Mental health and subjective wellbeing in UK mental health nurses.

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Declaration

I, Jennifer Oates, confirm that the work presented in this thesis is my own.

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Abstract

This study explores the subjective wellbeing and subjective experience of mental health problems in UK mental health nurses using a mixed methods approach. It aimed to understand the relationships between mental health nurses' own mental health and their subjective wellbeing, and to explore the ways in which mental health nurses managed their own mental health and wellbeing and how they negotiated for and use their experiences both within and outside of their work.

The mixed methods design had two phases. In phase one an online survey was sent to mental health nurses via their national professional bodies, the Royal College of Nursing and the Mental Health Nurses Association. The survey comprised three measures of subjective wellbeing, questions about personal and familial mental health history and questions about the impact of these experiences on mental health nursing work. 237 survey responses were included in the final statistical analysis. In the second phase 27 semi structured interviews were undertaken with a purposive sample of survey respondents who had both subjective experience of mental health problems and high subjective wellbeing.

A major finding of the study was that mental health nurses critically appraised their experience of delivering and receiving mental health care from the expert perspectives of both being a nurse and having their own experience of mental ill health.

Personal experience of mental illness was found to influence nursing practice in a number of ways: first, through overt disclosure and negotiation of professional boundaries; second, through the ‘use of the self as a tool’, the emotional labour of nursing; third, through the formation and development of professional nursing identity. This was in the context of a broader canvas of life experiences which participants considered to influence the development of their nursing identity, the use of self and self disclosure in their work

Mental health nurses in this study had a relatively low subjective wellbeing. Low subjective wellbeing was associated with having current mental health problems, and with having past experience of mental health problem. Personal experience of living with someone with mental health problems was associated with relatively higher subjective wellbeing.

This study has implications for occupational health and human resources policy within healthcare organisations. The findings suggest that mental health nurses who present to primary care or occupational health services should be offered care and treatment commensurate with their expertise and experience. Employers’ ‘staff happiness strategies’ and occupational health promotion activities should address work life balance and what nurses could do outside of their work to be well, as well as addressing the effects that team and management changes have on staff wellbeing.

Abbreviations

ANOVA Analysis of Variance
BMI Body Mass Index
CASP Critical Appraisal Skills Programme (CASP)(NHS Public Health Resource Unit, 2007)
CFWI Centre for Workforce Intelligence
CHRE Commission for Healthcare Regulatory Excellence (now Professional Standards Authority For Health and Social Care)
CMHT community mental health team
CNO Chief Nursing Officer
COREQ Consolidated criteria for reporting qualitative research (Tong, Sainsbury & Craig, 2007)
CPN/ CMHN Community psychiatric nurse/ Community mental health nurse
CQC Care Quality Commission
DH Department of Health
DRC Disability Rights Commission now Equality and Human Rights Commission
DWP Department of Work and Pensions
GHQ General Health Questionnaire
HSCIC Health and Social Care Information Centre
HSE Health and Safety Executive
IAPT Improving Access to Psychological Therapies
MBI Maslach Burnout Inventory
MHN mental health nurse
MHNA Mental Health Nurses Association
MHP mental health problems
MJSS Minnesota Job Satisfaction Scale
NCAS National Clinical Assessment Service
NHS National Health Service
NHSCB NHS Commissioning Board (now NHS England)
NICE National Institute for Health and Care Excellence (previously National Institute for Clinical Excellence)
NMC Nursing and Midwifery Council
OECD Organisation for Economic Co-operation and Development
ONS Office for National Statistics
PHP Practitioner Health Programme
PICOS approach - participants, interventions, comparators, outcomes, and study design - approach to designing a literature search
PRISMA Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) (Moher et al. 2009)
ProQOL Professional Quality of Life (Stamm, 1997)

PTSD post traumatic stress disorder
QOL Quality of Life
RCN Royal College of Nursing
RGN Registered General Nurse
RMN Registered Mental Health Nurse/ Registered Mental Nurse
RSEQ Rosenberg Self Esteem Questionnaire(RSEQ) (Rosenberg, 1965)
SURE Specialist Unit for Review Evidence
STROBE checklist - Strengthening of reporting of Observational Studies in Epidemiology) (Von Elm et al, 2007)
SWB subjective wellbeing
SWLS Satisfaction with Life Scale (Diener, 1985)
WBPN ward based psychiatric nurse
WEMWBS Warwick Edinburgh Mental Wellbeing Scale (Stewart-Brown and Janmohamed, 2008)
WHO World Health Organisation

Chapter 1 Introduction

This thesis explores mental health nurses' subjective wellbeing and subjective experience of mental health problems. An explanatory sequential mixed methods approach has been used, involving the collection of quantitative data first (phase 1) then semi structured interviews (phase 2). It is the first study to look at UK mental health nurses' subjective wellbeing (SWB) in the context of the wider 'happiness and subjective wellbeing' literature. It is also one of few studies looking at the lived experience of mental health nurses with subjective experience of mental illness. This study is situated within both the study of SWB and the study of health and care workers' occupational mental health. It seeks to move the discussion of the mental health of mental health nurses on from 'stress and coping' to a consideration of how their expertise and insight both as nurses and as people with lived experience of mental illness may enable individual mental health nurses, employers and policy makers to support the wellbeing and mental health of future mental health nurses.

1.1 Aims of the research study

The aim of the study was:

> To explore the mental health and subjective wellbeing of a sample of UK mental health nurses.

The central research question was:

> How do UK mental health nurses negotiate, use and manage their own mental health and wellbeing?

Recent surveys of NHS staff have found that healthcare workers experience high levels of mental ill health and distress, and that they access and use health services differently to the general population (DH, 2010, Harvey et al, 2009). There is a need for research on how mental health workers may improve and maintain their mental health. First there is a need to quantify the problem (the state of mental health nurses' mental health), using measures of SWB and

questions about experience of mental illness. Second, there is a need to learn from those nurses who are subjectively well and yet have acknowledged experience of mental illness.

1.2 Structure of the thesis

The thesis comprises 12 chapters. After this introduction, there is a background chapter providing a context to the study, with an overview of the policy, theoretical and research themes relevant to the study of mental health nurses' mental health and wellbeing. Chapter 3 and 4 are two reviews of the literature on mental health nurses' SWB and on mental health nurses' subjective experience of mental ill health. Chapter 5 presents the research design and methodology of the study. It includes a discussion of ethics and reflexivity. Chapter 6 offers a brief introduction to the findings. Chapter 7 describes the study participants, giving demographic and personal information about the survey respondents and interviewees. Chapter 8 presents and discusses findings on participants' SWB. Chapter 9 presents and discusses findings on participants' experience of mental ill health. Chapter 10 presents and discusses findings on participants' experience of having experience of mental health problems in relation to their work. In Chapter 11 the objectives and research questions of the thesis are revisited and a conceptual model of mental health nurses' mental health and SWB derived from the research findings and the literature is discussed. Chapter 12 is the conclusion wherein the implications of the study, its contribution to knowledge and the study's limitations are discussed.

1.3 Evolution of the study

I began thinking about this research project in 2009. At that time I was a mental health nursing lecturer who delivered training to qualified mental health professionals from a range of disciplines as well as offering pastoral and educational support to nursing diploma and degree students. In my nursing career I had come across many colleagues with mental health histories and many other colleagues for whom their own SWB was a source of concern. I was aware of the dominant discourse of 'stress and burnout' whereby mental health nurses described their work in terms of workload pressure, caseload pressure and role anxiety. I was also becoming familiar with the trend for employing

‘experts by experience’ in mental health worker roles. I had also been involved in recruitment and selection of student nurses who were open about the subjective experiences of mental illness that had led them into this career choice. I worked in a university department where service user involvement in research and training was very much encouraged. I believed that attitudes to the role of subjective experience in mental health work warranted further exploration. Ideas of subjective experience and expertise and what they brought to nursing work needed to be interrogated and clarified, as we seemed to be moving from user involvement in planning and delivery of health education and statutory services to an invitation for people with subjective experience of mental illness to join the health professions, without a full exploration of the consequences of that approach for them as individuals, as well as for the service user movement in general. There also seemed to be a lack of acknowledgement that ‘expertise by experience’ may be already in use. Incorporating ‘expertise by experience' in the provision of mental health care is not without potential deleterious consequences. As Rogers and Pilgrim (2010, p217) point out, ‘state incorporation’ risks undermining and defusing the strength of the mental health service user social movement. It could also be deleterious to the mental health of those individuals who take on professional roles, fraught with role anxiety and stress.

There were two underlying assumptions being made in the way ‘expertise by experience' and the mental health of mental health workers were manifesting that I was keen to explore and potentially challenge. The first was that mental health nursing equals being ‘stressed and burned out’. The second was that we must seek out new ‘experts by experience’ to offer a mental health service user perspective thus adding credibility to our teams and our work. This presupposes an absence of such insight already in use within the profession. I had a sense that maybe not all mental health nurses were stressed and burned out. I at least hoped that was the case. I also had a sense that there were many mental health nursing colleagues for whom personal experience of mental illness was both a motivating factor for joining the profession and something that informed their working practices. They just weren’t ‘out’ about it, or else were not vocal because of the dominant discourse of stress, burnout and the assumption that nurses lack the valid personal insight into mental illness that could be brought in

by ‘service user experts’. My thoughts about my profession, and the current preoccupations of mental health policy and practice were complex and centred around contradiction, if not contradictory themselves. The PhD study seemed like the ideal way to devote sufficient time, resources and analytical attention to the concerns I had. Even if my research was to find the opposite to be true: that yes, nurses are in the main subjectively unwell and no, they don’t draw on personal experience, then this warranted further exploration and discussion because how then can we in all conscience invite people with explicit, known mental health needs to join a profession that may be proven to make people mentally unwell?

1.4 Terminology

Within mental health practice and mental health research there are multiple ways to describe the people who use services and the people who provide them. Different terms have different connotations (Rogers and Pilgrim, 2010; Dickens and Picchioni, 2011). Whether the people with whom nurses work are described as ‘patient’ or ‘service user’ or ‘client’, depends on the context and on the preferences of the person being described. In this thesis I have kept the chosen word (whether ‘patient’ or ‘service user’) used by either the research participant or the author being referred to. As a nurse myself I have always made a distinction that people in hospital are ‘patients’ and people in the community are ‘service users’ or ‘clients.’ Several studies have found that users of mental health services prefer the term ‘patient’ over ‘service user’ (Dickens and Picchioni, 2011; McGuire-Snieckis, McCabe and Priebe, 2003; McLaughlin, 2009). Within the research and theoretical literature, nurses who work with people with mental illness are variously described as ‘mental health nurses’, ‘mental nurses’ or as ‘psychiatric nurses’. Mental health nurses in different countries and at different time periods may have different nomenclature. My preferred term here is ‘mental health nurse’. Where authors have used the term ‘psychiatric nurse’ this has been retained in the literature review 3 and 4, to reflect their preferences. The terms ‘mental health nurse’ or MHN have been used throughout the rest of the thesis.

There are also connotations and assumptions regarding how mental illness is described. We may say ‘mental health problems’, ‘mental illness’, or ‘psychiatric

illness'. We may describe particular diagnoses with specific diagnostic criteria (which may differ depending on the diagnostic manual) such as depression, anxiety, bipolar disorder, schizophrenia. Again, I have kept to the words used by participants and authors. In my survey I asked people: 'Are you presently experiencing or being treated for mental health problems?' I am comfortable with the term 'mental health problems', which at times I have abbreviated to MHP. 'Mental health problems' leaves the decision about what is covered by the term up to the subject. Let them decide whether they are experiencing them or not. I have not used diagnostic tools and have not sought to define caseness for particular conditions, because I wanted to elicit subjective views and opinions. In advance of reading the rest of the thesis I hope that readers will accept the choices made regarding terminology even if their preferred terms are not the same as mine.

Chapter 2 Background

2.1 Introduction

This chapter provides the background to the research study, setting it in a context of research, policy and theory on mental health, wellbeing and nursing work. It provides the rationale for the study of the mental health and subjective wellbeing (SWB) of mental health nurses. There are three parts to this chapter: first, the case for studying the mental health of mental health nurses is made; second, the wider UK policy context for the study of health and wellbeing and mental health work is discussed; third, the theoretical and research context for the study of mental health nurses' SWB and mental health is presented as the conceptual framework for the study. This chapter sets the scene for the next two chapters, which provide reviews of the literature on the mental health and SWB of mental health nurses. The ideas introduced in this chapter are referred to throughout the subsequent chapters of the thesis. They will resurface fully and be revisited in the final discussion chapter, when the findings of the study are considered in relation to the future of mental health nursing, mental health policy and mental health practice development.

2.2 Health, wellbeing and healthcare work in the UK

The present study aims to explore mental health nurses' mental health and their SWB. This is a worthy subject for research because of the impact on care quality that health workers' mental ill health and poor wellbeing can have, whether through absenteeism or presenteeism. In recent years there has been unprecedented scrutiny of the interplay between mental health and work, particularly for NHS staff.

2.2.1 The policy context

Having a mental health problem is linked with unemployment, low status work and social deprivation (Thomas et al, 2005; Virtanen et al, 2008; Stansfield, Head and Marmot, 2000). Marmot (2010) cites Labour Force Survey findings that less than 15% of people with mental health disabilities are in employment,

fewer than for any other type of disability. For workers in general, mental health problems are associated with difficulty maintaining work and performing at work. They are associated with absenteeism and presenteeism, with absenteeism being off sick from work and presenteeism being the term used to describe attendance but poor work performance where there is ‘reduced productivity when employees come to work and are not fully engaged’ (Centre for Mental Health, 2011, p1). The cost of presenteeism is hard to estimate, but it may account for 1.5% more time lost than sickness absence (Hassan et al, 2009). In nursing and other healthcare roles loss of productivity and lack of engagement have potential consequences for patients and service users (Letvak, Ruhm and Gupta, 2012, 2013; Gärtner et al 2010). As well as affecting productivity and safety, Gärtner et al’s (2010) literature review on this topic identified that common mental disorders in nurses affect intra and interpersonal working as well as task related functioning.

In UK health policy, employment has become a key indicator of successful management of adult mental health problems. The 2011 NHS Outcomes Framework (DH, 2010) identified ‘employment’ as the main indicator of quality of life for people of working age with mental health problems. The report by Dame Carol Black for the Department of Health and Department of Work and Pensions: ’Working for a healthier tomorrow’ (Black, 2008) reviewed the health of the working age population in Britain in the context of the aforementioned Labour Force statistics showing that less than 15% of people with mental health disabilities were in employment. The Black report set out the ‘case for concern’ regarding mental health then discussed the role of the workplace with regard to health and wellbeing. Black posited the idea that whilst work may be damaging to health, in some scenarios, it can also contribute to good health. She called for a move from ‘health and safety’ at work, to ‘health and wellbeing’, citing PricewaterhouseCooper’s contribution to the review, Building the Case for Wellness (PwC, 2008), the business case for employer investment in employee health and wellbeing. It argued that a ‘health and wellbeing’ focus could save employers money through preventing rather than reacting to employee ill health. Boorman’s (2009) report on the state of worker wellbeing in the NHS, following Black’s and the other commissioned reports, pursued this theme also,

presenting the business case that the NHS as an employer should exemplify this new 'health and wellbeing' approach to its employees .

In conjunction with the Black report, the Royal College of Psychiatrists (2008) completed their own report on 'Mental health and work'. Its report identified that mental ill health was a factor in not only worklessness, and sickness absence, but was also a major factor in poor work productivity through 'presenteeism'. The Department for Work and Pensions commissioned a qualitative research project 'Mental health and employment' (Sainsbury et al, 2008) which analysed the factors contributing to someone claiming incapacity benefit for mental health problems, and the factors affecting that person's return to work. The researchers interviewed 60 current or previous incapacity benefit recipients, and representatives from 40 organisations with experience of employing people with mental health problems. The report identified a lack of 'mental health literacy' amongst people with mental health problems and among employers. There was a lack of awareness of the resources available to employers and employees, and thus a lack of awareness of how best to identify and manage mental ill health in the workplace.

Black (2008) has argued that the field of occupational health should adapt in order to meet the shift in focus to wellbeing in employee health. Historically occupational health, or industrial medicine, as it was originally named, was separate from the provisions of the NHS. This has meant, according to Black, that it has not developed in unison with the changes in UK national healthcare, and has also meant that occupational health provision for workers can be patchy and inconsistent. She found there to be a lack of contemporary research in the occupational health field. This suggests that the complexity of the interaction between work and mental health requires further exploration.

The mental health and wellbeing of those working in health and care has been high on the agenda of successive governments as part of the wider programme looking at mental health and work, including National Institute for Health and Care Excellence (NICE) guidance on employee mental health (National Institute for Health and Care Excellence, 2009). An independent review on the health and wellbeing of NHS staff commissioned by the last government (Boorman,

2009) made several recommendations regarding what the NHS should be doing, as an employer, to support the health and wellbeing of its workforce. The main message of the recommendations was that the NHS should adopt a preventive rather than reactive approach to employee mental health. The report also recognised a lack of quality research into effective health promotion for NHS staff. The Boorman report (2009) was derived from a web based survey of NHS staff, focus groups with representative samples of staff and stakeholder events with staff in all of the UK's Strategic Health Authorities. The report team also conducted a review of the literature regarding the effectiveness of workplace interventions on improving health and wellbeing (Hassan et al, 2009). Key areas of concern regarding NHS staff health were absenteeism, presenteeism, work related stress, lifestyle choices, and general life satisfaction. The report also described some NHS sites wherein staff mental health was well supported and promoted. These included the user employment programme at South West London and Saint George's Mental Health NHS Trust, which has had a policy of encouraging people with mental health histories to apply for posts within the mental health trust since 1995 (Perkins, Rinaldi and Hardisty, 2010).

In conjunction with the Boorman review, the Department of Health commissioned an investigation into the current mental health of the healthcare workforce (Harvey et al, 2009). Harvey et al (2009) summarised employee mental health as being an interplay between individual factors and workplace factors, with the dominant model for viewing healthcare worker mental health being job stress and burnout. The findings of this broad, non-systematic review suggest that specific, focused, high quality research is required here, in particular to make suggestions regarding the relationship between health promotion and illness prevention. Also associated with the Department of Health programme was the setting up of a two year pilot Practitioner Health Programme (PHP), for all doctors and dentists living and/or working in London with physical, mental health and addiction problems, commissioned by the National Clinical Assessment Service (NCAS) (as evaluated by Brooks et al, 2011, 2013) and the NHS Employers 'Open your mind' campaign, which sought to raise awareness of how to support and retain NHS staff with mental health histories. In October 2008 NHS Employers published 'Mental health and

employment in the NHS'. This gave guidance to occupational health departments and managers regarding how to support employees with mental health problems. Like Boorman's work, it highlighted the User Employment Programme at South West London and St George's as an exemplar of positive mental health employment practice.

Harvey et al's (2009) literature review criticised the current research evidence in this field as being mainly descriptive and based on small scale cross sectional studies. They called for prospective cohort studies and the secondary analysis of routinely collected data. Some studies of that type have been done in the US (Dyrbye et al, 2010) and Scandinavia (Tyssen 2007), tracking the course of mental ill health and wellbeing in cohorts of nurses, medical students and professionals, but these do not necessarily represent all professions and have not looked specifically at mental health nurses.

2.2.2 Measuring and conceptualising subjective wellbeing (SWB)

At the same time as the national policy focus on mental health and work there has been increasing research and policy interest in the concept of subjective wellbeing (SWB), with calls for measures of SWB to be used to appraise the success and impact of UK government policies (Dolan and Metcalfe, 2012). Internationally, the Stiglitz commission (2009) recommended that national statistics agencies began to collect data of wellbeing, with international guidance on how and why SWB should be measured (OECD, 2013). From a socio-economic perspective, Dolan and colleagues' calls for the UK government to address SWB was driven by a consideration of the evidence that high SWB correlates with health, longevity and job success (Dolan and White, 2007). They also argued that the aims of public policy should be to improve the wellbeing of the people, and that policies that address subjective accounts of wellbeing may have better chances of long term success. The challenge to incorporate SWB in national research to inform public policy was taken up by the Office for National Statistics in the UK (ONS, 2011), resulting in the national collection of SWB data using four questions that address positive affect, negative affect, life satisfaction and eudaemonia. This had the aim of balancing 'objective' measures of

prosperity such as gross domestic product and employment statistics, with subjective measures of population happiness (Stiglitz et al, 2009).

'Happiness' and SWB are synonymous terms in the literature (Graham and Shier, 2013; Evans, 2011; Dolan et al, 2008), although the variety of meanings of 'happiness' in common language should be acknowledged (Veenhoven, 1991). The present study is concerned with global SWB, rather than wellbeing in one or more domains of life. Global SWB must be differentiated from domain specific SWB, wherein a person evaluates or experiences positively a particular domain of their life, such as work or home life. Global SWB may be defined as a person's overall current experience of positive and negative emotional states (the hedonic), combined with their overall estimation of life satisfaction (the evaluative) (as described by Newman et al, 2013 and Ryan and Deci, 2001). These 'hedonic' and 'evaluative' aspects of SWB are in some studies accompanied by a third aspect: 'eudaimonia', a sense of meaning or purpose (Waldron, 2010). In other accounts eudaimonia is measured distinctly from subjective wellbeing (Ryff and Keyes, 1995; Ryan and Deci, 2001).

Seligman and Csikszentmihalyi (2000) are often cited as the founders of positive psychology, of which the study of SWB is a major part (Slade, 2010). In their introduction to an issue of the American Psychologist dedicated to the study of happiness, Seligman and Csikszentmihalyi (2000) contrast the work of positive psychology with the focus on mental distress that has dominated the field. For them positive psychology is about 'optimal human functioning' or 'flourishing' which incorporates Csikszentmihalyi's (1990) concept of 'flow', meaning a state of total absorption in an activity which is sufficiently challenging (for example playing a musical instrument). Latterly, Seligman (2012) has proposed a five factor model of wellbeing: PERMA. This comprises: **P**ositive emotions; **E**ngagement; positive **R**elationships, **M**eaning and **A**ccomplishment, incorporating the social, psychological and subjective aspects of wellbeing.

The classic two part model of subjective wellbeing (life satisfaction with positive over negative affect) was proposed by Diener (1984). Diener is a proponent of the conceptualisation of wellbeing as comprising life satisfaction combined with positive and negative experiences. His work (1984; 1993; 2013) has focused

most on the evaluative aspect of SWB, measured using his Satisfaction with Life Scale (Pavot and Diener, 1984). In over three decades of research into the correlates and possible causes and effects of high SWB he has found that SWB is strongly associated with high average national income but not necessarily with increases in income between people within different countries; that high SWB affects people's social behaviour, for example happier people give more to charity; that high SWB is associated with better health and longevity; that high self esteem is associate with higher SWB across international comparison studies but that other qualities such as religiosity and introversion interact with SWB differently according to their value within certain cultures (Diener, 2013) .

A formulation for 'eudaimonia', psychological well-being as distinct from 'hedonia' and life satisfaction was proposed by Ryff (1989), with antecedents in Aristotle's notion of 'the good or happy life' where the self aware person reaches their potential rather than living a life dominated by pleasure and satisfaction of wants (hedonism). In subsequent studies eudaemonia was conceived as comprising: having a purpose; autonomy; personal growth; environmental mastery; positive relationships; self acceptance (Ryff, 2014). In her overview of the topic, 25 years since she defined it, Ryff (2014) found that the research on eudaemonic wellbeing has focused on six elements: psychological wellbeing over the life course; personality correlates; family and psychological wellbeing; work and psychological wellbeing; health and psychological wellbeing and intervention studies to improve psychological wellbeing.

In the 1990s and 2000s researchers explored the potential for combining hedonic and eudaemonic wellbeing in order to develop a model of 'flourishing' mental health (Gallagher et al, 2009; Keyes, 2005, 2007; Keyes et al, 2002). Keyes (1998) also proposed a five point model of 'social wellbeing', comprising social integration, social contribution, social coherence, social actualisation, and social acceptance. This approach looks at the individual's wellbeing in a social interpersonal rather than subjective interpersonal way (Gallagher et al, 2009).

The interplay and relative importance of hedonic and eudaimonic wellbeing are the subject of ongoing debate within the positive psychology community (Ryan

and Deci, 2001; Keyes and Annas, 2009; Joseph and Wood, 2010; Linley et al, 2009; Straume and Vittersø,2014), whereby different researchers place different emphasis on the contributions of the evaluative, the hedonic and the eudaimonic to overall happiness, for example, in their exploratory factor analysis with large scale UK adult samples Linley et al(2009) found subjective and psychological wellbeing to be independent but related factors.This mirrored the findings of prior studies in China (Biaobin et al, 2004) and the US (Keyes et al, 2002). For Straume and Vittersø (2014) wellbeing is 'an overarching concept' containing all three elements, whereas Ryan and Deci (2001) contend that happiness research may be divided into two traditions: the hedonic and the eudaemonic or the study of the experience of pleasure versus the study of the pursuit of the good or virtuous life. Keyes and Annas(2009) contend, based on their analysis of data on national data on American and South African young people, that hedonic wellbeing and eudaimonic wellbeing do not necessarily coincide.

In this relatively young field of research, what can be surmised is that it is an evolving field, wherein attempts to define, refine and incorporate concepts and phenomena are still ongoing. In the field of mental health, Slade (2010), arguably the foremost writer and researcher on the recovery approach, has said that mental health professionals must turn their focus to promotion of mental health not just reduction of mental illness. For Slade (2010) this means integrating the findings of positive psychology research, and designing interventions that promote flow, positive affect, eudaimonia and life satisfaction. The SWB approach has much to offer recovery oriented mental health services because it does not discount the experience of mental illness. The two are not mutually exclusive. A study of mental health nurses that incorporates measures of SWB should compliment an increased focus on positive psychology approaches within mental health work. Studies of nurses' SWB also address Boorman and Black's calls for a focus on 'health and wellbeing' rather than 'health and safety' at work, although a 2013 review of progress against the Boorman recommendations has found that, whilst Boorman's recommendations were accepted, more than one third of NHS trusts did not yet have a health and wellbeing strategy in place (Chartered Society of Physiotherapy, 2013).

2.2.3 Summary

This thesis aims to make recommendations of relevance to national and local policy as well as to individual nurses. It was prompted by an engagement with emergent governmental policies on the mental health of health care workers and on positive recruitment of people with mental health histories into mental health worker roles. As discussed above, there is a policy imperative for the mental health of workers to be addressed, with particular reference to NHS staff. Research into the effectiveness of current programmes to address workers' mental health has been limited in scope and the nationally commissioned reviews of the state of health workers' wellbeing have called for more research to be done. The complex relationship between work and mental health has been acknowledged and a strong case has been made for more preemptive approaches to occupational mental health policy and practice.

Work and wellbeing are inextricably linked to adult mental health. Trying to find people who are happy, or have subjective wellbeing, yet have experience of mental health problems may support a case for an 'expertise by experience' approach to mental health staff recruitment which can identify resilient, hardy staff with relevant life experiences. The identification of mental health nurses who have had personal or familial experience of mental health problems (which may be assumed as a likely source of stress) but also present with high SWB is an exercise of real value to the professions. There may be much to learn about how such people deal with work, and also what they do that maintains these positive qualities. Such people may also be the ideal 'experts by experience' given that they may have the ability to cope with the demands of mental health work.

2.3 Why study the mental health and subjective wellbeing of mental health nurses?

Nurses are the largest professional group within the health and care sector (Centre for Workforce Intelligence, 2012a), with nurses being the largest profession within the mental health workforce (Centre for Workforce Intelligence, 2012b). Those nurses with a registered mental nurse (RMN) designation in the UK have all completed a specific training course to become mental health nurses, with the training course accredited from the Nursing and Midwifery Council (NMC). As of 2013 all nurse training courses on offer are at degree level, although many nurses trained prior to that date will have diploma rather than degree level qualifications (Willis, 2012). Some RMNs may also have a registered general nurse (RGN) qualification, although most RMNs will have solely trained in the mental health field, save for some general experience during their pre-registration training.

Within the NHS the mental health nurse headcount for England in 2010 was 48,234 (CfWI, 2012), and the whole time equivalent for the whole UK for 2010 was 51,299 (RCN, 2014). The Health and Social Care Information Centre (HSCIC) monitors NHS staffing numbers and presents information on RMNs via an annual national survey, however, about 35% of RMNs work outside of the NHS (CFWI, 212). There is currently no reliable means of gathering information on nurses outside the NHS, so information about their wellbeing, working conditions and opinions is not available (RCN, 2014a).

Both inside and outside the NHS there are a number of settings in which MHNs may work. Traditionally this includes inpatient wards for adults, older adults, children and adolescents. Wards may have an acute, psychiatric intensive care or rehabilitation focus. Mental health nurses also care for patients in forensic low, medium and high secure hospital settings. Outside of the hospital, they work in community teams with a variety of configurations, maybe in locality based community mental health teams, assertive outreach, early interventions, crisis resolution and home treatment teams. Mental health nurses also work in specialist teams for people with particular diagnoses, for example personality disorder, or offering particular forms of therapy, such as Improving Access to

Psychological Therapies (IAPT) services. Mental health nurses work in drug and alcohol services, which could take the form of community teams, detox houses or rehabilitation wards. They also offer mental health care in general hospital settings (liaison psychiatry), in prisons and in police cells. Mental health nursing is a diverse profession, reflecting the range of mental health care needs individuals have across the life span (Callaghan et al, 2012; DH, 2006; RCN, 2014b).

2.3.1 The policy context for mental health nursing

In 2006 the Chief Nursing Officer (CNO) of England published a review of mental health nursing (DH, 2006). This document reflected the move to a 'recovery focus' within mental health and an increasing 'partnership' approach to working with service users, meaning a focus on service user derived aims and social inclusion for service users and carers (Callaghan et al, 2009). Whilst the 'therapeutic relationship' has ever been central to mental health nursing, Mental health nurses were also called to develop their holistic health skills, addressing the physical health of their service users as well as their spiritual needs. The CNO called for Mental health nurses to develop effective multidisciplinary team working and to take on new roles such as consultant or advanced practitioner roles. In their evaluation of progress against the numerous CNO recommendations, Callaghan et al (2009) found that there had not been consistent uptake of the recommendations and that there was a 'lack of strategic nurse leadership' for Mental health nurses within mental health trusts.

The 2006 CNO review reflected the vast changes in UK mental health policy and practice since the previous review in 1994. These included the implementation of the National Service Framework for Mental Health (DH, 1999) which incorporated the setting up of crisis resolution and assertive outreach teams, the revised Mental Health Act (2007) and the increased focus on evidence based practice, due to the work of the National Institute for Clinical Excellence (NICE, now the National Institute for Health and Care Excellence) (Callaghan, 2009). Now, in May 2016, so much has changed in the UK heath and care landscape in recent years that the 2006 report and even the 2009

evaluation have limited relevance. The 2012 Health and Social Care Act in England instigated wholesale change within the organisation of healthcare commissioning and delivery, having been described as 'the most controversial piece of NHS legislation in two decades' (Timmins, the King's Fund, 2014). Since devolution the health care administrations in Scotland and Wales are broadly similar to one another, with no internal market and no purchaser/ provider split. This is in contrast to the policy imperative in England to offer patient choice and foster private market based provision (Timmins, the King's Fund, 2014). Northern Ireland, like England has health commissioning bodies distinct from its providers, but, like Scotland and Wales, there is minimal private health care. Whilst the RCN and the NMC have a membership across the four countries, meaning that standards, training and professional concerns are aligned, the policy and political context of nursing between those countries within the United Kingdom differs.

Post the Francis Inquiry (The Mid Staffordshire NHS Foundation Trust Public Inquiry, 2013) and the investigation into the care of people with learning disabilities in Winterbourne View (DH, 2013), the way care services have been regulated has undergone dramatic change, with revised expectations regarding candour with patients, transparency about the quality of care and 'fit and proper' leadership and accountability from leaders and directors of services. The CNO of England's nursing strategy 'Compassion in Practice' (CNO, 2012) talked about the '6 Cs' of nursing, dictating the six attributes of a good nurse to be: caring, compassionate, courageous, competent, courageous and committed. The CNO strategy was itself a response to Francis and to a perceived subsequent denigration of the profession in the eyes of the public. The economic downturn of recent years and the requirement across the NHS for austerity measures and curbs on spending have been associated with 'an impending nurse staffing crisis' (Buchan et al / RCN, 2013). Whilst none of these developments were directly about mental health nursing, mental health nursing practice has been affected because of falling nursing numbers, changing public expectations, changes to commissioning and regulation and national debate on what constitutes good quality care in an age of limited resources and increasing demand. A new National Strategy for Mental Health in

England is due for publication in 2016, wherein plans to address these challenges may become apparent.

Despite governmental calls for ‘parity of esteem’ (Parliamentary Office of Science and Technology, 2015) between physical and mental health, the RCN and Rethink (RCN, 2014b) reported that mental health services in the UK in late 2014 had faced ‘unprecedented’ cuts, and had felt an inordinate burden due to efficiency savings. Whilst between 2010 and 2014 there was a slight increase in the nursing workforce, overall the number of UK Mental health nurses has declined. Despite the acknowledged social and economic impact that mental ill health has, reportedly affecting one in four people over their lifetime (DH, 2011), the RCN (2014b) reported a loss of 3,300 mental health nursing posts in recent years, particularly in England. Service redesign, usually incorporating a reduction in psychiatric hospital beds, has been accompanied by increasing demand for services and, in England at least, an increasing use of detention under the Mental Health Act (2007) (Care Quality Commission, 2014). The RCN also reports that nurses’ roles in the NHS have been ‘downbanded’, which has particularly reduced the numbers of senior mental health nurses in the country (RCN, 2014b). As nursing bodies prepare their response to the recent Willis Commission review of nurse education (Willis, 2012), it seems that generic training (with no preregistration mental health branch), abbreviated training and combined RGN/ RMN qualification are being suggested, discussed and even trialled (Coffey et al, 2015; McKeown and White; 2015). According to the RCN (RCN Labour Market Review, 2014a) the future of the profession in the UK is in the hands of the policy makers, commissioners and service providers and is tied to the fate of the struggling NHS as much as it is tied to the mental health of the nation.

2.3.2 Mental health nurses as nurses and mental health nurses as mental health workers

In recent years some RMNs have had the opportunity to extend their roles, through becoming Approved Mental Health Professionals (AMHPs), nurse prescribers or training in specific therapies such as Cognitive Behavioural Therapy (CBT) or Dialectical Behavioural Therapy (DBT). When nurses have

stepped into these new roles they have moved into professional territory previously the domain of their colleagues, whether this be social workers with the AMHP role, psychiatrists with the nurse prescriber role or psychologists with the therapist role (Dobel-Ober et al, 2010; Robinson et al, 2012; Coffey and Hannigan, 2013). With New Ways of Working (DH, 2007) the then UK government sought to 'break down professional barriers' in mental health, and to foster a more generic approach to being a mental health professional, with shared competencies between professions. Hannigan and Allen (2011) reported on the resistance to such 'threats to professional identity', though their Welsh example showed how a positive aspect of new approaches to mental health work has been the opportunity for community services to be shaped around particular local needs. Taking on some of the legal, medical and therapeutic roles previously belonging to colleagues has been cause for questioning of the Mental health nurse's identity and function within mental health teams (Coffey and Hannigan, 2013). Where 'role boundaries' are being negotiated and blurred, professional identity becomes a contested area (Allen, 2000; Hannigan, 2014; Hannigan and Allen, 2011, 2013).

Mental health nurses have had a longstanding struggle with 'identity' though, because they always hold dual identities, as member of mental health teams and as members of the nursing profession. Mental health nursing identity has been seen as 'weak' (Clarke, 2006), 'ambiguous' (Rungapadaichy et al, 2006) and poorly articulated (Hurley et al, 2009). In part this has been due to struggles that nursing has faced to 'professionalise' and define its particular role (Crawford et al, 2008). In mental health there is a perceived stigma associated with the nurse's closeness to people with mental health problems (Sercu et al, 2015) and also a tension between the therapeutic and sometimes custodial and coercive elements of the mental health nursing role (Koehn and Cutliffe, 2007; Landeweer et al, 2010). For some there is a further dichotomy between those who describe themselves as 'psychiatric' nurses, more associated with the medical model, and those who define themselves as 'mental health' nurses, aligning more with a social model of mental health problems (Cutcliffe et al, 2013). In both Crawford et al's (2008) and Hurley et al's (2009) qualitative studies on UK nurses' identities, mental health nurses have aligned themselves and their identities with the experiences of their patients and their therapeutic

relationships with those patients (‘rooted in the client’s wellbeing’, according to Crawford et al, 2008). Rather than necessarily extending the role of the mental health nurse, the new roles, accessed via further education and training, have been viewed by nurses as ‘ways out’ of the profession (Hurley and Wakeman, 2011) to the extent that those newly qualified nurses undergoing a postgraduate RMN qualification in McRae et al’s (2014) recent UK study were more aligned to working in mental health than being nurses, seeing the qualification as a ‘stepping stone’ into the field.

2.3.3 Doing mental health nursing, being a mental health nurse

Being a mental health nurse can be a fraught experience, leading the reflective practitioner to question where they sit in relation to fellow nurses, fellow mental health professionals, their patients and service users. They may also question their position in relation to the broad spectrum of fellow mental health nurse colleagues, some of whom may be working in a more or less custodial role (compare the mental health nurse in a high secure setting with one working in a dementia memory clinic, for example) (Rungipadiachy et al,2006; Hurley, 2009). Whilst some aspects of mental health nursing are tasks, such as completing assessments and administering medication, mental health nurses themselves define the work in terms of forming and maintaining therapeutic relationships: ‘therapeutic use of self’ (Hurley et al, 2009) and ‘being with’ people (Hercelinskyj, 2014). Again, in McRae et al’s(2014) recent work, newly qualified RMNs spoke more about nursing professional ‘values’ rather than ‘skills’. This is perhaps reflective of the spirit of modern nursing in the UK, with the 2006 CNO review being entitled ‘From Values to Action’ (DH, 2006) and the 2013 CNO strategy for the whole profession being ‘Compassion into Practice’ (DH, 2012). Values are seen as central to nursing, coming before and determining action. There is something here about ‘being’ a nurse, rather than ‘doing’ nursing, with mental health nurses being professionally socialised into nursing as ‘more than just a job’. Nursing has long been seen as one of those professions which requires ‘emotional labour’ (Hochschild, 1983; Smith,1992), where the person has to give more than their physical or mental effort to fulfil their role (Karimi et al, 2013). Emotional labour is a feature of day to day work for UK mental health nurses, and is associated with their experience of ‘daily stress’ (Mann and

Cowburn, 2005). In order to meet the CNO's approval or to work within the NMC Code (NMC, 2015) nurses have to demonstrate that they embody certain values and provide care in a certain way ('courageously', 'compassionately'). This is a giving of the self, emotional labour, rather than the completion of a set of tasks in a day's work. This is perhaps more fraught in mental health than in other nursing because of the tension between care and control, with compassion and empathy being tempered by the coercive and controlling elements of psychiatric care (Bray, 1999; Coffey and Jenkins, 2002).These are age-old tensions (Rogers and Pilgrim, 2010; Holyoake, 2014) whose currency is demonstrated in recent debates on the reduction of restrictive interventions in mental health care (Duxbury, 2015).

If 'being a mental health nurse' is closely aligned with what it means to 'be' someone with a mental health problems then the progressive alteration of mental health patient identity over the past decade must also have had an impact. The 2006 CNO review talked about a 'Recovery Approach', as did New Ways of Working (DH, 2007), characterised by a focus on service user identified goals, positive change and social inclusion (CNO, 2006). 'Recovery' oriented approaches are now the norm within UK healthcare (Slade, 2010). Service user involvement and engagement in the development of mental health services is now expected rather than unusual (Callaghan et al, 2009), with 'expertise by experience' being valued and sought in all aspects of service delivery and evaluation (for example, the role of service user experts on Care Quality Commission (CQC) inspections, as discussed in Oates, 2015). 'Peer support' workers are a common feature of mental health teams now, based on an ideological stance that those who have been through an experience may be able to best help those going through it (Nestor and Galletly, 2008; Simpson et al, 2014).

2.3.4 The legislative and regulatory context

There is an assumption in regulatory law that the mental health of nurses can impact on the quality of patient care, through their having to declare being 'of good health and good character' on renewing their professional registration (Kane and Gooding, 2009). There is also national legislation that protects the

rights of workers with mental health problems (Stanley et al, 2011). UK mental health nursing practice is regulated by the Nursing and Midwifery Council (NMC). The regulatory body has a role in determining nurses' 'fitness to practice', which included the state of their mental health (NMC, 2014). High profile cases where the mental ill health of healthcare workers has caused harm to others have called into question the effectiveness of existing systems to identify and manage the risks health care workers with mental ill health may pose. Wynn and Archer (2004) have written about the difficult role of occupational health with regard to assessing and managing the mental health of healthcare staff. They refer to the Daksha Emson inquiry report (North East London Strategic Health Authority, 2003) which criticised the activity of NHS occupational health services with regard to a psychiatrist who had a longstanding diagnosis of bipolar disorder and eventually committed suicide and infanticide. Other high profile cases, namely Allitt (Clothier, 1994) and Shipman (Smith, 2005), also served to draw attention to the possibility that there may be something lacking in the health service infrastructure to allow such individuals to work undetected. Wynn and Archer (2004) asked questions about the role of occupational mental health services rather than giving answers. They called for a consensus on how work affects health and health affects work, with regard to people with psychiatric histories.

In 2007 a national working group looking at the health of health professionals made recommendations for individuals, managers, organisations and regulators, regarding how the health of health workers may be improved and supported in Invisible Patients (DH, 2010). It found that health professionals seem to be more prone to anxiety, depression, suicide, substance misuse and sickness absence than employees in other types of work. It also identified the difficulties health professionals face with regard to seeking medical help, with particular reference to their mental health. These include fear of stigma, concern regarding confidentiality and concern regarding the effects of admitting mental ill health on being professionally registered (Invisible Patients, 2010). The Invisible Patients report recommended that regulators should provide clear guidance as to when a health problem should be referred to the regulator, that the distinction between fitness to work and fitness to practise should be made explicit and that there should be a consistent approach to handing the impact of

health on fitness to practise. These recommendations are similar to those made by the Council for Healthcare Regulatory Excellence (CHRE) in 2009, in its report on Health Conditions (CHRE, 2009). The CHRE paper responded to the findings of the Disability Rights Commission's (DRC) review of equality in professional regulation (DRC, 2007). The CHRE recommendations included a removal of the term 'good health' from the legislation and that separate Health Committees for Fitness to Practise cases be abolished, as illustrated below:

> 'There is ... clear evidence that interpretations of regulatory bodies' requirements by other parties has led to disabled people being discriminated against. There is a clear role for further guidance to these parties to help prevent this discrimination taking place and to ensure that disabled people are not impeded or discouraged from participation in the health professions. (2009, p2)

It should be noted that as of 2015 the 'good health' declaration remains part of a nurse's registration declaration, meaning that the CHRE recommendation has not been taken up by the regulator(NMC, 2015).

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Mental health nurses with mental health problems may fear stigma and discrimination, leading to secrecy and non-disclosure of their mental health status and needs (Sercu et al, 2015; Ross and Goldner, 2009; Tei-Tominaga et al, 2014). For nurses, 'fitness to work' may be confused with 'fitness to practise', leading to fears of removal of professional registration. There is a difference between 'fitness to work' and 'fitness to practise'. Fitness to work is a term used in occupational medicine regarding an individual's fitness to perform their job. Fitness to practise is a legal term, referring to whether an individual meets a standard of competence and conduct to hold registration within a certain profession (CHRE, 2009). The authors of 'Invisible Patients' acknowledged the concern registered professionals may have regarding the consequences of having a recognised illness, in term of professional registration, if this distinction is not made clear. They argued for clear guidance to be given regarding when and how to raise concerns about an individual's practice, in relation to health. Concern about how a nurse's health may impede practice also feeds into the regulatory bodies' and employers' engagement with disability and equalities

legislation, with the notion of 'good health' as being a factor in 'fitness to practice' being 'at odds with' equality legislation (Seymour et al, 2011). Whilst decisions on fitness to practise are made by the regulatory body, decisions about health related fitness to work are usually made by occupational health physicians (Kane and Gooding, 2009). They may acknowledge that health and disability may alter over time, and herein lies the responsibility of the individual nurse – to keep their employer and their professional body, informed of any actual or potential changes to health.

Just as individual nurses are accountable to their regulatory body regarding their ‘good heath’ as part of ‘fitness to practise’, employers must abide by equality and disability legislation. Whilst the regulators must protect the public, employers must ensure that they abide by laws that protect the rights of people with a disability not to be discriminated against. The significant amount of primary and secondary legislation relating to disability discrimination was consolidated in the Equality Act 2010, with mental ill health being covered under the Act’s ‘protected characteristic’ of disability:

> ‘(1) A person (P) has a disability if—
> (a) P has a physical or mental impairment, and
> (b) the impairment has a substantial and long-term adverse effect on P’s ability to carry out normal day-to-day activities.’ (Equality Act, 2010, 2.1.6)

The Equality Act 2010 requires employers to make reasonable adjustments when their practices or premises put a disabled employee at a substantial disadvantage in comparison to a comparator without the same particular disability. The purpose of the reasonable adjustments is to eliminate the disadvantage. What adjustments are reasonable depends on the circumstances. In 2009 the NMC published a review of the literature on reasonable adjustments (Kane and Gooding, 2009). This report described how educational institutions, professional bodies and employers had attempted to address reasonable adjustments requirements for nurses and midwives.

The requirement for disclosure of health conditions or impairments relevant to fitness to practise has a statutory basis, however, disclosure is also a prerequisite to accessing support and reasonable adjustments. With that disclosure, in order to access support and adjustments, comes a potential threat to professional standing and registration. As well as fear of loss of these, there are further reasons why professionals may not disclose a health problem. They may not regard themselves as disabled at all, or not disabled for the purposes of the Act, or not disabled according to the meaning understood by their professional body (Stanley et al, 2011).

Stanley et al (2011) conducted research into how and why regulated professionals (in this case, nurses, teachers and social workers) with ‘unseen disabilities’ such as mental health problems, disclosed their condition. The research was commissioned to inform the DRC’s Formal Investigation into fitness standards in the professions. It identified two models of disability disclosure that may occur concurrently. First, disclosure may be a rational transaction between the individual and their employer as a means of accessing appropriate support. Second, disclosure can be seen as a negotiation of the self and of the person’s identity as someone with a disability. In both senses, willingness to disclose disability was defined by how other people and employers responded to past disclosures. The study concluded that abolishing health standards for the professions would increase disability disclosure and decrease the stigma associated with disability. This was in line with the DRC’s investigation and recommendations and with the recommendations of the CHRE.

The Equality Act 2010 requires that employers make reasonable adjustments to enable people with mental health disabilities to work (Seymour et al, 2011). In order to do this fairly nurses and midwives must consider themselves able to disclose mental health problems without fear of the consequences of disclosure (Stanley et al,2011; Seymour et al, 2011). One rationale for the present study is its possible impact on mental health nurses' willingness to disclose, by finding those nurses who have subjective experience of mental illness and yet have SWB. Their stories might help other nurses and their employers deal well with disclosure and reasonable adjustment.

2.3.5 Summary

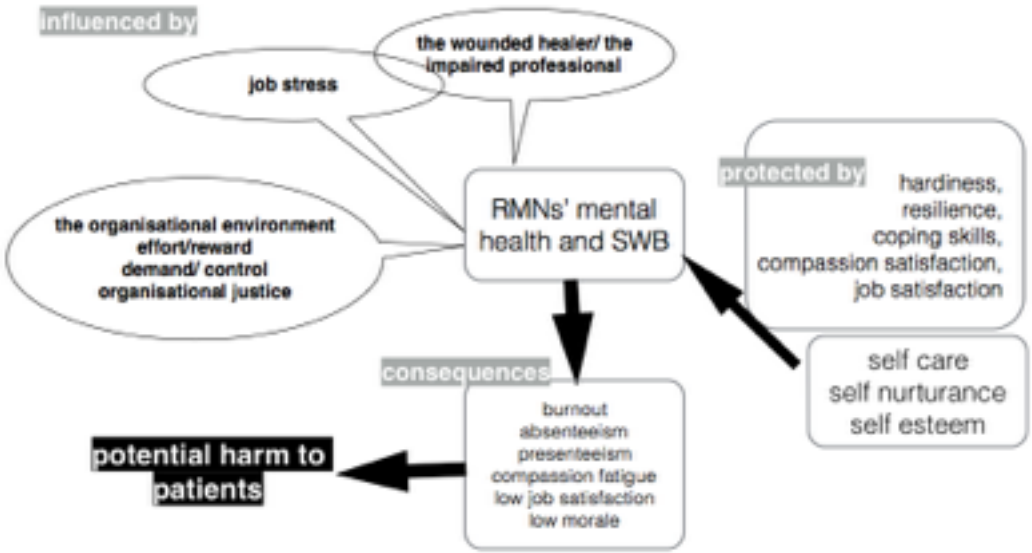
In summary, the mental health and SWB of mental health nurses is a worthy subject for research because of the nurse's centrality to the provision of mental health care in the UK, and the pervasive nature of mental ill health within UK society. UK mental health nurses now are working in a financially constrained health and care system, the structure, regulation and standards of which have gone through recent rapid change (Gilburt / King's Fund, 2015; RCN Labour Market Review, 2014). Nurses' roles have changed, however there is a case to be made that these roles may move individuals out of nursing and call mental health nursing identity into question. Nursing identity, particularly mental health nursing identity, is contested and complex, partly due to changes within the profession and partly to the shift in focus to recovery, partnership and multidisciplinary working within the wider field of mental health (Hannigan, 2014; Hannigan and Allen, 2011; McCrare, Askey-Jones and Laker, 2014). Listening to those nurses who are subjectively well and thriving, either despite or because of the complexities of their role, and listening to those who have a foot in both the nurse and the service user camp (through their own experience of mental health problems) may allow the whole profession to grow, survive or thrive.

2.4 Mental health nurses' mental health and subjective wellbeing: a conceptual framework

Maxwell (2009) describes a conceptual framework as one of the five components of research design, along with goals, research questions, methods and efforts to address the validity of the study. He describes the conceptual framework as the 'formulation' or 'tentative theory' about what is going on and why. For him the framework is broader than a literature review, drawing on experiential knowledge as well as existing theory and research. Whilst the succeeding chapters explore specific literature on nurses' mental health and subjective wellbeing in depth in the form of two reviews, it is important to first summarise the key concepts and theories that dominate in research on healthcare work and mental health that are pertinent to the research question. They provide a conceptual framework for the study. There is no overarching

theory or theoretical framework explaining mental health nurses' mental health and SWB on which this study may be pinned, rather there are points at which prior research and theory have touched on these topics and described phenomena of relevance. The conceptual framework here may best be called a framework of associated concepts. This is represented in Figure 2.1. This should be considered in the wider context of policy and legislation on health and work in the UK in recent years, and the historical and social context of mental health nursing, as summarised in 2.2 and 2.3 above. The conceptual framework comprises what is already known about nurses' mental health and wellbeing. This has been divided into three key aspects: what mental health nurses with mental health histories bring to their role (the wounded healer and impaired professional), the effect of the role on mental health nurses' mental health (stress, burnout and wellbeing at work) and how mental health nurses cope with their role (coping strategies and approaches).

Figure 2.1: a conceptual framework for MHNs' mental health and subjective well being



There is a vast research and theoretical literature on mental health, wellbeing and work (Harvey et al, 2009; Royal College of Psychiatrists, 2008), from which these themes emerge. Aspects of the mental health of healthcare workers have been studied in a variety of contexts, however they have tended to focus on negative experiences, in the form of stress and burnout, or on the interplay

between the worker and their environment, most recently and most broadly in the national study of inpatient mental health staff morale (Johnson et al, 2010). Concepts associated with wellbeing and positive mental health (for example, quality of life, resilience, self care and hardiness) have been explored in research on nurses and their colleagues but research on mental health nurses, particularly UK mental health nurses, from a positive or ‘happiness’ perspective is lacking, apart from those studies of morale, stress and burnout that have also considered coping strategies and approaches (see Coyle et al, 2000). This reflects the sporadic nature of research undertakings in this broad field. Although there is a wealth of research on stress, burnout and coping in mental health nurses, there is a lack of research on mental health nurses’ own subjective wellbeing. This is evidenced in Chapter 3, meaning that the concepts that are defined here are done so in reference to studies on other nursing and health professional groups.

2.4.1 What nurses with mental health problems may bring to their role: the wounded healer and the impaired professional

Whilst little has been written about mental health nurses specifically, there are several studies of other health and care professionals that have considered the impact of the professional’s own mental health on their work, either as ‘impaired professionals’ or ‘wounded healers’.

The concept of the 'wounded healer’ is drawn from a Jungian (1963) archetype based on the classical Greek imagery of Chiron and of Asclepius, mythical fathers of medicine. According to this archetype, ‘wounded healers’ are drawn to the helping professions in order to address their own ‘wounds'. These 'wounds' give them healing powers and insight into the needs of those in their care (Zerubavel and O’Dougherty-Wright, 2012). Being ‘a wounded healer' has been explored in nurses by Caan et al (2001) and in a range of mental health workers with depression by Rippere and Williams (1985). Current proponents of ‘expertise by experience’ have aligned the ‘expertise by experience’ approach to the wounded healer archetype, arguing that through their own suffering the peer support worker is better able to empathise with and cure their clients (Conchar and Repper, 2014).

Where ‘wounded healers’ belong to an age old tradition of helpers who use their experiences well, ‘impaired professionals’ are perceived as presenting potential risk to clients (Telepak, 2010; Pooler et al, 2008). They draw negatively on their experiences, adversely affecting engagement and causing stigma and censure from their colleagues and managers (Telepak, 2010; Pooler et al, 2008). International evidence of the impact of nurses and allied professionals' mental ill health on their work has been recently reviewed systematically by Gärtner et al (2010), framing it in terms of patient safety and quality of patient experience. The ‘wounded healer' image has some positive connotations, because the wounded healer is seen as having wisdom and insight. The ‘impaired professional’ image does not.

2.4.2 The effect of mental health nursing on nurses: stress and burnout, compassion fatigue and job satisfaction

The most common means of measuring mental health workers' mental health at work has been through examinations of individual health workers' experiences of stress and burnout. Stress and burnout studies often also include a measure of job satisfaction and may also discuss 'coping' as the means by which nurses and colleagues manage their experience of stress and burnout. In his definition of stress, Payne (1999) suggests that 'stress' describes both a cause, a consequence and a process of responding to work-related issues. He highlights the process dimension, which, he says, best fits with the seminal stress research conducted by Seyle (1936, 1974), looking at how humans and animals adapt to threats in the environment. The organism responds to stressors by 'fight or flight'. Over time a continued engagement with stressors and a continued' fight or flight' response drains the organism's physical and psychological resources and leads to potential exhaustion, conceptualised as burnout.

Many studies of UK mental health workers use the Carson model of stress (Carson and Kuipers, 1998). This model conceptualises stress as having three elements: stressors, stress moderators and stress outcomes. Stressors might be work situations or life events. Stress moderators might be workplace support or individual personality traits. Stress outcomes might be high burnout scores, impaired or improved productivity and the experience of symptoms of mental illness. The all-Wales study of stress in community mental health nurses (CMHNs) examined sources of stress and ways of coping, through Likert scale questionnaires and open ended questions(Edwards et al, 2000). Stress was associated with service user factors and also with the way work was organised. It was also linked to emotional exhaustion, high alcohol consumption and job insecurity (Edwards et al, 2000). In that study CMHNs described aspects of life outside work that helped them to cope, such as having a stable and separate home life, having hobbies and people to talk to (Coyle et al, 2000). Peer support and personal strategies were also commonly cited as ways of coping.

The concept of burnout was defined by Maslach and colleagues (Maslach et al, 1996) in their work on employees in the human services occupations as having three components: emotional exhaustion (the depletion of resources to engage with others); lack of personal accomplishment (not regarding oneself as making a difference); and depersonalization (not relating well to other people or seeing them in a positive light), sometimes described as cynicism. These are measured using the Maslach Burnout Inventory (MBI) (Maslach, 1981). Whilst the tool is widely used, its validity for different populations and for the use of the different subscales had been questioned (Schaufeli et al, 2001). In several studies of health workers the emotional exhaustion subscale score is very high whereas other aspects of burnout might not be (Cahill et al, 2004; Carson, 2006). A possible reason for this is that caring work *is* emotional work so it may be reasonable to expect a high score here. The tendency for health care workers to present as 'overcommitted' according to effort-reward measures (Siegrist, 1996) may be explained by a common finding that they have high emotional exhaustion (aspect of burnout) but also a high sense of personal accomplishment (another aspect, low in burnout).

Another concept associated with burnout is compassion fatigue, when the subject experiences distress and helplessness alongside a turning off of emotions as a result of secondary traumatisation (helping others who have experienced trauma) (Yoder, 2010).Compassion fatigue, along with burnout and compassion satisfaction has been measured using the Professional Quality of Life Scale (ProQOL R-IV) (Stamm, 1997). Like burnout, experience of compassion fatigue is associated with a reduction in the health worker's ability to do their job (Collins and Long, 2003). It was originally described as a variant of burnout in nurses (Joinson, 1992) but has subsequently been considered an associated but different concept, interchangeable with secondary traumatic stress (Figley, 1995). In Monroe's (2008) study of US mental health nurses, subjects scored as having low risk of burnout but over 60% risk of compassion fatigue (Monroe, 2008), whereas high risk scores on the ProQOL have been associated with higher depression and anxiety scores using other measures on general nurses (Hegney et al, 2010).

Job satisfaction is another concept associated with the wellbeing of nurses and their colleagues. It is commonly measured using the Minnesota Job Satisfaction Scale (MJSS) (Weiss, 1967). Thomsen et al (1999) found that organisational rather than individual factors made the most difference to mental health nurses' job satisfaction. This finding may be related to notions that emotional exhaustion is part of the emotional labour of mental health work, but that this exhaustion does not necessarily erode enjoyment of work. As stated above there may be personal factors that have led to this choice of an emotionally demanding career, and the resilient mental health worker may derive job satisfaction from being emotionally exhausted.

Job stress, job satisfaction and burnout are often measured together in health worker studies (Nelson et al, 2009; Edwards and Burnard, 2003), but it is important to recognise that burnout, job stress and low job satisfaction do not equate to being mentally ill. When mental ill health is assessed along with these concepts, it is a separate not a similar entity (Walsh 2002; Prosser et al, 1996, 1999). Outside of healthcare worker studies this is also the case. In the UK General Household Panel Survey, the Clinical Interview Schedule – Revised (CIS-R) is used to identify non-psychotic symptoms in the past week (McManus et al, 2007). The Whitehall II study, for example, measured work characteristics based on the Karasek model, depression using the General Health Questionnaire and wellbeing using the Affect Balance Scale (Schiaffano et al, 2003). In Siebert's (2004) work on depression in social workers the crossover between mental ill health and burnout was considered. She devised two models of impaired mental health in the helping professions – either burnout, which emphasises the role work plays on health, or compassion fatigue, which emphasised the personal aspect to worker health.

In Seymour and Grove's (2005) review of the literature on mental health and work, they exclude literature on job stress and burnout, determining them to be separate entities to common mental disorders. Many studies on mental health and the health worker have included findings related to stress and its outcomes. From this body of research there is evidence that aspects of job stress, dissatisfaction and burnout correlate to other aspects of mental wellbeing. Seymour and Grove's approach has set a precedent for the present study,

wherein the existing research on stress and burnout in mental health workers has only been referred to where measures of mental health have been included, but stress and burnout are not the focus.

2.4.3 The effect of mental health nursing on nurses: wellbeing and the work environment

There are three theoretical models commonly used to explain the interplay of the work environment and employees' wellbeing (NICE, 2009): the effort-reward model, the demand-control model and the model of organisational justice. Whilst the present study is concerned with overall SWB rather than employee wellbeing at work, these three models are relevant because of their predominance in the nursing literature, and must be acknowledged.

The demand-control model (Karasek, 1979) posits that work affects employee health adversely when it places high demands on the individual but those demands are not matched with a degree of worker control over their work tasks. In later versions of this model social support from managers and colleagues was also identified as a mediating factor between job demands, job control and work related stress (Karacek and Theorell, 1990). The Whitehall II study found that there is a social gradient to the effect of work on health, in part because lower status jobs tend to be ones where there is lower job control and lower support (Marmot et al, 1991). The Whitehall II study also found an association between high social support and lower psychiatric 'caseness', as well as an association between high job demand and high caseness, suggesting an association between the work environment and mental health (Stansfield et al, 1997). High job demands have been associated with higher incidence of anxiety and depression among UK nurses (Mark and Smith, 2012). Johnson et al, in the UK mental health worker morale study (2012) found confirmation of Karecek's model, whereby the organisational and workplace factors of job demand, control and support were associated with levels of morale, which was conceptualised as a combination of emotional strain and positive engagement at work . They found 'job control' to be of particular importance to mental health workers' level of engagement with their work.

The effort-reward imbalance model (Siegrist, 1996) proposes that work-related stress, and its associated lifestyle and health impacts, is caused by an imbalance between the efforts a worker makes and the rewards the worker receives. The model has been tested in several large scale cross sectional studies (Siegrist el al, 2004), and the link between effort-reward imbalance and mental health has been made in studies of nurses as well as those in other populations (Weyers et, 2006). The over committed individual responds to the demands of work by working harder and with more commitment, thus potentially exaggerating the imbalance between effort and reward further, thus putting health further at risk. Overcommitment has been associated with both anxiety (Gao et al, 2012) and depression in nurses (Kikuchi et al, 2009), although nurses in psychiatric settings have actually been found to be less 'overcommitted' than their general nursing colleagues (Schulz et al, 2009).

According to the organisational justice model of the psychosocial aspects of the work environment, wellbeing at work is affected by the extent to which workers consider the rules and decisions made at work are fair and that they feel respected by their managers (Kivimaki et al, 2006). Support from supervisors and a sense of organisational justice have been found to be influential on nurses' wellbeing (Rodwell and Munro, 2013). In a recent systematic review of the literature on the association between stress related disorders and the psychosocial work environment, incorporating research on all three models, Nieuwenhuijsen et al (2010) found that where workers experience low relational (whether supervisors treat workers with fairness) justice and low procedural justice (whether workplace decisions involve all relevant parties) there is heightened risk of stress related disorders. Whilst the present study does not specifically measure the influence of the psychosocial work environment on mental health or SWB, these models have relevance to the descriptions given by research participants of workplace changes, managerial decisions and changes to their working environment in the context of their own mental health.

2.4.4 How nurses cope with being a mental health nurse: compassion satisfaction, hardiness and resilience

There has been previous research measuring nurses and their colleagues' wellbeing at work, exploring the characteristics of workers who thrive (Hegney et al, 2014; Drury et al, 2014; Hooper et al, 2010; Nemcek, 2007; Zwink et al, 2013). 'Compassion satisfaction' is a related concept to 'compassion fatigue', whereby instead of being fatigued by compassionate practice the nurse is motivated and enriched by this aspect of their work (Stamm, 1998). This is similar to the relationship between burnout and engagement discussed earlier. Like compassion fatigue, compassion satisfaction has been commonly measured using the ProQOL (Stamm, 1997). The literature on compassion satisfaction has focused on emergency and oncology nurses. It has not been explored with UK mental health nurses.

Hardiness and resilience are other concepts that have been explored in relation to the wellbeing of mental health nurses (Matos et al, 2010; Smith, 2013; Pryjmachuk and Richards, 2007). Hardiness is a 'personality characteristic' that protects the individual against stress, whereby they see change as a positive challenge, can engage in activities with a degree of commitment and believe they have control over their circumstances (Kobasa, 1979). Hardiness has been shown to mediate happiness in nurses (Abdollahi et al, 2014) and to protect their physical and mental health (Lambert et al, 2007). Pryjmachuk and Richards (2007) invoked the concept when discussing why mental health nursing students in their study presented with less stress and psychiatric caseness than students from other branches of the profession.

Edward (2005) defines resilience as 'the ability of an individual to bounce back from adversity, persevere through difficult times, and return to a state of internal equilibrium or a state of healthy being.' (p142). She explored the concept of resilience through an analysis of semi-structured interviews with 6 crisis care mental health workers. She drew on research about resilience in other settings as a rationale for her study. Edward (2005) clustered ideas about resilience according to the themes of: Sense of Self, Faith and Hope, Having Insight and Looking after Yourself. Matos et al (2010) in a study of resilience in a population

of mental health hospital nurses in New York, found that there was a significant relationship between resilience and job satisfaction. They also found that professional status was a significant influencer of resilience. High resilience and hardiness may be seen as personality attributes that are not situation dependent and rather found in people who survive in their emotionally demanding role long term. Based on these studies, a resilient or hardy person would be expected to have high SWB.

2.4.5 How nurses cope with being a mental health nurse: self care, self nurturance and self esteem

Within the literature on health and social care workers' wellbeing there is often reference to 'self care', meaning those strategies used to look after one's own health and wellbeing. 'Self care' strategies have been deemed vital for mental health professionals (Monroe, 2008; Telepak, 2010; Barnett et al, 2007). Richards et al (2010) divide self care into the physical, the psychological and the spiritual, with the physical referring to the undertaking of healthy physical activity, the psychological referring to the health professional seeking their own personal counseling and the spiritual referring to the health professional deriving wellbeing from the meaning and value in their life, which may or may not be associated with spiritual or religious practices. Self care has been conceived also as the actions an individual may take to cope with stress and burnout or compassion fatigue (Kravitz et al, 2010). For Gibb et al (2010) 'self-care' was the term used to describe the way some nurses and allied health professionals in a Scottish mental health trust preferred to deal with work related stress instead of using their employer's occupational health service.

Synonymous with the concept of self care is self nurturance, when individuals make holistic healthy lifestyle choices, as proposed and studied in nurses by Nemcek in the US (Nemcek and James, 2007; Nemcek, 2007) who found that self nurturance in nurses was associated with life satisfaction and a happier work environment. To count as self nurturing or self caring, the activity must be undertaken with the express purpose of looking after the self (rather than it being incidental). In order to undertake self nurturing activities the individual must therefore have a sense of themselves as a valuable entity, they must

possess ‘self esteem’. ‘Self esteem’ has frequently been measured (using the Rosenberg Self Esteem Scale (Rosenberg, 1965)) in studies of stress and burnout in nurses, being deemed a moderator of stress (Edwards et al, 2000; Carson et al, 1997). Self esteem refers to the individual’s concept of themselves and their worth. High self esteem has been associated with higher life satisfaction, lower risk of depression and anxiety and occupational wellbeing (Carson et al, 1997; Dolan et al, 2008; Boey, 1999; Thomsen et al, 1999).

In summary, there are a number of way in which the SWB and mental health of mental health nurses and colleagues have been explored indirectly. The image of the wounded healer and the impaired professional have been used to describe health and care workers with mental health problems, encompassing their motivation to care and heal, the strengths they may have and the risks they may pose. Stress, burnout and coping have been explored in detail in numerous studies, as has job satisfaction. The impact of the work environment on workplace wellbeing has been studied according to three plausible and not incompatible models. These are aspects of wellbeing but do not encompass global SWB or the experience of symptoms of mental illness. Finally, there are some positive qualities associated with wellbeing that have been identified in nurses with low burnout, low stress and high job satisfaction. This study of mental health nurses’ accounts of their SWB and their experience of mental health problems does not aim to revisit prior research, but its antecedents and reference points must be acknowledged.

2.4.6 The interactions between burnout, well-being, resilience and working in nursing or mental health

The present study is concerned with mental health nurses’ global SWB, as opposed to wellbeing in the domain of work. Before examining the literature on nurses’ SWB and experience of mental illness in the following two chapters , it is useful to summarise the state of mental health nurses’ workplace wellbeing based on recent systematic reviews and large scale studies. This encompasses research exploring the concepts described in the previous sections.

Khamisa at al's (2013) systematic review of the interactions between stress, burnout, job satisfaction and general health in nurses found that while there are well established correlations between each of these factors, mediating elements and causal relationships are not clearly mapped out. Khamisa et al (2013) surmise that nurses commonly experience high levels of work related stress, burnout, job dissatisfaction and poor health, to a greater extent than other health professionals. They associate this with nurses' long working hours and frequent, prolonged patient contact. Morse et al's (2012) review of burnout and its relationship with associated factors in mental health service workers found a prevalence of burnout at between 21 and 67%, varying between the different mental health professions and between studies. The evidence reviewed by Morse et al (2012) shows that burnout, as measured using the Maslach Burnout Inventory, is associated with other negative conditions, including poor mental and physical health, as well as impaired job performance, absenteeism and low morale. Like Khamisa et al (2013), Morse et al (2012) found a lack of well designed studies, with a predominance of cross sectional, small scale studies using convenience samples with high attrition rates.

When factors associated with psychological ill health and sickness absence were compared between healthcare professional and non-health professionals in Michie and Wiliams' (2002) systematic review, the results were compatible with the demand-control-support model of workplace wellbeing described section 2.4.3: pressure of work, low involvement and low social support, bullying and negative organisational climate were associated with health worker psychological distress. For non-health workers the associated factors were similar: work overload and pressure, lack of control, poor social support, work/ family conflict and high job demands. Harvey et al (2009) also reviewed the published evidence on the health of health workers. They found a combination of individual and workplace factors to be at play, in line with the concepts of stress and burnout, compassion fatigue, job satisfaction, the effort-reward model, the demand-control model and the model of organisational justice, compassion satisfaction, hardiness, resilience, self care, self nurturance and self esteem described in sections 2.4.2 to 2.4.5. Workplace factors (job demands, workload), combined with individual personality traits have been associated with likelihood of work-related mental distress, usually conceived as

stress and burnout, and sometimes anxiety and depression. Again, the limitations of the evidence in relation to the methodologies used were acknowledged by the review authors, namely cross sectional designs and limited sampling.

Whilst there is systematic review evidence that nurses in various clinical settings experience secondary traumatic stress and compassion fatigue, Beck (2011) found no studies looking at secondary traumatic stress in mental health nurses specifically. In their literature review of the evidence on vicarious trauma in mental health workers, Collins and Long (2003) included burnout, along with compassion fatigue, compassion satisfaction, post traumatic stress and vicarious traumatisation. Like other reviewers in this field they call for more longitudinal research to be conducted. McCann et al's (2013) integrative review of resilience in the health professions offers the most comprehensive account of coping and resilience factors in nurses and colleagues in social work, psychology, counselling and medicine. They found that resilient nurses use problem-focused coping, taking time out and giving and receiving support from co-workers. They also identified that both individual and contextual factors affect resilience: work-life balance, hope, control, support, professional identity and clinical supervision. When nurses are compared with other health and care professionals, common factors associated with resilience are being female and having a good work-life balance. McCann et al (2013) conclude that more research must be undertaken to determine the interaction between those individual and contextual factors.

Maben et al's (2012) mixed methods study of associations between patient experiences of care and workplace wellbeing of nurses in older adult wards derived a seven factor model for nurses' experience and wellbeing comprising: work climate, co-worker support, job satisfaction, organisational climate, perceived organisation support, low emotional exhaustion and supervisor support. Maben et al (2012), with reference to Boorman's (2009) and Black's (2009) reports, define wellbeing as an 'individual's subjective experience and functioning at work' which includes job satisfaction, affect and motivation emotional labour and issues of emotional exhaustion and burnout. Their survey

included measures of demand, control, positive and negative affect, job satisfaction, support, performance, competence, dedication and team climate.

Johnson et al's (2012) study addressed English mental health workers' wellbeing at work under the umbrella term of 'morale'. This comprised burnout, job related affective wellbeing, job satisfaction, psychological health according to the General Health Questionnaire and a job involvement scale, as well as measurement of job characteristics according to the demand-control model. Johnson et al(2012) found all of the characteristics measured were significantly intercorrelated. The factors explaining the most variance in their model were first, 'emotional strain' (comprising high GHQ 12 scores, emotional exhaustion and low job related wellbeing) and second, job involvement and satisfaction. The morale study found that whilst staff wellbeing (as measured using the Job Related Affective Wellbeing Scale (Warr, 1990)) and job satisfaction were relatively high, emotional exhaustion using the Maslach Burnout Inventory was higher than most comparator groups. However, high emotional exhaustion has been shown to be a characteristic of caring work, particularly mental health caring work (van Daalen et al, 2009), which can be counterbalanced by workplace social support and well managed balancing of family and work (van Daalen et al, 2009).

The Maben et al (2012) and the Johnson et al (2012) studies offer a relatively contemporaneous account of workplace wellbeing in UK nurses and health professionals. Neither of these studies, nor the systematic reviews described above looked at nurses' global SWB beyond work, nor did they take a view of mental ill health beyond work-related stress and present measures of affect. The mental health and SWB of mental health nurses is clearly an under researched area. The present study offers both a broader perspective on mental health nurses' mental health (encompassing happiness, SWB and past and present experiences of mental illness) and a more subjective individualised perspective (in the form of subjective accounts of mental health problems and SWB).

The theories, models and concepts summarised in this section offer a degree of insight into mental health nurses' mental health and SWB, through associated

characteristics that have been explored in relation to other nursing or health and care professional groups, and occasionally in relation to mental health nurses specifically. Existing models do not fully account for the ways in which mental health nurses with mental health problems (including those not originating from work) negotiate and use their experiences of mental illness in their work. Secondly, whilst there is a body of research and theory on how nurses and health and care professionals 'cope', including their self caring, self nurturing and 'coping' strategies', there is limited evidence on how mental health nurses with high SWB or with subjective experience of mental health problems look after their mental health. The initial conceptual framework suggest that workplace and individual factors will feature, as will some of the contextual factors (mental health nurses' troubled identity and the impact of stigma and discrimination), although these factors must be further explored, with a specific focus on SWB and subjective experience of mental illness. This exploration will occupy the rest of this thesis.

2.5 Conclusion

This chapter has described the background, rationale and key concepts associated with the study of mental health nurses' mental health and SWB. The rationale for studying UK mental health nurses has been provided, with reference to current discourses on the state of the profession, and on mental health and work in the UK. The recent policy context regarding the mental health and wellbeing of mental health workers has been discussed in the broader context of the mental health of workers and of NHS workers in particular. The study has also been situated in the context of regulation and legislation as they relate to healthcare professionals. A review of policy and national reports suggests that it is time for a study of how nurses can be mentally well at work even if they have mental health problems. Such a study could lead to recommendations for interventions or practices that would support the ongoing wellbeing of healthcare workers and nurses in particular.

In Chapters 3 and 4 the bodies of literature on SWB in nurses and the literature on the mental health of mental health nurses are reviewed. These reviews have underpinned the development of a research methodology and research

questions that address gaps in the understanding of how mental health nurses' experience of mental health and wellbeing informs and is informed by their work.

There is clearly scope for a study that explores the interaction between subjective experience of mental health problems and SWB in mental health nurses. Furthermore, a study that evaluates mental health nurses' SWB is in keeping with the 'health and wellbeing' approach to the healthcare workforce supported by the UK government (Boorman, 2009; Black, 2009). Such a study is thus timely and original.

Chapter 3 Literature review: the subjective wellbeing of UK mental health nurses?

3.1 Introduction

This chapter presents a review of the primary research literature on the subjective wellbeing (SWB) of mental health nurses. The aim of the review is to answer the research questions:

How has the SWB of mental health nurses been measured?
What is the state of mental health nurses' SWB?
What personal, demographic and workplace factors are associated with SWB in mental health nurses?
What is the impact and influence of SWB on being a mental health nurse?

The chapter begins with a discussion of common themes in the study of subjective wellbeing (SWB), followed by a review of the research literature on the SWB of all nurses. The heterogeneity of the studies precluded doing a meta analysis, so this chapter presents a summary of the methods, quality and findings of each type of study, followed by a narrative response to the review questions. All tables are presented at the end of this chapter.

3.2 Background

Subjective wellbeing (SWB), or happiness, has been the subject of considerable international research since the 1960s (Dolan et al, 2011). The field of positive psychology has gained prominence in recent years. Governments have taken an increasing interest in happiness and SWB as an alternative means of measuring prosperity to the measurement of economic growth (OECD, 2013; Dolan and Metcalfe, 2012) and there have been progressive developments in the identification of relationships between subjective appraisals of wellbeing and other personal and environmental factors (Pavot and Diener, 2008; Diener et al, 1999; Diener, 2013).

SWB can be influenced by life events (Gomez et al, 2009) and has been shown to change over time, being more subject to fluctuation than some personality traits or physical characteristics, such as weight and blood pressure (Fujita and Diener, 2005), although SWB is correlated with the personality traits of neuroticism and extraversion (Gomez et al, 2009). This suggests that there is worth in identifying correlates with and influencers of SWB, as aids to the enhancement of high SWB. The life satisfaction component of SWB, particularly as measured using the Satisfaction with Life Scale (SWLS) (Diener et al, 1985), has been shown to correlate with 'a complex amalgam of immediate, intermediate and long-term components' (Pavot and Diener, 2008, p148), such as mood changes, life events (such as unemployment or widowhood) and personal disposition.

The number of primary research studies on SWB, or 'happiness' has grown exponentially in recent years, in line with the increasing national and international policy focus (Slade, 2010). Much research on SWB consists of cross sectional surveys, however, there have been calls for more experimental and longitudinal studies to be conducted (Diener, 2000; Fujita and Diener, 2005), to take account of the way SWB changes over time and in response to life events.

Cross sectional survey research is a useful starting point for the study of SWB within a given population because incidence, prevalence and correlations should be established in order to justify more experimental work. There is a limited body of published research on nurses' SWB or positive mental health. The focus has most often been domain specific SWB, particularly focused on the life domain of work, rather than on global (overall) happiness or life satisfaction (Lu et al, 2012; Adriaenssens et al, Delaney and Johnson, 2014; Simpson, 2009).

The relationship between SWB and demographic and workplace factors has previously been studied in UK population in cross sectional surveys of general household samples (Chanfreau et al, 2013; Dolan et al, 2008). Men have been found to have higher SWB using some scales (Tennant et al, 2007; Bartram et al, 2009) whereas women have scored higher than men on others (ONS, 2012,

Maltby and Day, 2004; Pavot and Diener, 2008). In UK general population studies SWB has been higher at the younger and older ends of the age spectrum (Tennant et al, 2007; ONS, 2012; Siedlecki et al, 2008) and household size has been found to impact on male and female SWB differently, in that an increasing number of children does not affect female SWB but male SWB decreases as households get bigger (Chanfreau et al, 2013). Living alone is associated with relatively low SWB for men but not for women, with male SWB being at its best when living with one or two people (Health Survey for England, 2011; Chanfreau et al 2013).

Graham and Shier (2009, 2010) conducted a mixed methods study of social workers in Canada from the perspective of SWB and finding out how social workers with high SWB looked after their SWB. The focus of their study contrasted with the usual focus in studies of health and care workers on stress and burnout. From a large scale survey (n700), 13 social workers who scored as having high SWB were interviewed. The themes that arose from their interviews were: professional opportunities, boundaries, practices and limitations as well as certain personal factors such as connecting with spirituality, routines, activities and also the impact of relationships both within and outside of work. Graham and Shier's work has informed the present study because it highlighted an avenue to research into the mental health of health and care workers that complemented existing research but moved debate and discussion down a new path.

As discussed in Chapter 2 there has been considerable research on the workplace wellbeing of nurses, particularly in relation to stress, burnout, job satisfaction and work engagement (Gärtner et al, 2011; Beck, 2011; Hegney, et al, 2014). The present review is concerned with global rather than domain specific workplace wellbeing. Many of the studies included in this review have considered SWB in relation to work-related factors, exploring the correlations between nurses' subjective accounts of their wellbeing and their self- reports of their work and home life experiences. In order to meet the inclusion criteria for the review they must have also included a global measure of SWB or must have considered nurses' overall SWB.

3.3 Search strategy

The scoping review found no previous studies looking specifically at the SWB of UK mental health nurses. The search undertaken for this study found only two studies looking at SWB in mental health nurses, one in India (Chakraborty, Chatterjee and Chaudhury, 2012) and one in Australia (Rose and Glass, 2006); only one study of UK nurses (Mackintosh et al, 2007), one study of UK (Welsh) nursing students (Hawker et al, 2012) and one study of English nursing students (Por et al, 2011). Because of the limited previous research on UK mental health nurses, the scope of the review was expanded to include all international English language primary research on the SWB of nurses from all of the branches of the profession, including student nurses.

An initial scoping review, following the methods proposed by Davies, Drey and Gould (2009) was conducted to get a sense of the available literature and to refine the study terms (see Appendix 1: Review protocol: the subjective wellbeing of nurses 2004-2014). The search protocol was then developed using a PICOS approach (Liberati et al, 2009): registered nurses (Population), identified through the root '*nurs*; any intervention or combination of interventions where subjective wellbeing was measured as part of the intervention or as an outcome measure for an intervention (Interventions); no restrictions on control groups were set (Control); any outcome, described by researchers as specifically measuring subjective wellbeing (Outcomes); all study designs, including qualitative study designs (Study Design). Synonyms for SWB used in the searches were: *'subjective wellbeing' 'subjective well being', subjective well-being', 'happiness' 'mental wellbeing', 'satisfaction with life*'.

Parameters of 2004 to 2014 were set to take account of a previous review in the study of SWB and job satisfaction by Sparks et al (2005) in the US. The present review considers the state of the field of research after Sparks et al's review. The databases that were searched for publications from 1/1/2004 to 31/12/ 2014 were: Cinahl, Medline, PubMed, Science Direct, Web of Science, Web of Knowledge, Social Science Citation Index, PsychINFO, PsychARTICLES. Hand searching of reference lists, following up of citations and a review of grey literature were also conducted.

Data abstraction forms were used for each study, collating the study designs, settings, participants, sample sizes, measures of mental ill health used, the nature of the interventions/surveys, outcome measures and results. The quality, findings and methodological rigour of the studies was compared. A synthesis of findings was then constructed from the evidence from both types of study in order to address the review questions.

3.3.1 Inclusion criteria

All publications were assessed against the following general inclusion criteria: English language, describing primary research on nurses, published between January 2004 and December 2014, explicitly looking at global SWB. Commentary, anecdotal and review articles were excluded.

3.4 Search results

The study selection process (as per the PRISMA approach (Liberati et al, 2009)) is shown in Flowchart 3.1. A total of 1732 citations were retrieved using the search terms. Titles/abstracts were reviewed according to the inclusion criteria. In total 298 papers were reviewed in full (comprising 256 from the literature search of databases and 42 from the reference lists of included studies), using a data extraction pro forma (an example of which is in Appendix 2). From these, 46 papers were included in the final review, describing 43 studies.

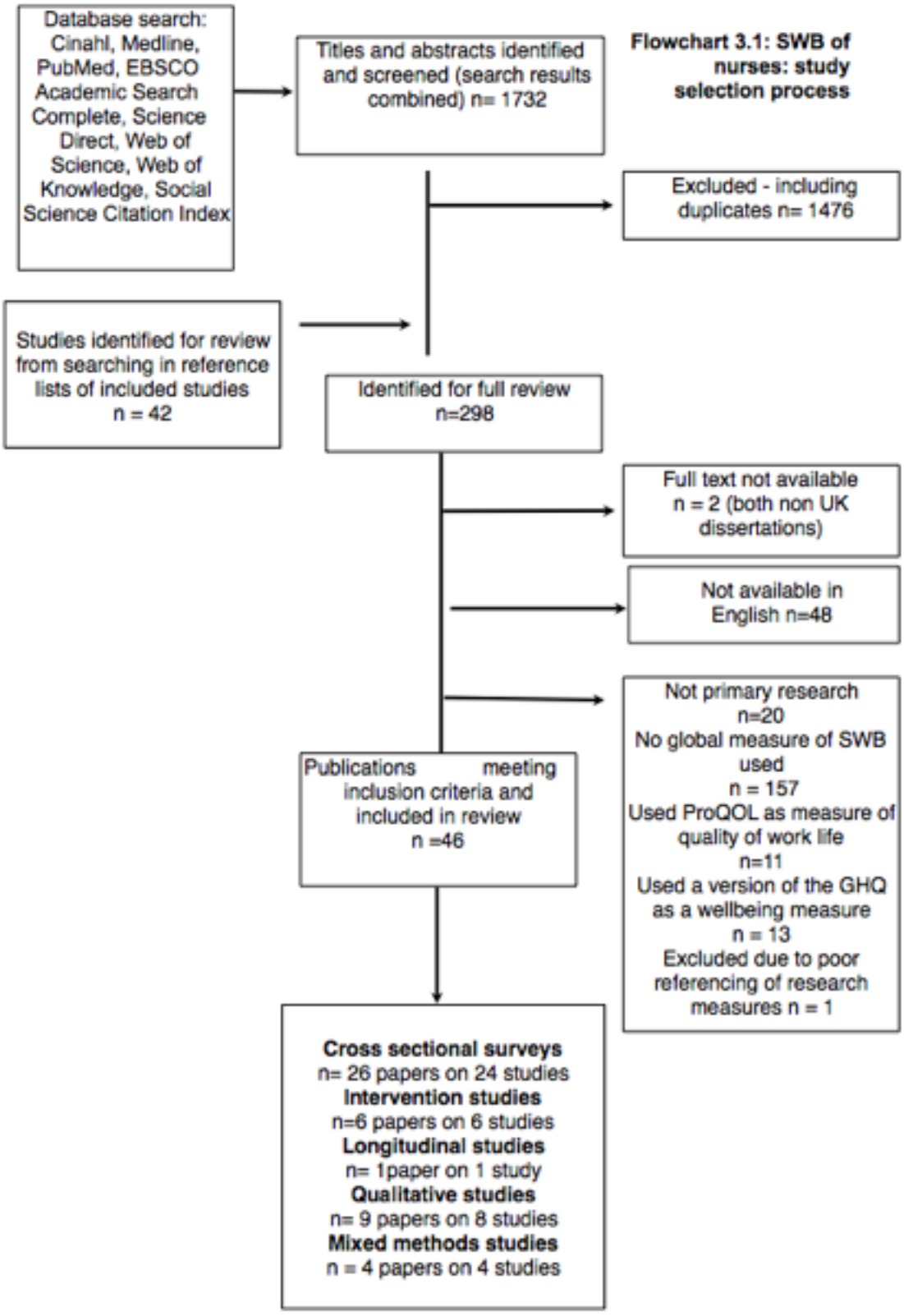
24 of the included studies (in 26 papers) were cross sectional surveys, with sample sizes of between 101 (Chakraborty et al, 2012) and 2086 (Zhang et al, 2014). There were: one study with a longitudinal element (Jacobs, 2013); six intervention studies (Bolier et al, 2014; Mackenzie et al, 2006; Pal, 2011; Appel et al, 2013; Lan et al, 2014; Ostermann et al, 2010); four mixed methods studies (Drury et al, 2013; Utriainen et al, 2011; Skinner et al, 2011; Salmond and Ropis, 2005) and nine papers describing eight qualitative studies, with sample sizes between five and 25 (Rose and Glass, 2006, 2009, 2010; Ward,

2011; Watkins et al, 2011; French et al, 2011; Mackintosh, 2007; Zwink et al, 2013; Freeney and Tiernan, 2009).

Table 3.1 summarises the methods and outcomes of the included studies. Table 3.2 summarises the objectives, samples size, population and response rate for the studies.

3.4.1 A note on the excluded studies

The vast majority of excluded studies (n = 1476) were excluded because they referred to patient and service users' SWB not nurses' SWB. Research papers on SWB and 'Nurs' were in the main written by or for nurses or about those in nursing care. Title reviews identified and discounted those studies whose subjects were 'wellbeing' in relation to nursing care and nursing provision rather than the wellbeing of nurses. Through the data extraction exercise 184 further papers were found not to meet the inclusion criteria. Of these, 157 were discounted because of their focus on domain specific aspects of nurses' wellbeing such as job satisfaction without measuring global SWB. This meant that studies using measures such as the ProQOL (Stamm, 2010) were excluded as well as those studies not using a positive measure of wellbeing (instead, for example, using the GHQ12 (Goldberg and Williams, 1978), which measures presence of psychiatric symptoms rather than SWB. A case has been made for the GHQ as a measure of positive mental health (Hu et al, 2007), however the presence or absence of reported symptoms must be differentiated from research subjects' subjective assessments of their overall wellbeing (which is what this review is concerned with) and also from studies that are situated within the field of happiness research.


Database search: Cinahl, Medline, PubMed, EBSCO Academic Search Complete, Science Direct, Web of Science, Web of Knowledge, Social Science Citation Index
Titles and abstracts identified and screened (search results combined) n= 1732
Flowchart 3.1: SWB of nurses: study selection process
Excluded - including duplicates n= 1476
Studies identified for review from searching in reference lists of included studies n = 42
Identified for full review n=298
Full text not available n = 2 (both non UK dissertations)
Not available in English n=48
Not primary research n=20
No global measure of SWB used n = 157
Used ProQOL as measure of quality of work life n=11
Used a version of the GHQ as a wellbeing measure n = 13
Excluded due to poor referencing of research measures n = 1
Publications meeting inclusion criteria and included in review n =46
Cross sectional surveys
n= 26 papers on 24 studies
Intervention studies
n=6 papers on 6 studies
Longitudinal studies
n= 1paper on 1 study
Qualitative studies
n= 9 papers on 8 studies
Mixed methods studies
n = 4 papers on 4 studies

3.5 Cross sectional studies

3.5.1 Methods: measures of subjective wellbeing

Hedonic, evaluative and eudaemonic measures have been used to measure nurses' global SWB. The included cross sectional surveys all used validated measures of SWB. The characteristics of these measures are summarised in Table 3.3. The Satisfaction with Life Scale (SWLS) (Diener et al, 1985) was the most commonly used measure of SWB. It measures SWB as 'global life satisfaction'. Other 'life satisfaction' scales (Life Satisfaction Index Z(LS-Z) (Wood et al, 1969), Life Satisfaction Scale (LSS) (Quinn and Shepard, 1974) and Life Satisfaction Scales Applicable to College Students in Chinese (Wang, 2005)) were used in three separate studies.

Other scales measured solely the hedonic experiential aspect of SWB, either in terms of self-reports of 'happiness' over a recent period of time (Happiness Measures Questionnaire(Fordyce, 1988); Oxford Happiness Inventory(OHI) (Hills and Argyle, 2002), Subjective Happiness Scale(SHS); WHO-5 wellbeing scale(Bech, 2004)) or the balance of positive and negative affect (Lyubomirsky and Lepper, 1997); Positive Affect Scale, Negative Affect Scale (PANAS) (Watson et al, 1988); Positive Affect Scale and the Negative Affect Scale (Džuka and Dalbert, 2002). Other measures looked at SWB as a combination of different life domains as well as global SWB: the PGI general well-being scale (Verma and Verma, 1989), Personal Wellbeing Index (PWI) (International Wellbeing Group, Personal Wellbeing Index, 2006); Semantic differential items for measuring job, family, and life satisfaction (Simunić and Gregov, 2012); and WHO QOL (Tazaki and Nakane, 2011). One scale, the Ryff's Psychological Well-Being Scale (RSPWB) (Ryff, 1989), as used by Loukzadeh and Bafrooi (2013) and Sahebalzamani et al (2013), measured eudaimonic wellbeing, rather than evaluative or hedonic wellbeing. The range of tools used meant that (aside from with the SWLS, which has been used in several studies) it was difficult to compare outcomes between studies.

The studies often used a measure of SWB alongside other psychometric measures in order to identify correlations between SWB and other traits or states, such as loneliness, job satisfaction or emotional intelligence. Outcomes were commonly reported as correlation coefficients or compared means. This was often between groups within the sample, for example student nurses with higher or lower academic grades (Yildirim et al, 2013), or nurses in different age groups or with different years of nursing experience (Gurková et al, 2012, 2014).

3.5.2 Findings

Table 3.4 summarises the findings and observations on the rigour of each study. Table 3.5 shows the mean SWB scores of nurses in each study, along with normative scores, where available. Several studies did not present mean SWB scale scores, rather presenting correlation calculations between SWB measure scores and other measures. The normative SWLS score given by Diener et al for nurses is 23.6 (Pavot and Diener, 1993) and for English adults is 24.1 (Pavot and Diener, 2008). Nurses in the studies included here had mean scores of between 20.15 (Turkish nursing students) (Akhumlar, 2010) and 28.9 (evening shift nurses in Iran) (Vanaki and Vagharseyyedin, 2009). This puts nurses' SWB at between neutral (20 out of 25) and satisfied (26 to 30 out of 35).

High SWB was linked to hardiness, spiritual intelligence, emotional intelligence, good self-esteem and low levels of depression and anxiety. It was also correlated with self-reports of a healthy lifestyle, recent and regular physical activity, accessing social support and self-nurturance. High SWB was found to correlate significantly with the work related factors of high job satisfaction, lower burnout, high organisational commitment and career satisfaction. Survey participants who reported having good support from their supervisors, having flexible and manageable work schedules and shift patterns and who reported a 50/50 work/life balance had significantly higher SWB. However, for both the individual and work-related correlations, the strength of the association tended to be low (with r = below 0.6 in most instances). The findings of previous studies on SWB in nurses reveal the importance of satisfaction with work, self

nurturance and social support that have been found in studies of other populations.

In many studies, demographic factors did not correlate significantly with SWB scores. Demographic factors were associated with variation in mean SWB scores in Thai nursing students (Ratanasiripong and Wang, 2011) and Iranian hospital nurses (Vanaki,and Vagharseyyedin, 2009). Demographic variables that did correlate to SWB were found to be nursing student age (Zwink et al, 2013), students' academic grades and family income (Yildirim et al, 2013) and Czech nurses' age (Gurková et al, 2011).

3.5.3 Quality

The quality of studies was appraised through a checklist using STROBE criteria (Von Elm et al, 2007) on observational studies (see Table 3.6) and CASP criteria (see observations on rigour for each study in Table 3.4). This STROBE measure was used because of the precedent set by Gärtner et al (2010) for its use when looking at research on mental disorders in nurses. Overall the quality of the studies was high, reflecting appropriate methodology, analysis and reporting.

The majority of included studies met criteria for quality regarding the statistical tests used, details of the measures used (in this case measures of SWB) and for providing descriptions of the study population being investigated. The exceptions was Akhunlar (2010) who did not report the demographic characteristics of his sample in detail. In three studies measures of SWB were used but the concept of subjective wellbeing or life satisfaction was not discussed and defined (Por et al, 2011; Simunic and Gregov, 2012; Yildirim and Aycan, 2008). All studies described the source of their participants and their methods of recruitment.

Response rates for three studies did not all meet the STROBE standard of over 50% (Burke et al, 2011; Yildirim and Aycan, 2008; An et al, 2014). Also a number of studies did not give their response rates (Akhunlar, 2010; Chakraborty et al, 2012; Faribors et al, 2010; Nemcek, 2007; Ratanasiripong

and Wang, 2011; Rochlen et al, 2009; Sahebalzamani et al, 2013; Sparks et al, 2005; Yildirim et al, 2013; Zhang et al, 2014).

Most studies were small scale and single site. Low response rates, convenience sampling and single site sampling limited the claims to external validity and generalisability of many studies (An et al,2014; Akhunla, 2010). Study objectives, designs and measures of SWB were in most cases clear and well justified, however in some cases response rates and/or sampling methods were not described (Montes-Berges and Augusto-Landa, 2014; Nemcek, 2007b; Zhang et al, 2014).

Study findings were based on appropriate statistical tests. For most studies the reliability of measures was tested and reported in terms of Cronbach's alpha. Most study authors acknowledged the limitations of the cross-sectional design in terms of ascribing causality or direction of influence. They also acknowledged the limitations of single site samples and self-report measures. Several studies also identify the risk of social desirability bias and the Hawthorne effect.

3.6 Longitudinal studies

3.6.1 Methods

One longitudinal study of nurses using a SWB was found (Jacobs, 2013) in which multilevel regression analysis was undertaken using survey and diary data on 137 nurses who took part in the Oregon Nurse Retention Project (ONRP) (Sinclair et al, 2009). The aim of the study was to monitor the interaction between work events and wellbeing in terms of 'stress reactivity' as part of a wider study on nurse retention and turnover. The nurses completed surveys of demographic, health behaviour and wellbeing in two Waves (including the SWLS at Wave 2), four months apart. In the interim they completed 12 weeks' worth of diaries on health behaviours and work events.

3.6.2 Findings

Jacobs (2013) found that SWLS scores correlated with healthy eating and exercise, with those nurses showing increased days of exercise during weeks of greater demand having lower depression scores and higher satisfaction with life. Satisfaction with life scores were negatively correlated with the personality traits of neuroticism, depression and reactive health behaviour.

3.6.3 Quality

The quality of Jacobs' study was measured using Specialist Unit for Review Evidence (SURE) (2013) criteria, as summarised in Table 3.7. Jacobs (2013) conducted her longitudinal survey as part of a larger web based study. She said that this meant that accurate sample sizes and response rates could not be calculated. Also, unfortunately the SWLS was only used at Wave 2 of the survey, so changes in SWLS over time were not measured, meaning there was not truly a longitudinal measure of SWB, despite being used in a longitudinal study. The limitations of the measures used and timeframes were acknowledged, as were limitations of self-report measures and the characteristics of the sample. The strengths of Jacobs' approach were her geographically diverse sample (enhancing generalizeability), the longitudinal element, and its embedding in a large scale research project.

3.7 Intervention studies

3.7.1 Methods

Six intervention studies were reviewed. Bolier et al (2014) used cluster randomized control methodology in an evaluation of the impact of an online intervention on nurses' wellbeing. Ostermann et al (2010, p2) conducted a 'pilot descriptive study' using a 'time-series design with three measurement points'. They measured life satisfaction, using the Brief Multidimensional Life Satisfaction Scale (BMLSS), as well as work environment, client satisfaction and self ascribed professional competence in 55 nurses and healthcare

workers, as well as 44 patients, at three time points in order to measure the impact of a team building process in a neurological rehabilitation service.

In a case control study, Pal (2011) compared mean scores on a SWB inventory between a test and control group of nursing students, where the test group had been taught a meditation technique. In Mackenzie et al's (2006) case control study the intervention group were taught a mindfulness technique, with differences between the groups pre and post being measured using the SWLS. In a similar study Appel et al (2013) measured happiness using Fordyce's (1988) Happiness Measures Questionnaire as well as a Gratitude Survey (McCullough et al, 2002) before and after the use of journaling as a SWB intervention with medical-surgical nurses. Lan et al (2014) conducted a pre and post study of a single group of critical care nurses who had been taught a mindfulness technique, using a Subjective Happiness Scale (Lyubomirsky and Lepper, 1997).

3.7.2 Findings

Three of the intervention studies (Lan et al, 2006, Mackenzie et al, 2006; Pal, 2011) found that meditation and mindfulness exercises had a positive impact on SWB, whereas the gratitude intervention (Appel et al, 2013) and the workplace online wellbeing intervention were not found to significantly affect SWB (Bolier et al, 2014). In Ostermann et al's (2010) study life satisfaction within the team and across all professions was found to be high at the baseline. They did not report a change in life satisfaction over the study period. The combined findings of these studies suggest that there are training interventions that can enhance SWB.

3.7.3 Quality

The quality of the intervention studies was measured using Specialist Unit for Review Evidence (SURE) (2013) criteria, as summarised in Table 3.7. All studies articulated their study design and analysis processes within their reports. Bolier et al (2014) described the process of their cluster randomised controlled trial (RCT), which met Dutch Trial Registry RCT methodology and

reporting standards. The limitations on the quality of their study are described by the authors as a high attrition and low intervention adherence rate and not reaching the number of participants to achieve statistical power. They suggest that this may have impacted on the significance of their results. The generalisability of their findings was limited by the low number of participants, high drop-out rate and low adherence to the intervention.

Appel et al (2013) used convenience sampling, but with coin toss determination of intervention/ control group membership. Potential investigation team bias was mitigated for. Valid and reliable instruments were used but Cronbach's alphas were not reported and response rates were not given. They used appropriate statistical tests: Chi squared, t tests and ANOVA. Linear regression was used to determine the association between variables. Pal's (2011) paper on the impact of meditation consisted of solely a comparison of mean scores. Unlike the other SWB measures used in other studies, their measure was not easily accessible and no report on its validity for this study was provided. The paper presented research in a less comprehensive way than the others.

Lan et al (2014) also used a non-probability voluntary sample, and their sample did not meet the size calculated for statistical power. They acknowledged the limitations of their study to be the lack of control group, lack of follow up and the use of self-report measures. In Mackenzie et al's (2006) study a convenience sample was used and the recruitment strategy was not explained in detail. No measure of internal consistency of scales was reported. The authors acknowledged the limitations of their study to be its sample size, sample characteristics and the lack of follow up.

Ostermann et al (2010) also identified sample size and response rates as limiting the quality of their study. They stated that longitudinal or more differentiated data may have been more useful. They made specific reference to good practice in data collection and analysis (Swart et al, 2008). The scale they used had a high Cronbach's alpha. The statistical procedures used were limited due to low sample size and response rate. They identified the study's limitations to be the lack of differential data between staff groups, the risk of observation bias and limited generalisability from such a specific study population.

An analysis of the quality of these studies and their limitations suggest that future research on nurses' SWB should be with larger and more diverse groups of participants, accessed via probability and random sampling.

3.8 Qualitative research

3.8.1 Methods

Nine papers described eight qualitative studies of nurses' SWB. The numbers of participants ranged from 5 to 24, coming from Australia, Ireland, South Africa, the UK, the US and Finland. Two studies by Rose and Glass (2006, 2009, 2010) and one by Ward (2011)used a feminist methodology (Glass and Davis, 1998), incorporating reflective and creative work by the researcher as well as researcher participation and self-disclosure in the research process. Watkins et al, (2011) describe theirs as a 'qualitative, exploratory and contextual' design incorporating journal and creative techniques alongside interviews and focus groups in their work with nursing students. French et al (2011) and Mackintosh (2007) undertook thematic analysis of semi structured interviews with nurses relating to wellbeing as 'coping' at work. Zwink et al (2013) and Freeney and Tiernan (2009) thematically analysed focus group data on nurses' wellbeing and the work environment.

3.8.2 Findings

Table 3.8 summarises the findings of the qualitative studies. The studies analysed nurses' SWB in relation to work and identified a range of thematic concerns, some of which were contextualised by certain theoretical models, for example Freeney and Tiernan (2009) mapped their themes against a model of burnout and engagement (Maslach et al, 2001). Across the papers three broad themes emerge: nurses and the social environment at work, nurses' personal development and self care and the centrality of patient experience to nurses' SWB.

The studies found that the social environment impacted on SWB in nurses in a number of ways: managerial involvement and mutual support with colleagues was a factor (French et al, 2011); relational and collective wellbeing were as important as the individual dimension for student nurses (Watkins et al, 2011); peer relationships, collaboration and positive relationships were central to work engagement and satisfaction for nurse managers (Zwink et al, 2013); and having flexible and fair working arrangements was vital to wellbeing (Freeney and Tiernan, 2009).

Self nurturance was a theme across several studies. Nurses took active steps to look after their wellbeing through relaxation and mindfulness, enhancing a mind-body-spirit connection (Rose and Glass, 2006, 2009, 2010); developing personal coping mechanisms (French et al, 2011); developing a 'work persona' and managing the 'porous' boundary between work and life (Mackintosh, 2007). Where Nemcek and James (2007) used a 'self nurturance scale' to measure the extent to which nurses made health promoting choices for themselves, self nurturance and self care emerged as a theme through their nurse interviewee descriptions of wellbeing in relation to work.

Patient experience and relationships were at the centre of nurses SWB for Mackintosh's (2007) surgical nurses and for Rose and Glass' (2006) mental health nurses.

3.8.3 Quality

The quality of each qualitative study was compared against the relevant CASP criteria (Public Health Resource Unit, 2006) (see Table 3.9). All had clear statements of aims, suitable for qualitative methodology, with all but Freeney and Tiernan (2009) citing theoretical or methodological antecedents to their approaches. Eight of the studies reported having gained either university or hospital level ethics approval, and said that informed consent had been given, with confidentiality and anonymity of participants maintained. French et al (2011) and Rose and Glass (2006, 2009, 2010) acknowledged the potentially distressing subject matter for their interviews and made provision for debriefing and counselling.

All but one paper (Zwink et al, 2011) gave details of their recruitment strategy. Given that several studies were undertaken by researchers who were also either tutors, colleagues or supervisors of the research subjects, the influence of prior relationships and bias was not much discussed. For those researchers using an explicitly feminist approach (Rose and Glass, 2006, 2009, 2010; Ward, 2011), the emancipatory and subjective approach of the researcher was explicitly discussed and rationalised.

All but two studies (Freeney and Tiernan, 2009, and Rose and Glass, 2006) detailed their approach to data analysis, with reference to methodological theory. They demonstrated rigour through detailing the process of analysis. Their approaches were variously described as ‘thematic analysis’ or ‘content analysis’. All studies contained clear statements of their findings and put those findings in the context of the contribution the research was making to both research and nursing practice. Commonly, the study authors recognised the limitations to generalisability of the findings due to the size and specificity of their samples.

3.9 Mixed methods studies

3.9.1 Methods

Four mixed methods studies were reviewed. Drury et al (2013) reported on the interview phase of a mixed methods study, the survey element of which has been described by Hegney et al (2013) and is discussed in Chapter 4. Skinner et al (2011) also reported on a two phase study, using telephone interviews and then semi structured focus groups. Both parts of their study were described sequentially in the one paper. Utriainen et al (2011) used a grounded theory approach to the development of a nurse engagement measure, with the results of interviews and diaries informing scale development and theory testing. Salmond and Ropis (2005) undertook a survey of medico surgical nurses, using the Affect Balance Scale (ABS) (Bradburn et al, 2001), a comprehensive measure of SWB, to measure mental wellbeing, alongside a measure of job

stress. Interviews were undertaken a month later with a purposive sample of survey participants.

3.9.2 Findings

The mixed methods findings were similar to those of the qualitative studies, that the social environment at work and nurses own self caring activities were vital to good SWB. Drury et al (2013) linked their findings to the concept of resilience and the impact of the social environment on the SWB of nurses through social networks, infrastructure and leadership. For Utriainen et al(2011) SWB was associated with work status and community, and through working with others and having independence. For Skinner et al (2011) SWB was promoted by flexible and fair working arrangements. Similarly to the nurses in the qualitative studies, SWB was associated with making healthy lifestyle choices (Drury et al, 2013) and with managing the 'porous' boundary between work and home life (Mackintosh, 2007; Skinner et al, 2011). For Utriainen et al(2011) ageing nurses, nurse-patient interaction and patient centred care were also key aspects of wellbeing.

3.9.3 Quality

The quality of the qualitative aspect of these studies was measured using CASP (Public Health Resource Unit, 2006) criteria (see Table 3.9). Drury et al (2013)'s study met all of the CASP quality criteria, in that they described and justified their aims, methods and analysis. They presented their thematic analysis with reference to Braun and Clarke's (2006) approach and set the mixed methodology in the context of Johnson and Onwuegbuzie's (2004) work on pragmatism in mixed methods research. Theirs was the only one to describe itself as 'mixed methods'. The others studies described sequential or concurrent research using more than one means of data collection, but did not relate it to the mixed methods paradigm.

Utriainen et al (2011) put their study in a theoretical context, linking the qualitative element to Glaser's (1998) grounded theory. They also described their analytical approach to qualitative data analysis in relation to a theoretical

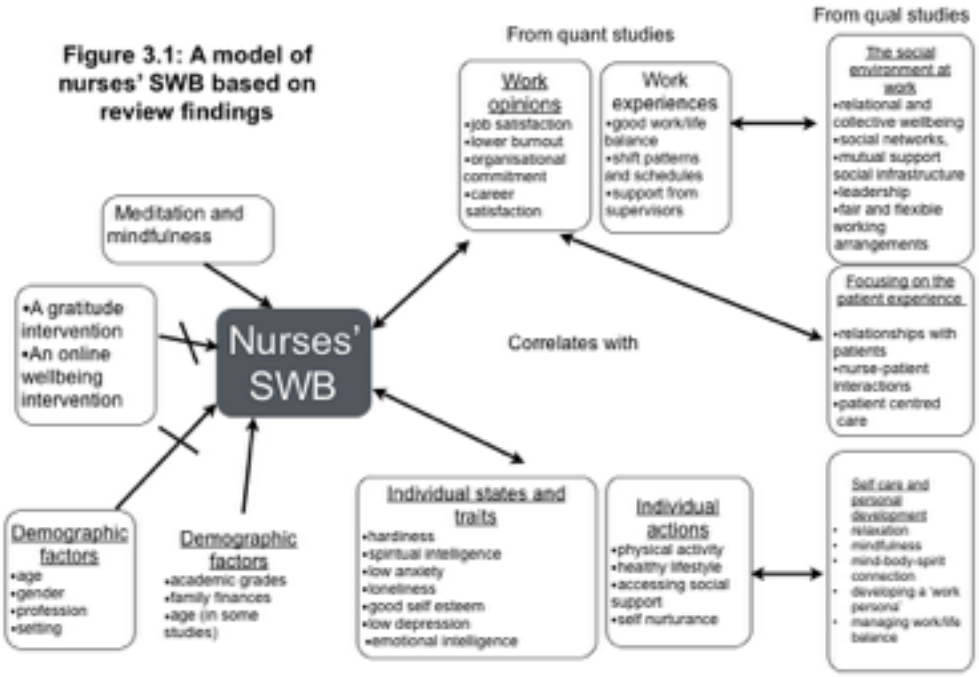


Figure 3.1: A model of nurses' SWB based on review findings

model. However, they did not describe their recruitment strategy for all stages of their study, nor did they discuss ethics and relationships between researchers and participants. Skinner et al (2011) did link their methods to their aims and also described in detail their recruitment and analysis strategies. They presented two 'studies' in the one paper, and whereas the methods for their first study were aligned with previous research, those for their second study were not. Also, like Utrianen et al (2011), they did not discuss relationships, bias or ethics in relation to their study.

The quality of Salmond and Ropis' (2005) study was measured using the STROBE criteria (Von Elm et al, 2007) (see Table 3.6). They used a convenience sample of home care and medical surgical nurses. They acknowledged the limitations of this but did not discuss the limitations of their analytical and cross section approach. They did not report on the validity of their chosen tools for this group of subjects.

3.10 Discussion: answering the review questions

Figure 3.1 presents a model of nurses' subjective wellbeing based on this review findings. It shows that qualitative studies associate high SWB (or qualities associated with SWB) with the social environment at work, with patient experience and with nurses' self caring practices. Certain individual personal qualities, states and traits such as hardiness and emotional intelligence are associated with high SWB, as are certain work experiences and opinions about work. In some studies demographic factors are associated with SWB, in some they are not. Meditation and mindfulness interventions appear to have an impact on SWB, but a gratitude intervention and an online health promotion intervention did not.

3.10.1 How has the subjective wellbeing of mental health nurses been measured?

There is minimal research on the SWB of mental health nurses as a distinct group, and research on nurses or nursing students in the UK using SWB specific measures is limited to one study each (Hawker, 2012; Mackintosh, 2007). The research literature reviewed here shows that nurses' subjective wellbeing outside the UK has been the focus of some studies, mainly cross sectional surveys. Studies have tended to use a measure of SWB in conjunction with other psychometric measures, with the aim of identifying associations between SWB and other characteristics, such as emotional intelligence or job satisfaction. There have been five intervention studies wherein the impact of wellbeing enhancing techniques (meditation, journaling, mindfulness, health promotion) have been tested with nurses and colleagues, and a measure of SWB has been used to gauge their impact. There have been eight qualitative and four mixed methods studies. These have aimed to gather insight into how nurses manage and perceive their wellbeing, in relation to work. This review of the literature suggests that further research should be undertaken on mental health nurses' SWB with a range of measures, specifically the use of measures of global SWB such as the Warwick Edinburgh Mental Wellbeing Scale (WEMWBS) (Stewart-Brown and Janmohamed, 2008) as well as or instead of the SWLS, given that the SWLS only measures the evaluative aspect of SWB. There is a lack of qualitative research looking specifically at SWB in relation to mental health nurses' mental health, given that

the qualitative studies found here looked at ‘wellbeing’ from the perspective of work engagement, compassion satisfaction and coping with emotional work. There is also a lack of research on nurses with high SWB in particular. This is an under researched area, particularly in the UK.

3.10.2 What is the state of mental health nurses’ subjective wellbeing?

The evidence available to address this question consisted of the survey and intervention study research reviewed here. The scope of this review was widened to include studies of all nurses, including student nurses, rather than just UK mental health nurses, due to the lack of studies of mental health nurses’ SWB. The SWLS scale was the most commonly used SWB measure. Nurses’ mean scores ranged from 20.15 in Turkish nursing students (Akhunlar et al, 2010) to 28.9 in evening shift nurses in Iran (Vanaki and Vagharseyyedin, 2009), setting their life satisfaction as between ‘neutral’ and ‘satisfied’ according to SWLS criteria. Pavot and Diener (2008) present normative data for a range of populations. They give the normative mean score for English male adults as 23.0 and for English female adults as 23.7. Pavot and Diener (1993) cite a mean score for English adults as 24.1 and for nurses and healthcare workers as 23.6. The range of SWLS scores in the studies of nurses reviewed here reflects SWB both higher and lower than to be expected for the working age adult population.

Table 3.5 summarises the mean scores for all relevant studies, and includes normative data where this was available, either within the study paper or from the original citations for the scales used. This shows that Hawker et al (2012) found nursing students’ SWLS scores to be lower (22.9) than expected for English working age adults (24.1) and lower than the normative score for nurses (23.6). Whilst there is no data available on UK nurses, Canadian, Australian and Dutch studies show that the state of nurses’ SWB in affluent countries is mixed, with Bolier et al (2014) finding nurses and allied health professionals’ WHO-5 scores to be below expected norms in the Netherlands, whereas Mackenzie et al (2006) found Canadian nurses’ SWLS scores to be above expected norms even before their wellbeing intervention. Of course, caution must be used in

comparing these samples, given the different socioeconomic standing of nurses in different countries and at different time periods.

The majority of studies had sample sizes of less than 250 nurses. For all of the studies cited with sample sizes greater than 250 (Abdollahi et al, 2014; Gurková et al, 2014; Makable et al, 2014; Sahebalzamani et al, 2013; Zhang et al, 2014; Yildirim et al, 2013) only Yildirim et al's (2013) study gave normative data available for that country. In that case the mean score (22.9) was close to that of the nurses' norm of 23.6. The available data suggests that there is more research to be done to understand thes tate of nurses' SWB, particularly as the normative data available for the SWLS, as cited by Pavot and Diener(2008), is not recent and comes from one study (Judge, 1990).

3.10.3 What personal, demographic and workplace factors are associated with subjective wellbeing in mental health nurses?

A number of factors are associated with nurses' SWB, although findings were not consistent across studies. No significant relationship between demographic factors and happiness was found by Akhunlar (2010) and Faribors et al (2010). In some cases demographic variables were associated with changes to mean scores on the SWLS (Vanaki and Vagharseyyedin, 2009). In their 2013 study of Czech nurses, Gurková et al (2013) found that age was correlated negatively with life satisfaction, but positively with job satisfaction. Sparks et al (2004, 2005) in the US, found a weak correlation between job satisfaction and life satisfaction in their survey of US nurses, although they found nurses to have higher life satisfaction yet lower job satisfaction than population norms.

Nurses' SWB may be affected by their healthy living and self caring practices. Hawker et al (2012) found that body mass index (BMI) but not physical activity was a 'weakly significant' predictor of life satisfaction. Jacobs (2013) found that nurses who undertook more exercise and healthy eating had higher SWLS and lower depression. The wellbeing interventions of mindfulness training (Lan et al, 2014) and meditation (Pal, 2011) were found to positively impact on happiness. Drury et al's (2010) nurses said that they used mindfulness and meditation in stress management. Ward's (2011) interviewees also talked about how they has

adopted mindfulness techniques into their work. This has also been found to be a wellbeing practice in doctors and social workers (McCann et al, 2013; Shier and Graham, 2011). These practices may also be likened to the 'self-nurturance' described in Nemcek's, (2007) and Rose and Glass' (2010) work.

Certain traits and approaches to life are associated with higher SWB. Hardiness was found to be a mediator of stress and happiness in Iranian nurses (Abdollahi et al, 2014), with hardiness being defined as the extent to which a person handles life events with commitment, control and challenge (Khoshaba and Maddi, 2008). Happiness and gratitude were associated in Appel et al's (2013) study, with gratitude being a state or disposition of appreciating life and aspects of life (Wood et al, 2010). Problem focused coping rather than emotion focused coping was more positively correlated with SWB in Iranian nurses (Loukzadeh and Bafrooi, 2013). Montes-Berges and Augusto-Landa (2014) found that nurses with high ability to emotionally self-repair scored more highly on the SWLS. Similarly, self-nurturance was associated with higher life satisfaction in nurses in Nemcek et al's (2007a, 2007b) studies as was emotional intelligence by Por et al (2011). A positive relationship between spiritual intelligence and life satisfaction has also been found (Sahebalzamani et al, 2013).

There was a correlation between job satisfaction and SWB for nurses, as there is in the general population (Sparks, 2005). Life satisfaction and job satisfaction were correlated for Korean nurses working in the US (An et al, 2014). 'Sense of general wellbeing' was a predictor of lower burnout in Indian psychiatric nurses, however this was not as significant as other personality and situational factors (Chakraborty et al, 2012). In Gurková et al's (2011) study of Slovak nurses positive affect was associated with job satisfaction, whereas frequency of negative affect was not associated with job satisfaction overall. Gurková et al's (2013) study of Czech nurses did find a low association between job satisfaction and life satisfaction. Positive and negative affect were predicted by the opportunities nurses had to interact and satisfaction with what their work schedules were. Lan et al (2004) found that working night shifts was associated with lower SWB, whereas when Simunić and Gregov (2012) found that Croatian nurses who worked different shifts and irregular and backwards rotated shifts had lower SWB than their colleagues. For nurses in Yildirim and Alcan's (2008)

study work overload and irregular working schedules predicted work-family conflict as well as low life and job satisfaction.

Hospital culture and support at work were linked with higher life satisfaction and lower numbers of psychosomatic complaints (Burke et al, 2011). In some qualitative studies flexible working arrangements, such as part time working, reportedly positively affected self-assessed work-life balance (Skinner et al, 2011; Harris et al, 2010) and professional fulfilment (Edwards et al, 2003). In Mackintosh's(2007) study, surgical nurses described the impact of their work experience on themselves. For Rose and Glass's (2010) nurses, nursing was seen as 'emotional work', where the nurses gave significantly of their emotional selves as part of their labour. The impact of coping and wellbeing interventions directly aimed at nurses have been measured in several studies (Irving et al, 2009; Appel et al, 2013; Bolier et al, 2014; Mackenzie et al, 2006; Ostermann et al, 2010).

In summary, the published research shows that nurses' SWB is associated with numerous factors, some individual and personal, some social. Working environments and satisfaction with work play a part. The lack of evidence on UK mental health nurses means that the extent to which the correlates of SWB in other groups of nurses are the same in the UK are not known. The use of convenience sampling and the specific nursing populations from which participants have been drawn mean that generalisations from these studies to UK nurses should be cautious.

3.10.4 What is the impact and influence of subjective wellbeing on being a mental health nurse?

The qualitative and mixed methods studies give an insight into the interaction between work and SWB, as perceived by nurses. Concepts that were discussed in Chapter 2 emerged here: identity and self; compassion satisfaction; resilience and engagement. Whilst they do not describe nurses' happiness per se, Drury et al (2013) described 'compassion satisfaction' as being supported by the social environment and infrastructure at work. Drury and Hegney et al (2008) also described how nurses 'resilience build' through developing positive coping

strategies such as mindfulness and meditation skills. For Freeney and Tiernan (2009) (who were concerned with 'work engagement' and avoiding burnout rather than happiness) a number of workplace factors, including workload, control, values and perceptions of fairness and reward affected whether nurses had a positive experience of work. Lee et al (2004) found that burnout was associated with more variance in life satisfaction than work satisfaction, suggesting that it is a syndrome with an impact outside as well as inside work. Managerial support, mutual support with colleagues and training were found to be important for emotional wellbeing in French et al's (2011) study, as were the personal attributes of faith and self-motivation. Mackintosh's (2006) surgical nurses talked about having 'a work persona' as a means of 'protecting the self' at work. Ward's (2011) nurse interviewees associated having a professional identity and being a nurse with their wellbeing, as it gave them 'a purpose'.

In their survey of Japanese nurses, Makabe et al (2014) found that the closer to an equal work life balance nurses had, the better their life satisfaction and quality of life. They found that most nurses did not have the work/ life balance they desire. Skinner et al (2011), in their interviews and focus groups, found that there was a 'porous' boundary between work and home, and so nurses' wellbeing was dependent on the balance between these two domains. They also found that nurses whose work schedules were flexible and fitted their home lives were happier. For the nurse managers in Zwink's (2013) study, increase in workload and work-life imbalance were associated with burnout.

Watkins, Roos and Van der Walt (2011) described the views on well-being voiced by their nursing student interviewees with reference to three dimensions of wellbeing: the personal, the relational and the collective. Personal wellbeing was linked to autonomy, optimism and having a sense of purpose. Relational wellbeing was about family relationships and friendships. Collective wellbeing was about how the students' wellbeing was interlinked to the wellbeing of nurses as a wider group. As with other studies, the social environment was perceived as central to SWB, balanced by nurses' own attitudes to life and self caring actions. Similarly Rose and Glass (2006) explored how emotional wellbeing related to work functioning in community mental health nurses. Autonomy, satisfaction and being able to speak out were associated with

wellbeing, as were the importance of balance and making a mind-body-spirit connection. Rose and Glass identified five self-care strategies used by community nurses: healthy lifestyle choices; access to debriefing; self-validation; assertion; and accessing emotional support.

The nurses interviewed by Ward (2011) associated their wellbeing with how well they supported their patients. For Rose and Glass' community nurses (2009, 2010), emotional wellbeing was about balance and interconnectedness. The study participants also described how wellbeing was influenced by boundaries, communication and professional developments in the workplace. For Rose and Glass' nurses wellbeing was also associated with patient experience and how well nurses thought they had provided good patient care. In Utriainen et al's (2011) model of ageing nurses' wellbeing, nurse wellbeing in relation to work was influenced by nurse-nurse interaction, nurse-patient interaction and by 'patient care-centredness.'

In summary, SWB for nurses had a social element and a personal self nurturing element. Also aspects of it were intertwined with nurses' relationship with their patients and how they balanced work and home life. Again, the lack of UK studies of mental health nurses suggests that these relationships should be explored with that population. Existing research has very much focused on nurses at work but evidence suggests that home and family life is important for nurses' global SWB. This suggests that the experience of nurses outside work should be further explored, as should the boundary between work and home.

3.11 Conclusion

This literature review aimed to identify the means by which nurses' SWB has been measured and to what it correlates. Figure 3.1 represents a model of mental health nurses' SWB according to review findings. The account of nurses' SWB derived from this review shows that personal or individual factors and workplace or organisational factors influence nurses' experience of wellbeing at work (Spence Laschinger et al, 2012; Jenaro et al, 2011; Biggio and Cortese, 2013).

There is no single unifying way in which nurses' SWB has been measured, although the SWLS is the most common way in which it has been measured. Study designs have offered limited generalisability, particularly because of small sample sizes and single site participants. There is variation in the state of nurses SWB. The evidence regarding what influences nurses' SWB is limited, but what can be surmised is that it is correlated with a number of workplace and individual factors and is affected by some individual actions: physical activity, healthy lifestyle, social support and self-nurturance. The model of nurses' SWB derived from the literature is of particular interest because it demonstrated that there are actions that individual nurses and their employers can take in order to address SWB.

As shown in Figure 3.1, SWB is higher in those nurses who undertake certain actions to support their own wellbeing, and also in nurses who have supportive managers and flexible working arrangements. Because of both the cross sectional nature of much of the relevant research and the limited sample and effect sizes of the included studies, it is difficult to determine the nature of the relationship between SWB and other factors. Intervention studies have shown that learning meditation and mindfulness can impact on SWB scores, but other interventions may not. Nurses associate high SWB with how they care for patients and how they experience the social environment of work. They have articulated, in focus groups and interviews, the strategies they use to maintain their wellbeing within and outside of work.

The implications of these findings are that there is more than one way to address nurses' SWB, with both the individual and their employer playing a part. The findings also imply that SWB can change and is not an innate feature of personality or role. Given the lack of specific research on the SWB of UK mental health nurses a cross sectional survey followed by a qualitative study of UK mental health nurses with high SWB would be a fitting starting point from which longitudinal or intervention research programmes may be developed. How mental health nurses look after their own SWB should be explored.

Table 3.1: Summary of included SWB studies

Study	Method	SWB measure	Other characteristics measured	Study population	Study objective	Study outcome (directly quoted and summarised from the source)
Abdollahi et al (2014)	cross sectional survey	Oxford Happiness Inventory (OHI) (Hills & Argyle, 2002)	Perceived Stress, Hardiness	252 nurses from six private hospitals in Tehran	to investigate the role of hardiness as a mediator between perceived stress and happiness	Hardiness partially mediated perceived stress and happiness among nurses. Nurses with low levels of perceived stress were more likely to report greater hardiness and happiness. Nurses with high levels of hardiness were more likely to report happiness. Hardiness was a protective factor against perceived stress and a facilitating factor for happiness in nurses.
Akhunlar (2010)	cross sectional survey	SWLS (Diener, 1985)	Loneliness	183 Turkish nursing students	to investigate whether there is a relationship between life satisfaction and loneliness of nursing students in Turkey	There was a significant relationship between life satisfaction and loneliness. There was a significant relationship between demographic variables and loneliness but no significant relationship between demographic variables and life satisfaction.
An et al(2014)	cross sectional mailed survey	SWLS (Diener et al, 1985)	Job Satisfaction, Self-Esteem, General Self Efficacy, Perceived Stress Scale, Perceived Organizational Support	105 Korean nurses in New York	to examine factors affecting the job satisfaction of immigrant Korean nurses: acculturation, life satisfaction self esteem self efficacy and perceived organisational support	Life satisfaction correlates significantly with job satisfaction (cc of 0.476 p<0.001) Life satisfaction scores were lower than those of a sample of 136 U.S.-born nurses (Nemcek, 2007), higher than another U.S.-born sample of 310 nurses (Nemcek & James, 2007)

Table 3.1: Summary of included SWB studies

Study	Method	SWB measure	Other characteristics measured	Study population	Study objective	Study outcome (directly quoted and summarised from the source)
Appel et al (2013)	two-group pre/post-intervention study	Happiness Measures Questionnaire (Fordyce, 1988)	Gratitude	91 medical surgical nurses	to evaluate the impact of journaling on on the perceived happiness and gratitude of direct-care medical-surgical nurses.	No differences were detected between the control and intervention groups for general happiness scores and percentage happy. Significant differences were detected for the gratitude score. Relationships among the variables general happiness, percentage happy, gratitude scores, and unit quality of care indicated significant associations between baseline and post-general happiness, percentage happy, and gratitude scores.
Bolier et al (2014)	cluster-randomized controlled trial (Mean score 63.7 and 63.8 pre intervention	WHO-5 wellbeing scale (Bech, 2004) Mean score 63.8 (gen pop average is 70/100)	Mental Health, Work Engagement	178 nurses, 188 allied health professionals (rr 32%)	to examine the effectiveness of a workers' health surveillance (WHS) module targeting positive mental health	No significant differences between groups were found for well-being as measured with the WHO-5, depression or anxiety.
Burke, Koyuncu & Fiksenbaum (2011)	cross sectional survey	Positive Affect scale (Watson, Clark and Tellegen, 1988), Negative affect scale (Watson, Clark and Tellegen, 1988), Life satisfaction scale (Quinn and Shepard, 1974)	Health and Safety Climate Hospital Support, Job satisfaction, absenteeism, Burnout, Work Engagement, Psychosomatic symptoms, Medication use, Perceptions of Hospital Functioning and Health Care, Workplace Errors and Accidents	224 staff nurses in Turkey (36%rr)	to examine the relationship between self-reports of hospital culture and indicators of work satisfaction and engagement, perceptions of hospital functioning and quality of nursing care, and psychological well-being of nursing staff in Turkish hospitals.	Hospital culture accounted for a significant increment in explained variance on psychosomatic symptoms and life satisfaction. Nurses with higher levels of hospital support reported few psychosomatic symptoms and greater life satisfaction

Table 3.1: Summary of included SWB studies

Study	Method	SWB measure	Other characteristics measured	Study population	Study objective	Study outcome (directly quoted and summarised from the source)
Chakraborty, Chatterjee & Chaudhury (2012)	cross sectional survey	PGI general well-being scale (Verma & Verma, 1989)	Global adjustment, Emotional maturity, Locus of control, burnout	101 psychiatric nurses in two major tertiary psychiatric centres in India	to determine whether there are any internal psychological factors relevant to burnout in psychiatric nurses in India	Emotional maturity, adjustment, duration of prior army service, and sense of general well-being were significant predictors of burnout score in decreasing order of significance.
Drury et al(2013)	mixed methods study - Phase 1 - survey (Hegney et al, 2014), Phase 2 - 10 interviews	n/a	n/a	10 general nurses in Australia	to explore the factors impacting upon compassion satisfaction, compassion fatigue, anxiety, depression and stress; to describe the strategies nurses use to build compassion satisfaction into their working lives.	**7 themes shared by all**: (1) social networks and support; (2) infrastructure and support; (3) environment and lifestyle; (4) learning (5) leadership, (6) stress; and (7) suggestions for building psychological wellness in nurses.
Faribors, Fatemeh & Hamidreza (2010)	cross sectional survey	Oxford happiness inventory OHI (Abir et al 2008)	Spiritual intelligence	125 nurses from 2 hospitals in Iran (rr not given)	to determine the relationship between the spiritual intelligence and happiness among the nurses of the selected hospitals in Bushehr, Iran.	Significant correlation between spiritual intelligence and happiness (r =0.356) Among the four factors of spiritual intelligence, only forgiveness had no significant relationship with happiness. In demographic factors, other characteristics such as age, marital status, number of years worked as a nurse, education and position had no significant correlated with spiritual intelligence, its factors and happiness.

Table 3.1: Summary of included SWB studies

Study	Method	SWB measure	Other characteristics measured	Study population	Study objective	Study outcome (directly quoted and summarised from the source)
Freeney & Tiernan (2009)	content analysis of focus groups data	n/a	n/a	20 nurses in Ireland, including four from a psychiatric hospital.	to explore nurses' experiences of their work environments and to reveal factors in the workplace that may facilitate or act as barriers to nurse engagement.	The themes mapped onto Maslach and Leiter's (1997) burnout and engagement model: workload, lack of control, insufficient reward, lack of fairness, absence of community, incongruent values.
French et al (2011)	thematic analysis of semi structured interview transcripts	n/a	n/a	10 nursing staff in a general hospital setting in South Africa	to explore and describe the experience, as well as perceptions of coping mechanisms, of nurses working in the multi-skill setting, and to formulate recommendations to promote their emotional well- being.	4 main categories: **positive experience of the multi-skill setting** - opportunity to gain experience and skills, task sharing, • **negative experience of the multi-skill setting** - • **personal coping mechanisms within the multi-skill setting**- faith, self motivation, mutual support with colleagues • **promotion of emotional well-being within the multi-skill setting** - training, support, managerial involvement
Gurková et al (2011)	cross sectional survey	the Positive Affect Scale and the Negative Affect Scale (Džuka & Dalbert 2002)	Job Satisfaction	104 public hospital nurses in Slovakia	to investigate job satisfaction and emotional subjective well-being among Slovak nurses.	Age correlated significantly with frequency of positive emotions. Positive relationship was found between frequency of positive affect states and job satisfaction.

Table 3.1: Summary of included SWB studies

Study	Method	SWB measure	Other characteristics measured	Study population	Study objective	Study outcome (directly quoted and summarised from the source)
Gurková et al (2013)	cross sectional survey	Personal Wellbeing Index (PWI) (International Wellbeing Group, 2006) and the Positive Affect Scale and the Negative Affect Scale (Džuka & Dalbert 2002	Job Satisfaction	499 hospital nurses in Czech Republic	to investigate the relationship between the domains of the job satisfaction and components of SWB in nurses.	Age correlated negatively with life satisfaction ($r = –0.10$; $P < 0.05$) Years of nursing experience correlated negatively with life satisfaction ($r = –0.13$; $P < 0.05$) A statistical significant relationship was established between the frequency of negative and positive affect states, life satisfaction and the intention to leave the actual workplace. Life satisfaction was predicted by three domains of job satisfaction (extrinsic rewards, co-workers and family/work balance).
Hawker (2012)	cross sectional survey	SWLS (Diener et al, 1985)	Anxiety and Depression, Self-Esteem, Physical Activity	213 Welsh nursing students	to examine the relationship between physical activity and mental well-being in undergraduate student nurses.	No relationship was found between physical activity and life satisfaction, in contrast to similar studies with other populations. BMI was found to be a weakly significant predictor of satisfaction with life, which is consistent with the findings of other studies.
Jacobs (2013)	time lag study (2 waves 4 months apart)	SWLS (Diener, 1985)	Depression, items on demography, weekly negative events,perceived health	137 nurses in Oregon, US part of a larger study (Sinclair et al, 2009)	Using ‘slopes’ to examine the relationships between work stressors and nurses’ health behaviors	SWLS scores correlated with healthy eating and exercise, with those nurses showing increased days of exercise during weeks of greater demand having lower depression scores and higher SWL.

Table 3.1: Summary of included SWB studies

Study	Method	SWB measure	Other characteristics measured	Study population	Study objective	Study outcome (directly quoted and summarised from the source)
Lan et al (2014)	quasi-experimental, single-group, pre-post study	Subjective Happiness Scale (Lyubomirsky & Lepper, 1997)	Mindfulness Awareness Attention, Perceived Stress, Depression Anxiety and Stress	41 critical care nurses in Malaysia.	To measure impact of brief mindfulness based cognitive therapy training programme 41 critical care nurses in Malaysia.	After completing the program, the participants reported significant improvement in the level of perceived stress), stress, anxiety, depression, mindfulness and happiness with a moderate to large effect size.
Lee et al (2004)	cross sectional survey	Life Satisfaction Index Z (LS-Z) (Wood et al, 1969)	Work Satisfaction, Burnout	194 general hospital nurses in South Korea	To identify the levels of work satisfaction, burnout and life satisfaction among194 general hospital nurses in South Korea	Korean nurses reported moderate levels of life satisfaction, with low levels of work satisfaction and high levels of burnout. Burnout explained more variance in life satisfaction than work satisfaction. Night shift working negatively impacted on life satisfaction
Loukzadeh & Bafrooi (2013)	cross sectional survey	Ryff's Psychological Well-Being Scale (RSPWB) (Ryff, 1989)	Coping Styles	100 hospital nurses in Iran	to examine ways of coping and the level of psychological well-being as well as their relationships among nurses.	There was a negative relationship between purpose in life and emotion focused coping style (ECFS), a significant negative correlation between EFCS and personal growth, asignificant positive relationship between problem focused coping style (PCFS)and purpose in life
Mackenzie et al (2006)	case control intervention study	SWLS (Diener et al, 1985)	Burnout, Relaxation Dispositions, Intrinsic Job Satisfaction, Orientation to Life	16 nurses (intervention group), 14 nurses wait-list control group.	to evaluate a 4 week mindfulness intervention for nurses and nurses aides in continuing care in Canada, using a case control approach.	Following training, participants' scores remained stable, whereas intervention participants' scores increased, resulting in a significant Group x Time interaction.

Table 3.1: Summary of included SWB studies

Study	Method	SWB measure	Other characteristics measured	Study population	Study objective	Study outcome (directly quoted and summarised from the source)
Mackintosh (2007)	thematic analysis of semi structured interviews	n/a	n/a	16 UK nurses working in surgical settings	to explore and describe how qualified nurses working with in, in-patient surgical areas cope with the daily experiences they are exposed to.	Overall finding - nurses switch off by developing 'a work persona different from but related to personal persona', with 3 themes: r**elationships with patients, being a person and the effect of experience.**
Makabe et al (2014)	cross sectional survey	26-item World Health Organization Quality of Life (Japanese) scale (Tazaki M, Nakane Y, 2011)	Work Life Balance satisfaction , Job Satisfaction, Private life satisfaction , Sense of Coherence	1,202 acute care nurses in Japan (81% response rate)	to investigate the status of work-life imbalance among hospital nurses in Japan and impact of work-life imbalance on job satisfaction and quality of life.	Respondents were divided into 4 Groups according to their work-life balance scores, with Group A (50/50, including other lower working proportion groups [e.g., 40/50]), Group B (60/40), Group C (70/30), and Group D (80/20, including higher)For QOL Group A scored significantly better in the all subscales than Groups C and D. In contrast, Group D was significantly worse in all subscales than all other groups. Groups A and B were not significantly different except for physical health, while Groups C and D were not significantly different. For SOC (the measure of stress-coping ability), Group A had a significantly higher score than all other groups. In contrast, Group D had a significantly lower score than all other groups .
Montes-Berges & Augusto-Landa (2014)	cross sectional survey	SWLS (Diener, 1985)	Sociodemographic and Work Data, Affect Intensity, Trait Meta-Mood, Psychological Well-Being	85 nurses from 1 hospital.	to examine the relationship between perceived emotional intelligence (PEI), affective intensity, life satisfaction , and psychological well-being in a sample of nurses in Spain.	SWL was correlated with emotional repair ($p<0.05$) and positive affect ($p<0.05$), life quality was a dependent variable, being influenced by emotional repair.

Table 3.1: Summary of included SWB studies

Study	Method	SWB measure	Other characteristics measured	Study population	Study objective	Study outcome (directly quoted and summarised from the source)
Nemcek (2007a, 2007b)	cross sectional survey	SWLS (Diener et al, 1985)	Self-Nurturance, Nursing Career Satisfaction Scale	136 nurses	to determine whether nurses are happy or satisfied with their lives; how self-nurturing or "good to self" they are; and whether a relationship exists among self-nurturance, life satisfaction, and career satisfaction.	a significant positive correlation between self-nurturance and life satisfaction ($p < 0.05$) and satisfaction with career ($p<0.05$)
Ostermann, Bertram & Büssing (2010)	A time lag 3 point survey before, during and after a team building inteventio n	Brief MultidimensionaLife satisfaction scale (BMLSS) (Büssing et al, 2009)	Work Environment, Conviction of Therapeutic competency, Client Satisfaction	55 nurses and healthcare workers, with therapists and 3physicians and carers in Germany.	to investigate the effects of a team building process on perceived work environment, self-ascribed professional competence, life satisfaction, and client satisfaction in a neuro rehab hospital	Life Satisfaction was quite high among the staff members (76.0 ± 14.0), and did not significantly differ between the professions ($F = 1.5$; $p = 0.226$) There were no gender specific effects. Life Satisfaction significantly correlated with Nervousness, but not with Self Realisation, Workload or Conflict.
Pal (2011)	test and control group interventio n study	Subjective Wellbeing inventory developed by Sell & Nagpal (1962)	n/a	60 nursing students (30 in test, 30 in non test group) in India	to determine the effectiveness of meditation on subjective wellbeing among 2nd year General Nursing and Midwifery students.	A comparison of means between the test and control group found a significant raise in scores post-test in the test group but not in the control group.

Table 3.1: Summary of included SWB studies

Study	Method	SWB measure	Other characteristics measured	Study population	Study objective	Study outcome (directly quoted and summarised from the source)
Por et al (2011)	cross sectional survey element of a prospective correlational survey	Satisfaction with Life Scale (SWLS) (Diener et al, 1985)	Emotional Intelligence, Perceived Stress, Ways of Coping, Nursing Competence	130 nursing students	to explore the EI of nursing students (n=130, 52.0%) and its relationship to perceived stress, coping strategies, subjective well-being, perceived nursing competency and academic performance.	Emotional intelligence was positively related to wellbeing ($p<0.05$)
Ratanasiripong & Wang (2011)	cross sectional comparative study	SWLS (Diener, 1985)	Self-Esteem, Depression, Shyness	200 nursing students and 200 non nursing students from 2 colleges in Thailand.	to investigate the differences between nursing students and non-nursing students in Thailand with regard to their psychological well-being, also exploring the effect of gender on scale outcomes.	Nursing students scored significantly higher on self-esteem and life satisfaction and reported fewer depressive symptoms and social difficulties than their non-nursing counterparts, For nursing students, depression was negatively correlated with self-esteem and life satisfaction but positively correlated with social difficulties. Self-esteem was negatively correlated with social difficulties and positively correlated with life satisfaction. (all $p>0.01$)

Table 3.1: Summary of included SWB studies

Study	Method	SWB measure	Other characteristics measured	Study population	Study objective	Study outcome (directly quoted and summarised from the source)
Rochlen, Good & Carver (2009)	cross sectional survey	Satisfaction with Life Scale (SWLS) (Diener et al, 1985)	Gender Role Conflict, Perceived Social Support, Self-Assessment of Job Skills, Gender-Related Work Barriers, Job in General	174 male nurses in the US	to investigate the relationships between gender role conflict, social support, gender-related work barriers, and work and life satisfaction in male nurses.	The six significant unique predictors of life satisfaction were conflict between work and family (=0.27, p<01), social support from significant other 0.21, p<05), restric- tive affectionate behavior between men (??0.19, p <05), social support from friends (0.16, p<05), perceived job skills (?? 0.15, p?.05), and gender-based work barriers (0.14, p< 05) The model explained 40% of life satisfaction among men in nursing.
Rose & Glass (2006)	Thematic analysis of qualitative inquiry - semi structured interviews and journalling	feminist methodology	n/a	5 Australian community mental health nurses.	to explore the relationship between emotional wellbeing and effective functioning as a woman community mental health nurse?	4 interrelated key components of emotional wellbeing: the nebulous notion; the stress relation- ship; the mind, body, spirit connection and an inner sense of balance. 2 interrelated aspects of professional practice: delivery of quality patient care and satisfaction in their nursing care. 3 dual themes for the relationship of emotional wellbeing to professional practice were identified: • Being able to speak out (or not) • Being autonomous (or not) • Being satisfied (or not)
Rose & Glass (2009, 2010)	Thematic analysis of qualitative inquiry - semi structured interviews and journalling	feminist methodology	n/a	16 community health nurses in Australia.	to explore the relationship between emotional work, emotional well-being and pro-fessional practice of generalist community health nurses who provided palliative care to clients living at home.	3 significant issues. 1 - the concept of emotional well-being was complex and multifaceted and associated with nurses feeling either balanced or out of balance. 2 -an interconnectedness between the participants' emotional work, emotional well- being and professional practice, influenced by the workplace organisation, communication amongst health professionals, setting professional boundaries and education and professional development opportunities. 3 - the participants revealed 5 self-care strategies to enhance their emotional well-being: healthy lifestyle choices; access to debriefing; self- validation; assertion; and, accessing emotional support.

Table 3.1: Summary of included SWB studies

Study	Method	SWB measure	Other characteristics measured	Study population	Study objective	Study outcome (directly quoted and summarised from the source)
Sahebalzamani et al (2013)	cross sectional survey	Ryff Scales of Psychological Well-being (RSPWB) (Ryff, 1989) Mean score 319.95	Spiritual intelligence, Purpose in life	270 hospital nurses from 4 hospitals in Tehran, Iran (including psychiatric nurses)	to investigate the relationship between spiritual intelligence with purpose in life and psychological well-being among the nurses. Materials	Pearson correlation coefficient between spiritual intelligence and psychological well-being was 0.48 (P = 0.00) Pearson correlation coefficient between spiritual intelligence and purpose in life was 0.53 (P = 0.001)
Salmond & Ropis (2005)	mixed methods study, a comparative study	Affect Balance Scale (ABS) (Bradburn, 2001)	Job Stress and an interview guide of 5 open ended questions on job stress, workplace stressors, support, and perceived well- being.	89 nurses (58 in home care, 31 in medical-surgical) in the US	to examine job stress and general wellbeing among medical-surgical and home care nurses.	A negative affective mood was found in 21.3% (n=19) of the sampled group of nurses, 44.9% (n=40) had moderate scores, and 33.7% (n=30) had positive mood scores. There was no difference between mood scores for medical-surgical and home care nurses.
Simunić & Gregov (2012)	cross sectional survey	Semantic differential items with bipolar pairs of cognitive and affective adjectives listed on opposite ends of seven-point scale ranging from -3 to +3 for all three domains (job, family, life) (overall mean scores not given)	Psychological demand of work, Negative effects of work time Conflict between work and family roles.	128 nurses from 2 hospitals in Croatia	to examine the perception of conflict between work and family roles and job, family, and life satisfaction among nurses in relation to work schedules.	The affective component of life satisfaction was the lowest in nurses working irregular and backward rotated shifts.

Table 3.1: Summary of included SWB studies

Study	Method	SWB measure	Other characteristics measured	Study population	Study objective	Study outcome (directly quoted and summarised from the source)
Skinner, van Dijk, Elton & Auer (2011)	2 part study: part 1 - telephone interviews, 2 - focus groups and telephone interviews	n/a	Qualitative description' mode of analysis, aiming 'to provide an in-depth account of events and experiences in everyday terms'	Part 1 - 24 telephone interviews w nurses and midwives; Part 2 - focus groups and telephone interviews with 25 nurse and midwives in Australia	to conduct an in-depth examination of the key factors that impact on nurses' and midwives' work–life interaction in hospitals, and the human resource management strategies likely to improve and support work–life interaction, retention and well-being.	**1- What does work–life balance mean to nurses and midwives?** - work/ life not separate domains, porous boundary, work gives life meaning and purpose, personal satisfaction BUT emphasised need for boundaries, vulnerable to negative spillover. **2- What makes a difference to nurses' and midwives' work–life interaction?** challenges of shift work, benefits of flexible rostering, impact of work intensity and work loads, accessing leave, moving to flexible rather than permanent employment for work- life fit, difficulties of coordinating childcare, impact of org culture.
Sparks et al (2005) (2004)	cross sectional survey	SWLS (Diener et al, 1985)	Job Satisfaction, Social Desirability	152 nurses in the US. (rr 16-100%)	to measure SWB, Job Satisfaction and social desirability in a sample of registered nurses.	A correlation between SWLS scores and job satisfaction scores ($r = .15$, $p < .05$) was statistically significant, but denotes a weak relationship, significantly weaker ($p < .OOl$) than in the general population.
Utriainen, Kyngäs & Nikkilä (2011)	mixed methods: 1 - interviews, diaries and open data collection forms. 2 - a survey	n/a	Scale developed from the qual study was a 75 items using a 5 point Likert scale -	Qual - 21 ageing hospital nurses, Quant - 328 hospital nurses born between the years 1948–1962 in Finland	to develop a theoretical model of ageing hospital nurses' well-being at work and the subsequent testing of the model itself	Main components of the model: **nurse–nurse interaction**: 8 factors - (1) cohesion, (2) feeling of freedom in workplace community, (3) giving and receiving assistance and support, (4) nurses? status at work, (5) perceiving one?s work as meaningful, (6) being together with other nurses, (7) nurses working in pairs and (8) working independently. **nurse– patient interaction**: 3 factors - (1) patient satisfaction, (2) well-con- ducted nursing and (3) encountering patients and helping them. **patient-care centeredness:** (1) provision of good care to patients, (2) putting the patient first and (3) appreciation of nursing.

Table 3.1: Summary of included SWB studies

Study	Method	SWB measure	Other characteristics measured	Study population	Study objective	Study outcome (directly quoted and summarised from the source)
Vanaki, & Vaghars eyyedin (2009)	cross sectional survey	SWLS (Diener, 1985) Overall Mean scores not given, rather for different demographic characteristics - ranging from 28.1 (SD 1.8)-29.6 (SD 2.9)	Affective Commitment, Work Environment	250 nurses (rr80.6%) in 5 hospitals in Iran.	to investigate the relationship between nurses' organizational commitment, work environment conditions, and life satisfaction.	Mean SWLS scores varied between genders, age groups, education levels and years in the profession. A significant positive relationship between affective organizational commitment and life satisfaction (r = 0.29, P = 0.016)
Ward (2011)	thematic analysis of individual interviews, focus groups, and reflective practice	n/a	n/a	13 female mental health nurses working in inpatient settings in Australia.	to investigate the lived experiences of 13 female mental health nurses working in inpatient services, asking about their practice and perceptions of workplace culture, and they shared their thoughts on stress management and professional well-being.	**Three subthemes:** Glass half empty/glass half full - being flexible and honest with patients, being female, importance of professional identity, work is chaotic but gives me purpose. • It is all about the patient - strong determination to fight stigma and support the patient • Facilitating change - The participants all talked about creating change. They discussed the job satisfaction they gained from transform- ing situations.
Watkins, Roos & Van der Walt (2011)	thematic analysis of interviews, focus groups and visual presentations	n/a	n/a	16 nursing students in South Africa	to explore the different dimensions of well-being as described by nursing students.	**Identified themes:** Personal well-being: Lack of autonomy• Feelings of uncertainty • Feeling under pressure • Disillusionment with the nursing profession and the training • Dispositional optimism • Sense of purpose and deeper meaning Relational wellbeing: friends, families, lecturers Collective wellbeing: Challenging working environment • Lack of role models in clinical practice • Incongruence between theoretical and practical training

Table 3.1: Summary of included SWB studies

Study	Method	SWB measure	Other characteristics measured	Study population	Study objective	Study outcome (directly quoted and summarised from the source)
Yildirim & Aycan (2008)	cross sectional survey	SWLS (Diener, 1985)	Time demands of job and inflexibility, work hours, work schedule, overtime, Supervisory support, Work-to-family conflict, Job satisfaction	243 nurses: 106 academic nurses (43.6%) and 137 clinical nurses (56.4%)	to examine the extent to which work demands (i.e., work overload, irregular work schedules, long hours of work, and overtime work) and supervisory support are related to work-to-family conflict as well as life and job satisfaction of nurses in Turkey.	Work-to-family conflict was associated with lower life and job satisfaction, Structural equation modeling results showed that work overload and irregular work schedules were the significant predictors of work-to-family conflict and that work-to-family conflict was associated with lower job and life satisfaction.
Yildirim, Kilic & Akyol (2013)	cross sectional survey	SWLS (Diener, 1985) Mean score 22.90 (SD 5.74)	Quality of Life	396 nursing students from 1 school in Turkey (rr 60.5%)	to evaluate the relationship between life satisfaction and quality of life of nursing students	There was a significant correlation between life satisfaction and the four main domains of Quality of Life (QOL) ($P < 0.05$) Life satisfaction of the students improved with increasing QOL. No significant difference was detected between life satisfaction and variables such as age, graduated high school, place of residence, and parents' educational level ($P > 0.05$) In the advanced analysis, a significant difference was found between a student's grade and his/her mean score of life satisfaction ($P < 0.05$), especially among the first- and third-grade students. Life satisfaction of working students was found to be significantly higher than that of nonworking students ($P < 0.05$) Students with a family income of 2500 Turkish Liras (approximately 1380 $) and above had higher life satisfaction score ($P < 0.05$)

Table 3.1: Summary of included SWB studies

Study	Method	SWB measure	Other characteristics measured	Study population	Study objective	Study outcome (directly quoted and summarised from the source)
Zhang et al (2014)	cross sectional survey	Life satisfaction scales applicable to college students (CSLSS) (Wang, 2005)	Health Anxiety, Alexithymia,	2086 nursing students in China	To explore health anxiety in a sample of nursing students to determine the relation-ships between health anxiety and life satisfaction , personality, and alexithymia .	Pearson correlation coefficients found significant correlation between anxiety and life satisfaction (-0.268, p<0.05) Older students (Grade 5) had significantly higher CSLSS total scores compared with the other grades: F(4, 2,081) =5.563, P>0.001
Zwink et al (2013)	categorical and thematic analysis of focus group data	n/a	n/a	21 acute inpatient nurse managers in the US.	to explore the perceptions of inpatient acute care nurse managers (NM) that influence NM retention, including current work environment, satisfaction , work-life balance.	Nurse managers identified staff recognition, support, peer relationships, collaboration, and ability to make positive change as factors influencing their decision to remain in the role. Burnout factors included workload issues, work-life imbalance, and difficulty sustaining positive relationships. Traits supporting success were communication, resiliency, integrity, and a visionary outlook.

Table 3.2: Objectives, samples sizes, population and response rates for studies on nurses' SWB

Author	Study objective	Study population	Sample size	Response rate
Abdollahi et al (2014)	To investigate the role of hardiness as a mediator between perceived stress and happiness	Nurses from six private hospitals in Tehran	252	81%
Akhunlar (2010)	To investigate whether there is a relationship between life satisfaction and loneliness of nursing students in Turkey	Turkish nursing students	183	not given
An et al(2014)	To examine factors affecting the job satisfaction of immigrant Korean nurses: acculturation, life satisfaction, self esteem self efficacy and perceived organisational support	Korean nurses in New York	105	15.3%
Appel et al (2013)	To evaluate the impact of journaling on on the perceived happiness and gratitude of direct-care medical-surgical nurses.	US medical surgical nurses	91	not given
Bolier et al (2014)	To examine the effectiveness of a workers' health surveillance (WHS) module that offers screening, tailored feedback and online interventions targeting positive mental health and mental health complaints on all nursing and allied health professional staff in one hospital	Nurses and allied health professionals in the Netherlands	177	32%
Burke, Koyuncu & Fiksenbaum (2011)	To examine the relationship between self-reports of hospital culture and indicators of work satisfaction and engagement, perceptions of hospital functioning and quality of nursing care, and psychological well-being of nursing staff in Turkish hospitals.	Staff nurses in Turkey (36%rr)	224	36%
Chakraborty, Chatterjee & Chaudhury (2012)	To determine whether there are any internal psychological factors relevant to burnout in psychiatric nurses in India	Psychiatric nurses in two major tertiary psychiatric centres in India	101	not given
Drury et al(2013)	To explore the factors impacting upon compassion satisfaction, compassion fatigue, anxiety, depression and stress and to describe the strategies nurses use to build compassion satisfaction into their working lives.	General nurses in Australia	10	n/a
Faribors, Fatemeh & Hamidreza (2010)	To determine the relationship between the spiritual intelligence and happiness among the nurses of the selected hospitals in Bushehr, Iran.	Nurses from 2 hospitals in Iran (rr not given)	125	not given
Freeney & Tiernan (2009)	To explore nurses' experiences of their work environments and to reveal factors in the workplace that may facilitate or act as barriers to nurse engagement.	Nurses in Ireland, including four from a psychiatric hospital.	20	n/a
French et al (2011)	To explore and describe the experience, as well as perceptions of coping mechanisms, of nurses working in the multi-skill setting, and to formulate recommendations to promote their emotional well-being.	Nursing staff in a general hospital setting in South Africa	10	n/a
Gurková et al (2011)	To investigate job satisfaction and emotional subjective well-being among Slovak nurses.	Public hospital nurses in Slovakia	104	55%
Gurková et al (2014)	To investigate the relationship between the domains of the job satisfaction and components of SWB in nurses.	Hospital nurses in Czech Republic	499	81.5%

Table 3.2: Objectives, samples sizes, population and response rates for studies on nurses' SWB

Author	Study objective	Study population	Sample size	Response rate
Hawker (2012)	To examine the relationship between physical activity and mental well-being in undergraduate student nurses.	Welsh nursing students	215	79%
Jacobs (2013)	To examine the relationships between work stressors and nurses' health behaviors (alcohol consumption, diet, exercise) and then used those relationships as predictors of follow-up outcomes (depression, life satisfaction, perceived health)	Nurses in Oregon, US part of a larger study (Sinclair et al, 2009)	137	not given
Lan et al (2014)	To measure the impact of brief mindfulness based cognitive therapy training programme on 41 critical care nurses in Malaysia.	Critical care nurses in Malaysia.	37/41	90% of completers
Lee et al (2004)	To identify the levels of work satisfaction, burnout and life satisfaction among194 general hospital nurses in South Korea	General hospital nurses in South Korea	194	88%
Loukzadeh & Bafrooi (2013)	To examine ways of coping and the level of psychological well-being as well as their relationships among nurses.	Hospital nurses in Iran	88	88%
Mackenzie et al (2006)	To evaluate a 4 week mindfulness intervention for nurses and nurses aides in continuing care in Canada, using a case control approach.	Canadian continuing care nurses 16(intervention group), 14 nurses (wait-list control group)	30	not given
Mackintosh (2007)	To explore and describe how qualified nurses working with in, in-patient surgical areas cope with the daily experiences they are exposed to.	UK nurses working in surgical settings	16	n/a
Makabe et al (2014)	To investigate the status of work-life imbalance among hospital nurses in Japan and impact of work-life imbalance on job satisfaction and quality of life.	Acute care nurses in Japan	1202	81%
Montes-Berges & Augusto-Landa (2014)	To examine the relationship between perceived emotional intelligence (PEI), affective intensity, life satisfaction, and psychological well-being in a sample of nurses in Spain.	Nurses from 1 hospital in Spain	85	not given
Nemcek (2007a)	To determine whether nurses are happy or satisfied with their lives; how self- nurturing or "good to self" they are; and whether a relationship exists among self-nurturance, life satisfaction, and career satisfaction.	US nurses from Magnet hospitals	136	not given
Nemcek (2007b)	To ascertain the relationship between self-nurturance, perceived Magnet features and life satisfaction and to evaluate the predictive effects of self-nurturance and Magnet features on life satisfaction.	US nurses from Magnet hospitals	310	not given
Ostermann, Bertram & Büssing (2010)	To investigate the effects of a team building process on perceived work environment, self-ascribed professional competence, life satisfaction, and client satisfaction in a neuro rehab hospital	Nurses and healthcare workers, therapists and physicians and carers in Germany.	77 (incl. 55 nurses)	51.9% at Time 0

Table 3.2: Objectives, samples sizes, population and response rates for studies on nurses' SWB

Author	Study objective	Study population	Sample size	Response rate
Pal (2011)	To determine the effectiveness of meditation on subjective wellbeing among 2nd year General Nursing and Midwifery students.	Nursing students (30 in test, 30 in non test group) in India	60	n/a
Por et al (2011)	To explore the EI of nursing students (n=130, 52.0%) and its relationship to perceived stress, coping strategies, subjective well-being, perceived nursing competency and academic performance.	Nursing students in the UK	130	52%
Ratanasiripong & Wang (2011)	To investigate the differences between nursing students and non-nursing students in Thailand with regard to their psychological well- being, also exploring the effect of gender on scale outcomes.	Nursing students and non nursing students from 2 colleges in Thailand.	400 (incl. 200 nursing students)	not given
Rochlen, Good & Carver (2009)	To investigate the relationships between gender role conflict, social support, gender-related work barriers, and work and life satisfaction in male nurses.	Male nurses in the US	174	84% of those consenting
Rose & Glass (2006)	To explore the relationship between emotional wellbeing and effective functioning as a woman community mental health nurse?	Australian community mental health nurses.	5	n/a
Rose & Glass (2009, 2010)	To explore the relationship between emotional work, emotional well-being and professional practice of generalist community health nurses who provided palliative care to clients living at home.	Community health nurses in Australia.	16	n/a
Sahebalzamani et al (2013)	To investigate the relationship between spiritual intelligence with purpose in life and psychological well-being among the nurses. Materials	Hospital nurses from 4 hospitals in Tehran, Iran (including psychiatric nurses)	270	not given
Salmond & Ropis (2005)	To examine job stress and general wellbeing among medical-surgical and home care nurses.	Nurses (58 in home care, 31 in medical-surgical) in the US	89	63%
Simunić & Gregov (2012)	To examine the perception of conflict between work and family roles and job, family, and life satisfaction among nurses in relation to work schedules.	Nurses from 2 hospitals in Croatia	128	80%
Skinner, van Dijk, Elton & Auer (2011)	To conduct an in-depth examination of the key factors that impact on nurses' and midwives' work–life interaction in hospitals, and the human resource management strategies likely to improve and support work–life interaction, retention and well-being.	Part 1 - telephone interviews w nurses and midwives; Part 2 - focus groups and telephone interviews with 25 nurse and midwives in Australia	part 1-24, part 2 - 25	n/a n/a
Sparks et al (2005)(2004)	To measure SWB, Job Satisfaction and social desirability in a sample of registered nurses.	Nurses in the US. (rr 16-100%)	152	16-100%
Utriainen, Kyngäs & Nikkilä (2011)	To develop a theoretical model of ageing hospital nurses' well-being at work and the subsequent testing of the model itself	Hospital nurses in Finland	21	n/a

Table 3.2: Objectives, samples sizes, population and response rates for studies on nurses' SWB

Author	Study objective	Study population	Sample size	Response rate
Vanaki,& Vagharseyyedin (2009)	To investigate the relationship between nurses' organizational commitment, work environment conditions, and life satisfaction.	Nurses in 5 hospitals in Iran.	250	80.6%
Ward (2011)	To investigate the lived experiences of 13 female mental health nurses working in inpatient services, asking about their practice and perceptions of workplace culture, and they shared their thoughts on stress management and professional well-being.	13 female mental health nurses working in inpatient settings in Australia.	13	n/a
Watkins, Roos & Van der Walt (2011)	To explore the different dimensions of well-being as described by nursing students.	16 nursing students in South Africa	16	n/a
Yildirim & Aycan (2008)	To examine the extent to which work demands (i.e., work overload, irregular work schedules, long hours of work, and overtime work) and supervisory support are related to work-to-family conflict as well as life and job satisfaction of nurses in Turkey.	Nurses in Istambul, Turkey (106 academic nurses (43.6%) and 137 clinical nurses (56.4%))	243	34%
Yildirim, Kilic & Akyol (2013)	To evaluate the relationship between life satisfaction and quality of life of nursing students	Nursing students from 1 school in Turkey (rr 60.5%)	396	65%
Zhang et al (2014)	To explore health anxiety in a sample of nursing students to determine the relationships between health anxiety and life satisfaction, personality, and alexithymia.	Nursing students in China	2086	not given
Zwink et al (2013)	To explore the perceptions of inpatient acute care nurse managers (NM) that influence NM retention, including current work environment, satisfaction, work-life balance.	Acute inpatient nurse managers in the US.	21	n/a

Table 3.3: Measures of SWB used in included studies

SWB measure	Measure description	Used by	Elements of SWB measured
Affect Balance Scale (ABS) (Bradburn, 2001)	A comprehensive measure of SWB in that comprises an 11-item questionnaire with two subscales, a five-item positive affect scale (PAS), a five-item negative affect scale (NAS) and an 11th question asking participants to rate their general happiness. Each question is scored on a 3-point scale assessing the frequency of occurrence of the positive or negative feeling. The ABS score is computed by subtracting NAS scores from PAS scores and adding a constant of 5 to avoid negative scores.	Salmond & Ropis (2005)	hedonic affective and evaluative
Brief Multidimensional Life satisfaction scale (BMLSS) (Büssing et al, 2009)	A 7 point Likert scoring scale measuring the intrinsic dimensions (Myself, Overall Life), social dimensions (Friendships, Family life), external dimension (Work, Where I live), and the perspective dimension (Financial Situation, Future Prospects) of subjective life satisfaction.	Ostermann, Bertram & Büssing (2010)	evaluative
Happiness Measures Questionnaire (Fordyce, 1988)	A hedonic measures, comprising 2 questions. The first asks respondents to choose a statement of their general happiness, from 0 (extremely unhappy, utterly depressed, and completely down) to 10 (extremely happy, feeling ecstatic, joyous, or fantastic) The second question asks for the time spent in each of three states: happy, unhappy, and neutral. These two questions cover, according to Fordyce, the scale and percentage of happiness, namely its frequency and intensity	Appel et al (2013)	hedonic
Life Satisfaction Index Z (LS-Z) (Wood et al, 1969)	The LSI-Z comprises 13 items, to which the respondent answers agree, disagree or don't know. Each affirmative answer is graded 2, negative 0 and don't know 1. Total scores range from 0 to 26, and higher scores indicate higher overall life satisfaction. The measure is global and evaluative, asking respondents to reflect on their life overall.	Lee et al (2004)	evaluative
Life Satisfaction Scale (LSS) (Quinn & Shepard, 1974)	According to Burke, Koyuncu and Fiksenbaum, the LSS is a 5 question 7- point Likert scale where respondents indicate their agreement with each item (e.g., In most ways my life is close to ideal) BUT looking at the original measure it does not ask this - rather it asks- *'Taking all things together, would you say things are these days? Would you say you're very happy, 'pretty happy, or not too happy these days*?' The question cited by Burke et al seem to come from the SWLS.	Burke, Koyuncu & Fiksenbaum (2011)	evaluative
Life Satisfaction Scales Applicable to College Students in Chinese (Wang, 2005)	A six-item Likert scale measure that assesses the life quality of college students. It contains two factors: objective satisfaction (items 1–5) and subjective satisfaction (item 6) The total score ranges from 6 to 42.	Zhang et al(2014)	evaluative
Oxford Happiness Inventory (OHI) Hills & Argyle 2002)	The OHI is a 29 item scale of individual happiness items, scored on a 6-point Likert scale from '1 = strongly disagree' to '6 = strongly agree'. The possible scores range from 29 to 174. The OHI is a comprehensive measure of SWB, covering frequency and degree of positive affect, life satisfaction over a period of time, and the absence of negative affect.	Faribors, Fatemeh & Hamidreza (2010) Abdollahi et al (2014)	evaluative, hedonic
PGI general well-being scale (Verma & Verma, 1989)	This is a 20-item scale devised for the Indian population, requiring respondents to tick statements that apply to them, relating to aspects of well-being such as worry, distress, life satisfaction and control.	Chakraborty, Chatterjee & Chaudhury (2012)	evaluative

Table 3.3: Measures of SWB used in included studies

SWB measure	Measure description	Used by	Elements of SWB measured
Personal Wellbeing Index (PWI) (International Wellbeing Group. Personal Wellbeing Index, 2006)	The PWI measures the cognitive aspect of SWB, comprising 10 point Likert scale ratings for 8 items on satisfaction with different domains, including standard of living, health, social relationships, achievement, personal security, connection to community, future security and spirituality/religion with one item related to overall satisfaction with life.	Gurková et al (2013) - used with Positive Affect Scale (Džuka & Dalbert 2002)	evaluative
Positive Affect Scale, Negative Affect Scale (PANAS) (Watson, Clark & Tellegen, 1988)	Positive Affect is measured using a 10-item scale where respondents indicate how often they experienced items during the past week (e.g., excited, proud, excited) on a 5-point Likert scale (1=not at all, 5=extreme)Negative affect is measured using a 10 item scale where respondents indicate how often they experienced these (e.g., irritable, nervous, distressed) on a 5-point Likert scale (1=not at all, 5=extreme)	Burke, Koyuncu & Fiksenbaum (2011),	affective, hedonic
Positive Affect Scale and the Negative Affect Scale (Džuka & Dalbert 2002)	According to Gurková et al (2011), the Positive Affect Scale consists of 4 descriptors (pleasure,happiness, joy and physical freshness) and the Negative Affect Scale (Džuka & Dalbert 2002), comprises 6 descriptors (anger, guilt feelings, shame, anxiety, pain and sorrow), stating how often they experience each of these affect states on a six-point frequency scale ranging from 1('almost never') to 6 ('almost always') The original scale is not available in English translation for review.	Gurková et al (2011)	affective, hedonic
Ryff's Psychological Well-Being Scale (RSPWB) (Ryff, 1989)	Two studies (Loukzadeh and Bafrooi, 2013) and Sahebalzamani et al, 2013) use the RSPWB. This measure comprises questionnaire consisted of 84 questions, scored on a 6 point Likert scale from 'agree strongly' to 'disagree strongly'. The scale was developed for use with older adults and covers eudaimonic wellbeing, rather than evaluative or hedonic wellbeing. It asks for a self report on self-acceptance (SA), positive relations with others (PR), autonomy (AU), environmental mastery (EM), purpose in life (PL), and personal growth (PG) The scores range from 84 to 504.	Loukzadeh & Bafrooi (2013) Sahebalzamani et al (2013)	eudaimonic

Table 3.3: Measures of SWB used in included studies

SWB measure	Measure description	Used by	Elements of SWB measured
Satisfaction with Life Scale (SWLS) (Diener et al, 1985)	The SWLS is a a 5-item evaluative measure of overall life satisfaction using a 7-point Likert scale ranging from 1 (strongly disagree)to7(strongly agree), with scores ranging from 7 to 35, with higher scores reflecting greater life satisfaction. The SWLS is used in Mackenzie et al's (2006) case-control intervention study, and in Jacobs et al's (2013) time lag study. The other uses of the SWLS are in cross sectional surveys. Normative means for the SWLS are available for a number of populations. Pavot and Diener (1993) give the normative mean for nurses and health workers as 23.6.	Akhumalr (2010), An et al (2014), Rochlen, Good & Carver (2009), Hawker (2012), Jacobs(2013), Mackenzie et al (2006), Montes-Berges & Augusto-Landa, (2014), Nemcek (2007a, 2007b), Por et al (2011), Ratanasiripong & Wang (2011), Rochlen, Good & Carver (2009), Sparks et al (2005)(2004), Vanaki,& Vagharseyyedin (2009), Yildirim & Aycan (2008), Yildirim, Kilic & Akyol (2013)	evaluative
Semantic differential items for measuring job, family, and life satisfaction (Simunić & Gregov, 2012)	Simunić and Gregov (2012) use means of measuring SWB derived by Gregov(1994), along with other measures of the demands of work and work/family conflict, in their study of hospital nurses in Croatia. Their measure comprises of semantic differential items with bipolar pairs of cognitive and affective adjectives listed on opposite ends of seven-point scale for the domains of job, family, life. The results are given as mean scores for a cognitive appraisal of 'my life' and an affective report on 'my life', with scores ranging from 1 to 7.	Simunić & Gregov (2012)	evaluative
Subjective Happiness Scale (SHS) (Lyubomirsky & Lepper, 1997)	4 item scale of global subjective happiness, using a 7 point Likert scale, measuring self perceived happiness NOT affective or life satisfaction components. It was devised using a sample of US and Russian college students. Lyubomirsky and Lepper argue that it measures self assessed happiness in so far as this is a different concept to current feelings of happiness or cognitive evaluations of life satisfaction.	Lan et al(2014)	evaluative BUT happiness NOT life satisfaction
Subjective Weil-Being Inventory (SUBI) (Nagpal & Sell, 1985)	This 40 item instrument asks subjects to respond according to a 3 point Likert scale. The instrument covers various aspects of wellbeing, from general life satisfaction to domain specific items to physical wellbeing, relationships and transcendent experiences. It is a comprehensive measure.	Pal (2011)	evaluative, eudaimonic, hedonic, global and domain specific

Table 3.3: Measures of SWB used in included studies

SWB measure	Measure description	Used by	Elements of SWB measured
WHO-5 wellbeing scale (Bech, 2004)	The WHO-5 comprises 5 positively worded items on subjective well-being, rating the items using a 6-point scale (0= never, 5=all of the time) 4 of the questions are about 'feelings' in the past 2 weeks. It is a hedonic measure of SWB. The total score is multiplied by 4, adding up to a possible maximum score of 100.	Bolier et al (2014)	hedonic
WHO QOL (Tazaki & Nakane, 2011)	This 26-item questionnaire includes 24 questions that assess four domains ("physical health," "psychological health," "social relationships," and "environment") and two questions providing an "overall" assessment. Scoring for each question and each domain is on a 5 point Likert scale and a mean can be calculated for each domain. Higher scores indicate a better QOL.	Makabe et al (2014)	evaulative, eudaimonic, and hedonic

Table 3.4: Summary of findings and rigour - SWB quantitative studies

Study	Method	SWB measure	Study outcome (directly quoted and summarised from the source)	Observations on rigour
Abdollahi et al (2014)	cross sectional survey	Oxford Happiness Inventory (OHI) (Hills & Argyle, 2002)	Hardiness partially mediates perceived stress and happiness among nurses. Nurses with low levels of perceived stress were more likely to report greater hardiness and happiness. Nurses with high levels of hardiness were more likely to report happiness. Hardiness was a protective factor against perceived stress and a facilitating factor for happiness in nurses.	The reliability of tools used was tested in a pilot study; the number of participants meet criteria for structured equation modelling approach (Kline, 2005), purposive sample with 81% rr; the convergent validity (average variance extracted) of the OHI was 0.54, and the construct reliability (CR) was 0.71; uses advanced statistics (structural Equation Modelling) to establish relations between constructs; limitations of sample, self reporting and cross sectional approach were acknowledged.
Akhunlar (2010)	cross sectional survey	SWLS (Diener, 1985)	There was a significant relationship between life satisfaction and loneliness. There was a significant relationship between demographic variables and loneliness but no significant relationship between demographic variables and life satisfaction. All independent variables explain %29 of total variance of life satisfaction.	Purposive convenience sample form 1 site, so dificult to generalise; Cronbach's alpha of scales not reported; multiple regression analysis used to measure strength of relationshps; limitations of the study not acknowledged.
An et al(2014)	cross sectional mailed survey	SWLS (Diener et al, 1985)	Life satisfaction correlates significantly with job satisfaction (cc of 0.476 p<0.001) Life satisfaction scores were lower than those of a sample of 136 U.S.-born nurses (Nemcek, 2007), higher than another U.S.-born sample of 310 nurses (Nemcek & James, 2007)	Convenience sample; rr of 15.3% from mailed survey; Cronbach's alpha of 0,89 for the SWLS in this study; statistical analysis described, normality assessed; descriptive statistics, Pearson's correlation coefficient and hierarchical multiple regression analysis was performed and reported; limitations of cross sectional design, sampling approach were acknowledged.
Appel et al (2013)	two-group pre/ post-interven-tion study	Happiness Measures Ques-tionnaire (Fordyce, 1988)	No differences were detected between the control and intervention groups for general happiness scores (7.88 ± 0.95 vs. 8.11± 0.87; p=0.225), and percentage happy (69.88 ± 15.1 vs. 70.04 ± 16.9; p=0.962) No differences were detected for the general happiness change score (0.49 ± 0.89 vs. 0.26 ± 0.79; /fcO.210) The control group change for percentage happy was significantly greater than the intervention group (7.19 ± 19.17 vs. -0.791 ± 14.55; / i=0.028)	Convenience sampling but with coin toss determination of intervention/ control group membership; potential investigation team bias mitigated for; valid and reliable instruments used but Cronbach's alphas not reported;rr not given; simple statistical tests used - Chi squared, t tests and ANOVA; linear regression; limitations of the study are described to explain unexpected scores; limitations of the methodology not acknowledged.

Table 3.4: Summary of findings and rigour - SWB quantitative studies

Study	Method	SWB measure	Study outcome (directly quoted and summarised from the source)	Observations on rigour
Bolier et al (2014)	online cluster-randomized controlled trial	WHO-5 wellbeing scale (Bech, 2004)	No significant differences between groups were found for well-being as measured with theWHO-5, depression or anxiety.	Part of a larger study (Gärtner et al., 2011); cluster randomized control methodology used, with randomization approach described; number of participants were not sufficient for statistical power; study specific Cronbach's alphas for all scales reported, for the WHO-5 it was 0.91; high attrition rates online group compared to controls (61% vs. 27%), t tests and logistic regression used to compare drop outs and non-drop outs; Linear Mixed Modelling used; Cohen's d used to measure effect size; all analyses used two-sided tests and alphas of 0.05; low adherence rates to the intervention.
Burke, Koyuncu & Fiksenbaum (2011)	cross sectional survey	Positive Affect scale (Watson, Clark and Tellegen, 1988), Negative affect scale (Watson, Clark and Tellegen, 1988), Life satisfaction scale (Quinn and Shepard, 1974)	Hospital culture accounted for a significant increment in explained variance on two of the five indicators of psychological health: psychosomatic symptoms and life satisfaction. Nurses indicating higher levels of hospital support reported few psychosomatic symptoms and greater life satisfaction. Life satisfaction not significantly correlated with personal demographics or work situation. Positive affect not significantly correlated with personal demographics or hospital culture, but significantly associated with work situation (P<)5)	Convenience sample; Cronbach's alphas of three SWB given (0.91. 0.86, 0.75) Stepwise hierarchical regression analyses used to identify predictors of variance amongs the numerous characteristics measured; limitations of the sample, risk of lack of representativeness, cross sectional design were acknowledged.

Table 3.4: Summary of findings and rigour - SWB quantitative studies

Study	Method	SWB measure	Study outcome (directly quoted and summarised from the source)	Observations on rigour
Chakraborty, Chatterjee & Chaudhury (2012)	cross sectional survey	PGI general well-being scale (Verma & Verma, 1989)	Correlations between total burnout score and different sociodemographic and clinical variables were examined using Pearson's r for continuous variables and Spearman's rho for categorical variables. Independent variables were analysed in a stepwise multivariate regression. Emotional maturity, adjustment, duration of prior army service, and sense of general well−being were significant predictors of burnout score in decreasing order of significance.	Nurses from 2 hospitals sampled but response rate not given, ethics not discussed, validated measures used but Cronbach's alphas not reported, limitations acknowledged, appropriate statistical tests used.
Faribors, Fatemeh & Hamidreza (2010)	cross sectional survey	Oxford Happiness Inventory OHI (Abir et al 2008)	Significant correlation between spiritual intelligence and happiness (r =0.356) Among the four factors of spiritual intelligence, only forgiveness had no significant relationship with happiness. In demographic factors, only department had significantly correlated with patience (f = 2.943) and happiness (f =2.552) Demographic characteristics such as age, marital status, number of years worked as a nurse, education and position had no significant correlation with spiritual intelligence, its factors and happiness.	Convenience sample - but sample size justified according to calculations (Morgan, 1979); response rate not given; Cronbach's alpha for the measures used reorted for other studies but not for this particular study; t-test, one-way ANOVA, correlation to analysis and simple and multiple regressions were applied with the assumptions of each measure being tested and met; limitations of self reported measures and lack of comparable research were acknowledged, but not the sampling or cross sectional design.

Table 3.4: Summary of findings and rigour - SWB quantitative studies

Study	Method	SWB measure	Study outcome (directly quoted and summarised from the source)	Observations on rigour
Gurková et al (2012)	cross sectional survey	the Positive Affect Scale and the Negative Affect Scale (Džuka & Dalbert 2002)	Age correlated significantly with frequency of positive emotions (r= 0.286; P = 0.006) Negative correlations were noted between frequency of negative emotions (r = 0.294; P = 0.010) and years of nursing experience (r = 0.947; P = 0.000) A positive relationship was found between frequency of positive affect states and job satisfaction (r = 0.290; P = 0.003) No statistically significant correlation was found between frequency of negative affect states and overall job satisfaction (r = -0.121; P = 0.224)	Purposive convenience sample from 3 hospitals; sampling strategy described; response rate given, study specific Cronbach's alpha give for the SWB meaasure (0.745 positive affect/ negative affect 0.64); descriptive statistics and non-parametric Spearman's correlation was used to determine significant correlations, with a P-value < 0.05; limitations of the sample in terms of generaliseability are discussed as are the limitations of the statistical analyses used.
Gurková et al (2014)	cross sectional survey	Personal Wellbeing Index (PWI) (International Wellbeing Group, 2006) and the Positive Affect Scale and the Negative Affect Scale (Džuka & Dalbert 2002	Age correlated negatively with life satisfaction (r = −0.10; P < 0.05) Years of nursing experience correlated negatively with life satisfaction (r = −0.13; P < 0.05) A statistical significant relationship was established between the frequency of negative and positive affect states, life satisfaction and the intention to leave the actual workplace. Positive affect was predicted by two domains of job satisfaction (interaction opportunities and scheduling), explaining a total of 10% of the variance. Negative affect was predicted by two domains of job satisfaction (interaction opportunities and scheduling) and the intention to leave the actual workplace, explaining a total of 11% of the variance. Life satisfaction was predicted by three domains of job satisfaction (extrinsic rewards, co-workers and family/work balance), explaining a total of 12% of the variance.	response rate and sampling strategy given; Cronbach's alpha for each measure given for this study(Positive Affect Scale 0.83, Negative Affect Scale 0.77, PWI 0.85); parametric Pearson correlations and hierarchical multiple regression analyses used to measure correlations between variables; limitations of the cross sectional design and convenience sample were acknowledged.

Table 3.4: Summary of findings and rigour - SWB quantitative studies

Study	Method	SWB measure	Study outcome (directly quoted and summarised from the source)	Observations on rigour
Hawker (2012)	cross sectional survey	SWLS (Diener et al, 1985)	Correlation coefficients were calculated amongst mental well-being, physical activity variables and self-reported BMI. Multiple regression was undertaken to further assess relationships between variables. No relationship was found between physical activity and life satisfaction, in contrast to similar studies with other populations. BMI was found to be a weakly significant predictor of satisfaction with life, which is consistent with the findings of other studies.	Response rate and sampling strategy given; all scales used had a Cronbach's alpha of >0.80; correlation coefficients and multiple regression were used to assess relationships between variables; limitations of the self report surveys, the sample generaliseability and the cross sectional design were acknowledged.
Jacobs (2013)	web based survey, time lag study (2 waves 4 months apart)	SWLS (Diener, 1985)	SWLS scores correlated with healthy eating and exercise, with those nurses showing increased days of exercise during weeks of greater demand having lower depression scores and higher SWL.	Part of a larger study (Sinclair et al, 2009); study specific Cronbach's alphas for all scales reported, for the SWLS it was 0.92; diverse sampling methods make defining response rate not possible; missing data was analysed; Linear Modelling and slopes-as-predictors were used as statistical analysis approaches; limitations of the measures used and timeframes were acknowledged, as were limitations of self report measures and the characteristics of the sample.
Lan et al (2014)	quasi-experimental, single-group, pre-post study	Subjective Happiness Scale (Lyubomirsky & Lepper, 1997)	After completing the program, the participants reported significant improvement in the level of perceived stress (PSS: $p < .001$; $r = 0.50$), stress (DASS-S: $p = .002$; $d = 0.56$), anxiety (DASS-A: $p < .001$; $r = 0.38$), depression (DASS-D: $p < .001$; $r = 0.37$), mindfulness (MAAS: $p < .001$; $d = 1.002$), and happiness (SHS: $p = .028$; $d = 0.57$), with a moderate to large effect size	Non probability voluntary sample BUT sample size almost met calculation for statistical power; paired sample t-test used to measure impact of intervention, and a Wilcoxon-rank test to evaluate intervention effectiveness; limitations of the study were acknowledged as lack of control group, lack of follow up, use of self report measures.

Table 3.4: Summary of findings and rigour - SWB quantitative studies

Study	Method	SWB measure	Study outcome (directly quoted and summarised from the source)	Observations on rigour
Lee et al (2004)	cross sectional survey	Life Satisfaction Index Z (LS-Z) (Wood et al, 1969)	Korean nurses reported moderate levels of life satisfaction, with low levels of work satisfaction and high levels of burnout. Burnout explained more variance in life satisfaction than work satisfaction. Night shift working negatively impacted on life satisfaction	Convenience sample; study specific Cronbach's alphas given, with 0.82 for the SWB measure; separate hierarchical multiple regressions were conducted to compare the unique contribution of burnout and work satisfaction to the variance in life satisfaction; a stepwise multiple regression was conducted to examine the significant predictors of life satisfaction; limitations of cross sectional design, and convenience sampling acknowledged.
Loukzadeh & Bafrooi (2013)	cross sectional survey	Ryff's Psychological Well-Being Scale (RSPWB) (Ryff, 1989)	There was a negative relationship between purpose in life and Emotion Focused coping Style (EFCS) (r = -0.28, P = 0.01) There was a significant negative correlation between EFCS and personal growth (r = -0.24, P = 0.03) There was a significant positive relationship between PFCS and purpose in life (r = 0.31, P =0.006)	Purposive sampling with some randomisation; Study specific Cronbach's alpha for SWB measure not given; The correlations between coping styles and aspects off psychological well-being were examined by Pearson correlation test, with paired t-tests to compare means; limitations of convenience sampling, cross sectional study and sample characteristics were acknowledged.
Mackenzie et al (2006)	case control intervention study	SWLS (Diener et al, 1985)	Following training in mindfulness, participants' scores remained stable, whereas intervention participants' scores increased, resulting in a significant Group x Time interaction.	Convenience sample, with recruitment strategy not explained in detail; no measure of interal consistency of scales reported; impact of the intervention on scale outcomes was measured using 2 (groups) x 2 (times) repeated measures analyses of variance (ANOVAs);limitations of sample size, sample characteristics, lack of follow up all acknowledged.

Table 3.4: Summary of findings and rigour - SWB quantitative studies

Study	Method	SWB measure	Study outcome (directly quoted and summarised from the source)	Observations on rigour
Makabe et al (2014)	cross sectional survey	26-item WHO QoL(Japanese) scale (Tazaki M & Nakane Y, 2011)	Respondents were divided into 4 Groups according to their work- life balance scores, with Group A (50/50, including other lower working proportion groups [e.g., 40/50]), Group B (60/40), Group C (70/30), and Group D (80/20, including higher) For QOL Group A scored significantly better in the all subscales than Groups C and D. In contrast, Group D was significantly worse in all subscales than all other groups. Groups A and B were not significantly different except for physical health, while Groups C and D were not significantly different.	Geographically limited sample; Cronbach's alpha of the SWB measure was 0.62 for this study; sample divided into 4 groups according to work life balance scores, then ANOVA and ANCOVA applied; Tukey-Kramer test used to measure significant difference between groups; limitations of cross sectional approach were acknowledged.
Montes-Berges & Augusto-Landa (2014)	cross sectional survey	SWLS (Diener, 1985)	SWL was correlated with emotional repair ($p<0.05$) ad positive affect ($p<0.05$) Life quality was a dependent variable, being influenced by emotional repair. Statistically significant differences in life satisfaction, positive relationships with others, purpose in life, and personal growth in nurses with High versus Low Repair.	Convenience sample; Response rates not given; study specific Cronbach's alphas not given; correlations and multiple stepwise analysis statistics used; limitations of self report measure and sample size were acknowledged.
Nemcek (2007a)	on line administered cross sectional survey	SWLS (Diener et al, 1985)	A significant positive correlation between self-nurturance and life satisfaction ($p <0.05$) and satisfaction with career ($p<0.05$)	Pilot study completed first; Convenience sample via multiple means so no way of calculating response rate; internal consistency coefficient of the SWLS for this study was 0.85; correlation coefficients calculated as means of identifying strength of relationship between variables; limitations of cross sectional surveys using self report measures on convenience samples are acknowledged.

Table 3.4: Summary of findings and rigour - SWB quantitative studies

Study	Method	SWB measure	Study outcome (directly quoted and summarised from the source)	Observations on rigour
Nemcek (2007b)	cross sectional survey	SWLS (Diener et al, 1985)	Frequent self-nurturance choices are associated with greater satisfaction with life. Greater life satisfaction is linked to reduced job dissatisfaction and improving retention and productivity.	No response rate given; convenience sample, but exceeded size required for study to have statistical power (Cohen, 1988); study specific Cronbach's alpha for the SWLS was 0.89; outliers, missing data, skewedness were examined; associations between variables measured using Kendall's tau, Pearson's r and ANOVA; multiple regression analysis used;limitations to generaliseability of the sampling methods and self reporting were acknowledged.
Osterma nn, Bertram & Büssing (2010)	A time lag 3 point survey before, during and after a team building inteventi on	Brief Multidime nsionaLif e satisfacti on scale (BMLSS) (Büssing et al, 2009))	Life Satisfaction was quite high among the staff members (76.0 ± 14.0), and did not significantly differ between the professions (F = 1.5; p = 0.226) There were no gender specific effects. Life Satisfaction significantly correlated with Nervousness, but not with Self Realisation, Workload or Conflict using Spearmans's correlation coefficients	Single site; response rate of 51.9%; Stated adherence to good practice in data collection and analysis (Swart et al, 2008), Cronbach's alpha for the BMLSS used in the study was 0.87; factors analysis and bivariate correlation analysis undertaken using nonparametric tests (Kruskal-Wallis test and Mann- Whitney U-test); statistical procedures limited due to low sample size an response rate; lack of differential data between staff groups; risk of observation bias and limited generaliseability from such a specific study population also acknowledged.
Pal (2011)	test and control group interven tion study	Subjectiv e Wellbein g inventory develope d by Sell & Nagpal (1962)	A comparison of means between the test and control group found a significant raise in scores post- test in the test group but not in the control group.	2 site study; pre and post test and case-control study; simple statistical analysis- means and t tests between and within groups; small sample size(n 60); ethical issues not discussed
Por et al (2011)	cross sectional survey element of a prospec tive correlati onal survey	SWLS (Diener et al, 1985)	Emotional intelligence was positively related to well-being ($p<0.05$) Means scores for SWB were not significantly different between genders or educational pathways.	Single site, single cohort, small sample impacting on generalizeability; response rate of 52%; study specific Cronbach's alpha for SWLS was 0.86; descriptive and inferential statistical analyses were used including Spearman's rho, Kruskal–Wallis Test, stepwise multiple regressions; limitations f cross sectional approach were acknowledged.

Table 3.4: Summary of findings and rigour - SWB quantitative studies

Study	Method	SWB measure	Study outcome (directly quoted and summarised from the source)	Observations on rigour
Ratanasiripong & Wang (2011)	cross sectional comparative study, mapping questionnaire responses against curriculum content and academic performance	SWLS (Diener, 1985)	MANCOVAs found a significant but rather weak main effect of gender (F(4,386)= 2.65, pb.05, η2=.027) and a strong main effect of group difference (F (4,386)=18.28, pb.001, η2=. 159); there was no significant interaction effect (F(4,386)=. 27, p=.90) Nursing students scored significantly higher on self-esteem and life satisfaction and reported fewer depressive symptoms and social difficulties than their non-nursing counterparts (with t (389) values ranging from 14.47 to 55.14 and all psb.001) For nursing students, depression was negatively correlated with self-esteem and life satisfaction but positively correlated with social difficulties. Self-esteem was negatively correlated with social difficulties and positively correlated with life satisfaction. (all p>0.01)	Part of a larger study; random selection of respondents from the larger study, but response rate not given; coefficient alpha of 0.73 for the SWLS for this study; chi square analyses used to compare the nursing and non nursing groups; two- way multivariate analysis of covariance (MANCOVA) was used to measure interaction between independent and dependent variables; limitations of the study were not discussed
Rochlen, Good & Carver (2009)	online cross sectional survey	SWLS (Diener et al, 1985)	The six significant unique predictors of life satisfaction were conflict between work and family (=0.27, p<01), social support from significant other (0.21, p<05), restrictive affectionate behavior between men (0.19, p <05), social support from friends (0.16, p<05), perceived job skills (0.15, p<.05), and gender-based work barriers (0.14, p< 05) The model explained 40% of life satisfaction among men in nursing.	Difficulty measuring response rates in online studies not acknowledged; study specific Cronbach's alpha for SWLS was 0.89; correlational coefficients for scale scores were undertaken, then simultaneous multiple regression analysis with the criterion variable as life satisfaction was undertaken; limitations of self reporting and cross sectional studies were acknowledged, including inability to measure causality, impact of sampling method on generalizeability was also acknowledged.
Sahebalzamani et al (2013)	cross sectional survey	Ryff Scales of Psychological Well-being (Ryff, 1989) Mean score 319.95	Pearson correlation coefficient between spiritual intelligence and psychological well-being was 0.48 (P = 0.00), indicating an association. Pearson correlation coefficient between spiritual intelligence and purpose in life was 0.53 (P = 0.001)	Single site convenience sample, no response rate given; reliability of Ryff scale in this study was 0.82; Pearson's correlation coefficients for the scales used were calculated, but no multivariate analyses were reported; limitations of the study methods and generalisaebility were not acknowledged.

Table 3.4: Summary of findings and rigour - SWB quantitative studies

Study	Method	SWB measure	Study outcome (directly quoted and summarised from the source)	Observations on rigour
Salmond & Ropis (2005)	cross sectional element of a mixed methods study, a comparative study	Affect Balance Scale (ABS) (Bradburn, 2001)	A negative affective mood was found in 21.3% (n=19) of the sampled group of nurses, 44.9% (n=40) had moderate scores, and 33.7% (n=30) had positive mood scores. There was no difference between mood scores for medical- surgical and home care nurses on an independent sample t-test. ANOVA showed that job pressure varied by mood grouping ($f = 4.464$, $p<0.01$), as did job stress ($f = 5.723$, $p<0.005$)	Convenience sample; Cronbach's alpha for ABS not given; t test and ANOVA calculated but no multiple regression; limitations of sampling choices were discussed but not the limitations of the analysis or the cross sectional approach.
Simunić & Gregov (2012)	cross sectional survey	Semantic differential items with bipolar pairs of cognitive and affective adjectives.	One way ANOVA found the cognitive-evaluative component of job satisfaction was the highest among morning shift nurses and the lowest in nurses who worked 12-hour shifts, while the affective component of life satisfaction was the lowest in nurses working irregular and backward rotated shifts. These results confirm that shift work negatively impacts on work-family role conflict.	Cross sectional, three site study; sample size calculation not explained; study specific Cronbach's alpha coefficients ranging from 0.82 to 0.96 for the SWB measures; mean scores and one way ANOVAs performed but no regression analyses; limitations of sample groupings and sample size acknowledged
Sparks et al (2005) (2004)	cross sectional survey	SWLS (Diener et al, 1985)	SWLS scores correlated with job satisfaction scores ($r = .15$, $p< 0.05$) This was statistically significant, but denotes a weak relationship, significantly weaker ($p< 0.0l$) than in the general population where the correlation has been found to be approximately .44.	Pilot study undertaken; accurate response rate unavailable (between 16 and 100%); study specific Cronbach's alpha for SWLS not reported; social desireability effect measured and not found to be significant; correlation coefficients between scales were calculated but no regression analyses; limitations of sampling approach and response rate information were acknowledged.

Table 3.4: Summary of findings and rigour - SWB quantitative studies

Study	Method	SWB measure	Study outcome (directly quoted and summarised from the source)	Observations on rigour
Vanaki,& Vaghars eyyedin (2009)	cross sectional survey	SWLS (Diener, 1985)	Mean SWLS scores varied between genders, age groups, education levels and years in the profession. Pearson's r indicated a significant positive relationship between affective organizational commitment and life satisfaction (r = 0.29, P = 0.016) In stepwise multiple regression the work environment conditions explained 15% of the variance in affective organizational commitment. Having life satisfaction as the next variable increased the explained variance to 18%.	Geographically limited sample; Cronbach's alpha of the SWLS measure was 0.87 for this study; Tukey post- hoc tests, ANOVAs, correlations and multiple regression analyses were undertaken; limitations of having self selecting responders but not cross sectional study were acknowledged.
Yildirim & Aycan (2008)	cross sectional survey	SWLS (Diener, 1985)	Work-to-family conflict was associated with lower life and job satisfaction. Structural equation modeling showed that work-to-family conflict was associated with lower job and life satisfaction. Moderated multiple regression analyses showed that social support from the supervisor did not moderate the relationships among work demands, work-to-family conflict, and satisfaction with job and life.	Low response rate but this is justified in reference to similar studies (Rosenfeld, Edwards & Thomas, 1993); Cronbach's alpha for SWLS in this study was 0.86; structural equation modelling undertaken as well as moderated multiple regression analyses; model fit further assessed using comparative fit index (CFI) and the Tucker–Lewis Index (TLI) values and the root-mean-square error of approximation (RMSEA), as recommended by Hu and Bentler (1999); limitations of response rate, single geographical site and cross sectional design were acknowledged.

Table 3.4: Summary of findings and rigour - SWB quantitative studies

Study	Method	SWB measure	Study outcome (directly quoted and summarised from the source)	Observations on rigour
Yildirim, Kilic & Akyol (2013)	cross sectional survey	SWLS (Diener, 1985)	There was a significant correlation between life satisfaction and the four main domains of QOL (P < 0.05) Life satisfaction of the students improved with increasing QOL. No significant difference was detected between life satisfaction and variables such as age, graduated high school, place of residence, and parents' educational level (P > 0.05) A significant difference was found between a student's grade and his/her mean score of life satisfaction (P < 0.05), especially among the first- and third-grade students. Life satisfaction of working students was found to be significantly higher than that of non working students (P < 0.05) Students with a family income of 2500 Turkish Liras (approximately 1380 $) and above had higher life satisfaction score (P < 0.05)	Single cohort, single site sample; The Mann– Whitney U-test, Kruskal–Wallis test and analysis of variance (ANOVA) were used to calculate relationship between demographic characteristics and life satisfaction; Pearson's correlation used to calculate relationship between life satisfaction and QOL; limitations of the sampling choices were acknowledged, but not the use of self report measures and the cross sectional design.
Zhang et al (2014)	cross sectional survey	Life satisfaction scales applicable to college students (CSLSS) (Wang, 2005)	Pearson correlation coefficients found significant correlation between anxiety and life satisfaction (-0.268, p<0.05) Older students (Grade 5) had significantly higher CSLSS total scores compared with the other grades: F(4, 2,081) =5.563, P>0.001	Single site; response rate not given; study specific Cronbach's alphas for the CSLSS not given; limitations of sampling choices and lack of confounding information were acknowledged but limits of self reporting measure and cross sectional design were not recognised.

Table 3.5: Comparison of mean SWB scale scores

Author	Study population	n	SWB measure	SWB mean score (SD)	Normative score
Abdollahi et al (2014)	Nurses from six private hospitals in Tehran	252	OHI	121.57 (SD 33.13)	not available
Akhunlar (2010)	Turkish nursing students	183	SWLS	20.15 (SD 6.21192)	23.6
An et al(2014)	Korean nurses in New York	105	SWLS	24.05 (reported as 4.81 (SD 1.24))	23.6
Appel et al (2013)	Medical surgical nurses Control group *Baseline* *Post* Intervention group Baseline Post	91	HMQ	 7.37 (SD 1.09) 7.88 (SD 0.954) 7.85 (SD 0.684) 8.11 (SD 0.871)	 6.92 (SD 1.75) (Fordyce, 1988)
Bolier et al (2014)	Nurses and allied health professionals	177	WHO-5	63.8	70
Burke, Koyuncu & Fiksenbaum (2011)	Staff nurses in Turkey	224	PANAS LSS	not given	n/a
Chakraborty, Chatterjee & Chaudhury (2012)	Psychiatric nurses in two major tertiary psychiatric centres in India	101	PGI WBS	not given	n/a
Faribors, Fatemeh & Hamidreza (2010)	Nurses from 2 hospitals in Iran	125	OHI	not given	n/a
Gurková et al (2011)	Public hospital nurses in Slovakia	104	PAS NAS	not given	n/a
Gurková et al (2014)	Hospital nurses in Czech Republic	499	PAS NAS PWI	3.52(SD 0.92) 2.28 (SD 0.65) 65.03 (SD 15.82)	no norm data for Czech
Hawker (2012)	Welsh nursing students	215	SWLS	22.9 (SD 6.6)	23.6
Jacobs (2013)	Nurses in Oregon, US part of a larger study (Sinclair et al, 2009)	137	SWLS	25.24 (SD 6.24)	23.6
Lan et al (2014)	Critical care nurses in Malaysia. *Pre intervention* *Post intervention*	37	SHS	 19.46(SD 3.35) 20.49 (SD 2.91)	 4.63(1.72) 5.62(0.96)
Lee et al (2004)	General hospital nurses in South Korea	194	LS-Z	15.30 (SD 5.86)	not available
Loukzadeh & Bafrooi (2013)	Hospital nurses in Iran	88	RSPWB	317.58 (reported as 52.93 (SD 6.03))	not available

Table 3.5: Comparison of mean SWB scale scores

Author	Study population	n	SWB measure	SWB mean score (SD)	Normative score
Mackenzie et al (2006)	Canadian continuing care nurses	30	SWLS		23.6
	Wait list control group				
	Baseline			28.46 (SD 5.1)	
	Post			28 (SD 5.63)	
	Intervention group				
	Baseline			24.5(SD 6.05)	
	Post			27.31(SD 4.54),	
Makabe et al (2014)	Acute care nurses in Japan	1202	WHO QOL		no norm data for Japan
	Group A (50/50 WLB)			3.1 (SD 0.7)	
	Group B (60/40 WLB)			2.9 (SD 0.7)	
	Group C (70/30 WLB)			2.9 (SD 0.7)	
	Group D (80/20 WLB)			2.6 (SD 0.7)	
Montes-Berges & Augusto-Landa (2014)	Nurses from 1 hospital in Spain	85	SWLS	25.65(SD 5.46)	23.6
Nemcek (2007a)	US nurses from Magnet hospitals	136	SWLS	24.35 (reported as 4.87 (SD 1.16))	23.6
Nemcek (2007b)	US nurses from Magnet hospitals	310	SWLS	22.8 (reported as 4.56, CI 4.42–4.69)	23.6
Ostermann, Bertram & Büssing (2010)	Nurses and healthcare workers, therapists and physicians and carers in Germany.	77 (incl. 55 nurses)	BMLSS	76.0 (SD 14)	72.5 (SD 17.0)
Pal (2011)	Nursing students in India		SWI		n/a
	Non test group	60			
	Baseline	30		74.46	
	Post			70.03	
	Test group				
	Baseline			72.53	
	Post	30		85.76	
Por et al (2011)	Nursing students	130	SWLS	23.7 (SD 4.2	23.6
Ratanasiripong & Wang (2011)	Nursing and non nursing students from 2 colleges in Thailand.	400	SWLS		23.6
	Nurses	200		19.8 (reported as 3.96 (SD 0.79))	
	Non nurses	200		16.06 (reported as 3.21 (SD 0.74))	
Rochlen, Good & Carver (2009)	Male nurses in the US	174	SWLS	25.75 (SD 6.18)	23.6
Sahebalzamani et al (2013)	Hospital nurses from 4 hospitals in Tehran, Iran (including psychiatric nurses)	270	RSPWB	319.95	not available

Table 3.5: Comparison of mean SWB scale scores

Author	Study population	n	SWB measure	SWB mean score (SD)	Normative score
Salmond & Ropis (2005)	Nurses (58 in home care, 31 in medical-surgical) in the US	89	ABS	not given	n/a
Simunić & Gregov (2012)	Nurses from 2 hospitals in Croatia	128	Semantic differential scales		
	Morning shift worker				n/a
	Cognitive			4.72 (SD 1.40)	
	Affective			6.17 (SD 0.58)	
	Forward rotation 12 hr worker				
	Cogntive			4.53(SD 1.27)	
	Affective			6.31 (SD 0.56)	
	Forward rotation 8 hour shift worker				
	Cognitive			4.56 (SD 1.50)	
	Affective			6.28 (0.80)	
	Backward rotation plus irregular 8 hr shift worker				
	Cognitive			4.40(SD 1.71)	
	Affective			5.61 (SD 1.27)	
Sparks et al (2005)(2004)	Nurses in the US. (rr 16-100%)	152	SWLS	25.03 (SD 6.08)	23.6
Vanaki,& Vagharseyyedin (2009)	Nurses in 5 hospitals in Iran.	250	SWLS		23.6
	Gender				
	Female	185		28.2(SD3.02)	
	Male	65		28.7(SD 3.3)	
	Type of shift worked				
	Morning	64		28.5(SD2.8)	
	Evening or night	41		28.9(SD3.9)	
	Rotating	145		28.5(SD 2.9)	
	Number of years experience in nursing				
	2-10	128		28.5(SD 3.0)	
	11-20	54		28.1(SD 3.1)	
	21-30	68		28.6(SD 3.3)	
Yildirim & Aycan (2008)	Nurses in Istambul, Turkey (106 academic nurses (43.6%) and 137 clinical nurses (56.4%))	243	SWLS	13.4 (reported as 2.68 (SD 0.92))	23.6
Yildirim, Kilic & Akyol (2013)	Nursing students from 1 school in Turkey (rr 60.5%)	396	SWLS	22.90 (SD 5.74	23.6
Zhang et al (2014)	Nursing students in China	2086	CSLSS	not given	n/a

Table 3.6: STROBE Quality Checklist SWB papers

Methodological quality appraisal for SWB cross sectional studies and the survey elements of mm, long. and intervention studies (after Gärtner, 2012) STROBE criteria (Von Elm et al, 2007)

	Abollahi et al (2014)	Akhunlar (2010)	An et al (2014)	Burke, Koyuncu & Fiksenbaum (2011)	Chakraborty, Chatterje & Chaudhury (2012)	Faribors, Fatemeh & Hamidreza (2010)	Gurková et al (2012)	Gurková et al (2014)	Hawker (2012)	Lee et al (2004)	Loukzadeh & Bafrooi (2013)	Makabe et al (2014)	Montes-Berges & Augusto-Landa (2014)
+ The source of participants* and the method of recruitment is reported.	y	y	y	y	y	- not detailed	y	y	y	y	y	y	y
+ The response rate is 50% or higher. -	+ 81%	- not given	-15.3%	- 37%	- not given	- not given	y 52%	y 81.5%	y 79%	y 88%	y 88%	y 81%	y 81%
Descriptive data													
+ The main characteristics of the study population (occupation, age, gender) are reported,	y	- not detailed	y	y	y	y	y	y	y	y	y	y	y
Disorder or complaints variable													
Description													
+ The SWB variable is defined.	y	y	y	y	y	y	y	y	y	y	y	y	y
Assessment													
+ Details of SWB assessment method are presented and if applicable categories chosen are listed and explained***.**	y	y	y	y	- not detailed	y	y	y	y	y	y	y	y
Statistical methods													
+ The statistics used are described and seem appropriate to achieve the objective of our study.	y	y	y	y	y	y	y	y	y	y	y	y	y

* the group from which the study population was selected
**name and reference of assessment instrument used
*** number of categories and category boundaries when continuous variables were categorized e.g., cut-off points or median values

Table 3.6: STROBE Quality Checklist SWB papers 2

Methodological quality appraisal for SWB cross sectional studies and the survey elements of mm, long. and intervention studies (after Gärtner, 2012) STROBE criteria (Von Elm E, Altman DG, Egger M et al. The Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) statement: guidelines for reporting observational studies. J Clin Epidemiol 2008;61:344-9.)

	Nemcek (2007a, 2007b)	Poret al (2011)	Ratanasiripong & Wang (2011)	Rochlen, Good & Carver (2009)	Sahebalzamani et al (2013)	Salmond & Ropis (2013)	Simunić & Gregov (2012)	Sparks et al (2005) (2004)	Vanaki,& Vaghar seyyedin (2009)	Yildirim & Ayca n (2008)	Yildirim, Kilic & Akyol (2013)	Zhang et al (2014)
+ The source of participants* and the method of recruitment is reported.	y	y	y	- not described	y	y	y	y	y	y	y	y
+ The response rate is 50% or higher. -	- not given	y 52%	- not given	- not given	- not given	y 67%	y 80%	- not given	y 80.6 %	y 34.5 %	- not given	- not given
Descriptive data												
+ The main characteristics of the study population (occupation, age, gender) are reported,	y	y	y	y	y	y	y	y	y	y	y	y
Disorder or complaints variable												
Description												
+ The SWB variable is defined.	y	n	y	y	y	y	n	y	y	n	y	y
Assessment												
+ Details of SWB assessment method are presented and if applicable categories chosen are listed and explained***.**	y	y	y	y	y	y	y	y	y	y	y	y
Statistical methods												
+ The statistics used are described and seem appropriate to achieve the objective of our study.	y	y	y	y	y	y	y	y	y	y	y	y

* the group from which the study population was selected
**name and reference of assessment instrument used
*** number of categories and category boundaries when continuous variables were categorized e.g., cut-off points or median values

Table 3.7: Measuring intervention, trial and long. studies against SURE (2013)* quality criteria

	Appel et al (2013	Bolier et al RCT	Jacobs (2013)	Lan et al (2014)	Mackenzie et al (2006)	Ostermann, Bertram & Büssing (2010)	Pal (2011)
1. Does the study address a clearly focused question/ hypothesis?	y	y	y	y	y	y	y
2. Was the population randomised? If YES, were appropriate methods used?	n	√ but randomisation method not described	n	n	√ but randomisation method not described	n/a	n
3. Was allocation to intervention or comparator groups concealed?	y	n	n/a	n/a	n	n/a	n
4. Were participants/ investigators blinded to group allocation? If NO, was assessment of outcomes blinded?	y	n	n/a	n	n	n/a	n
5. Were interventions (and comparisons) well described and appropriate?	y	y	y	y	y	y	y
6. Was ethical approval sought and received?	y	y	not described	y	not described	not described	y
7. Was a trial protocol published?		n	n	n	n	n	n
8. Were the groups similar at the start of the trial?	y	y	n/a	n/a	y	n/a	y
9. Was the sample size sufficient?		y	y	n - calculated at 40, final no was 37	not discussed	not discussed	not discussed
10. Were participants properly accounted for? Was follow-up ≥ 80%?		n - drop-outs in the online group (61%) vs controls (27%)	n/a	y	n/a	not discussed	not discussed
11. Data analysis - Are you confident with the authors' choice and use of statistical methods?	√	√	√	√	√	√	√

Table 3.7: Measuring intervention, trial and long. studies against SURE (2013)* quality criteria

	Appel et al (2013	Bolier et al RCT	Jacobs (2013)	Lan et al (2014)	Mackenzie et al (2006)	Ostermann, Bertram & Büssing (2010)	Pal (2011)
12. Results - Were outcome measures reliable (eg objective or subjective measures)?	√	√	√	√	√	√	√
13. Is any sponsorship/ conflict of interest reported?	not described	y	y	y	not described	y	n
14. Finally...consider: Did the authors identify any limitations?	y	y	y	y	y	y	not discussed

*Specialist Unit for Review Evidence (SURE) 2013. Questions to assist with the critical appraisal of randomised controlled trials and other experimental studies. Available at: http://www.cardiff.ac.uk/insrv/libraries/sure/doc/SURE_RCT_Checklist_2013.pdf

Table 3.8: Summary of findings SWB qualitative studies

Study	Method	Qualitative approach	Study population	Study objective	Study findings
Drury et al(2013)	mixed methods study - Phase 1 - survey (Hegney et al, 2014), Phase 2 - 10 interviews	phased mixed methods design using Braun and Clarke(2006) thematic analysis	10 general nurses in Australia	to explore the factors impacting upon compassion satisfaction, compassion fatigue, anxiety, depression and stress and to describe the strategies nurses use to build compassion satisfaction into their working lives.	**7 themes shared by all**: (1) social networks and support; (2) infrastructure and support; (3) environment and lifestyle; (4) learning (5) leadership, (6) stress; and (7) suggestions for building psychological wellness in nurses. 5 of these themes (social networks and support; infrastructure and support; environment and lifestyle; learning; and leadership) are in the resilience framework of Hegney et al linked to focus, relaxation and mindfulness and positive coping strategies in other literature.
Freeney & Tiernan (2009)	content analysis of focus groups data	explorative qualitative design'	20 nurses in Ireland, including four from a psychiatric hospital.	to explore nurses' experiences of their work environments and to reveal factors in the workplace that may facilitate or act as barriers to nurse engagement.	**The themes mapped onto Maslach and Leiter's (1997) burnout and engagement model**: workload, lack of control, insufficient reward, lack of fairness, absence of community, incongruent values. Interventions aimed at fostering engagement are required for nurses to gain positive experiences from their work and subsequently a greater sense of well-being.
French et al (2011)	thematic analysis of semi structured interview transcripts	qualitative exploratory design	10 nursing staff in a general hospital setting in South Africa	to explore and describe the experience, as well as perceptions of coping mechanisms, of nurses working in the multi-skill setting, and to formulate recommendations to promote their emotional well- being.	4 main categories: **positive experience of the multi-skill setting** - opportunity to gain experience and skills, task sharing, • **negative experience of the multi-skill setting** - • **personal coping mechanisms within the multi-skill setting**- faith, self motivation, mutual support with colleagues • **promotion of emotional well-being within the multi-skill setting** - training, support, managerial invt
Mackintosh (2007)	thematic analysis of semi structured interviews	descriptive qualitative design	16 UK nurses working in surgical settings	to explore and describe how qualified nurses working with in, in-patient surgical areas cope with the daily experiences they are exposed to.	Overall finding - nurses switch off by developing a work persona different from but related to personal persona', with 3 themes: r**elationships with patients, being a person and the effect of experience.**

Table 3.8: Summary of findings SWB qualitative studies

Study	Method	Qualitative approach	Study population	Study objective	Study findings
Rose & Glass (2006)	Thematic analysis of qualitative inquiry - semi structured interviews and journalling	feminist methodology	5 Australian community mental health nurses.	to explore the relationship between emotional wellbeing and effective functioning as a female community mental health nurse?	**4 interrelated key components of emotional wellbeing** were identified: the nebulous notion; the stress relationship; the mind, body, spirit connection and an inner sense of balance. 2 interrelated aspects of professional practice: delivery of quality patient care and satisfaction in their nursing care. 3 dual themes for the relationship of emotional wellbeing to professional practice were identified: • Being able to speak out (or not) • Being autonomous (or not) • Being satisfied (or not)
Rose & Glass (2009, 2010)	Thematic analysis of qualitative inquiry - semi structured interviews and journalling	feminist methodology	16 community health nurses in Australia.	to explore the relationship between emotional work, emotional well-being and professional practice of generalist community health nurses who provided palliative care to clients living at home.	**3 significant issues**. 1 - the concept of emotional well-being was complex and multifaceted and associated with nurses feeling either balanced or out of balance. 2 -an interconnectedness between the participants' emotional work, emotional well- being and professional practice, influenced by the workplace organisation, communication amongst health professionals, setting professional boundaries and education and professional development opportunities. 3 - the participants revealed 5 self-care strategies to enhance their emotional well-being: healthy lifestyle choices; access to debriefing; self- validation; assertion; and, accessing emotional support.
Skinner, van Dijk, Elton & Auer (2011)	2 part study: part 1 - telephone interviews, 2 - focus groups and telephone interviews	Qualitative description' mode of analysis, aiming 'to provide an in-depth account of events and experiences in everyday terms'	Part 1 - 24 telephone interviews w nurses and midwives; Part 2 - focus groups and telephone interviews with 25 nurse and midwives in Australia	to conduct an in-depth examination of the key factors that impact on nurses' and midwives' work–life interaction in hospitals, and the human resource management strategies likely to improve and support work–life interaction, retention and well-being.	**1- What does work–life balance mean to nurses and midwives?** - work/ life not separate domains, porous boundary, work gives life meaning and purpose, personal satisfaction BUT emphasised need for boundaries, vulnerable to negative spillover. **2- What makes a difference to nurses' and midwives' work–life interaction?** challenges of shift work, benefits of flexible rostering, impact of work intensity and work loads, accessing leave, moving to flexible rather than permanent employment for work- life fit, difficulties of coordinating childcare, impact of org culture.

Table 3.8: Summary of findings SWB qualitative studies

Study	Method	Qualitative approach	Study population	Study objective	Study findings
Utriainen, Kyngäs & Nikkilä (2011)	mixed methods: 1 - interviews, diaries and open data collection forms. 2 - a survey	qual data analysed using grounded theory constant comparative method. Scale developed from the qual study was a 75 items using a 5 point Likert scale -	Qual - 21 ageing hospital nurses, Quant - 328 hospital nurses born between the years 1948–1962 in Finland	to develop a theoretical model of ageing hospital nurses' well-being at work and the subsequent testing of the model itself	Main components of the model: **nurse–nurse interaction**: 8 factors - (1) cohesion, (2) feeling of freedom in workplace community, (3) giving and receiving assistance and support, (4) nurses status at work, (5) perceiving one's work as meaningful, (6) being together with other nurses, (7) nurses working in pairs and (8) working independently. **nurse– patient interaction**: 3 factors - (1) patient satisfaction, (2) well-conducted nursing and (3) encountering patients and helping them. **patient-care centeredness:** (1) provision of good care to patients, (2) putting the patient first and (3) appreciation of nursing.
Ward (2011)	thematic analysis of individual interviews, focus groups, and reflective practice	feminist methodology used	13 female mental health nurses working in inpatient settings in Australia.	to investigate the lived experiences of 13 female mental health nurses working in inpatient services, asking about their practice and perceptions of workplace culture, and they shared their thoughts on stress management and professional well-being.	**Three subthemes:** Glass half empty/glass half full - being flexible and honest with patients, being female, importance of professional identity, work is chaotic but gives me purpose. • It is all about the patient - strong determination to fight stigma and support the patient • Facilitating change - The participants all talked about creating change. They discussed the job satisfaction they gained from transforming situations.
Watkins, Roos & Van der Walt (2011)	thematic analysis of interviews, focus groups and visual presentati ons	qualitative exploratory design with thematic analysis	16 nursing students in South Africa	to explore the different dimensions of well-being as described by nursing students.	**Identified themes:** Personal well-being: Lack of autonomy• Feelings of uncertainty • Feeling under pressure • Disillusionment with the nursing profession and the training • Dispositional optimism • Sense of purpose and deeper meaning Relational wellbeing: friends, families, lecturers Collective wellbeing: Challenging working environment • Lack of role models in clinical practice • Incongruence between theoretical and practical training

Table 3.8: Summary of findings SWB qualitative studies

Study	Method	Qualitative approach	Study population	Study objective	Study findings
Zwink et al (2013)	categorical and thematic analysis of focus group data	qualitative descriptive design with a 'general inductive' approach to analysis	21 acute inpatient nurse managers in the US.	to explore the perceptions of inpatient acute care nurse managers (NM) that influence NM retention, including current work environment, satisfaction, work-life balance.	Nurse managers identified staff recognition, support, peer relationships, collaboration, and ability to make positive change as factors influencing their decision to remain in the role. Burnout factors included workload issues, work-life imbalance, and difficulty sustaining positive relationships. Traits supporting success were communication, resiliency, integrity, and a visionary outlook.

Table 3.9: Measuring qualitative SWB studies against CASP criteria

CASP criteria	Drury et al, 2013	Freeney & Tiernan (2009)	French et al (2011)	Mackintosh (2007)	Rose & Glass (2006)	Rose & Glass (2009,2010)	Skinner et al (2011)	Utriainen et al(2011)
1. Clear statement of aims?	y	y	y	y	y	y	y	y
2. Appropriate methodology ?	y	An explorative qualitative design using semi-structured focus groups BUT Methodological decision not referenced to theory or model.	y	y	y	y	y	y
3. Design matches aims?	y	y	y	y	y	y	y	y
4. Recruitment strategy	y	Recruitment via nominations from senior nurses from 2 hospitals	Potential participants approached directly by the researcher BUT prior relationship with the respondents is not discussed.	y	Non probability convenience sampling using snowballing.	Not described in 2010, 2009 says a purposive sample with community nurses via their teams.	y	Not described for phase 1, at phase 3 participants were accessed by the Finnish Nurses Assocaition (FNA)
5. Data collection method?	y	y	y	y	y	y	y	y

Table 3.9: Measuring qualitative SWB studies against CASP criteria

CASP criteria	Drury et al, 2013	Freeney & Tiernan (2009)	French et al (2011)	Mackintosh (2007)	Rose & Glass (2006)	Rose & Glass (2009,2010)	Skinner et al (2011)	Utriainen et al(2011)
6. Relationships and bias are discussed?	y	y	not discussed	Lone researcher, prior relationship with participants not discussed.	Researcher shared personal information in the interviews, in line with feminist methodology. Researched shared journal entries with transcripts returned to interviewees	Researcher was included as one of the research subjects,	not discussed	not discussed
7. Ethical issues considered?	y	y	y	y	y	y	not discussed	not discussed
8. Rigorous data analysis?	y - Thematic analysis, following Braun and Clarke (2006), analytical approach described, analytical rigour through transparency, auditability and 'fittingness'	Qualitative content analysis' used, BUT approach not referenced; independent analysis of transcripts was undertaken and inter rater reliability was >75%	y - Analysis undertaken according to Cresswell's (2003) approach, with an independent co-coder reviewing the data.	y - Morse and Field's (1996) content analysis approach used, with each of the 4 stages described in the paper BUT no independent analysis of themes	Analytical approach not interview. Transcripts were described - in terms of how the verified by interviewees. themes were identified.	y - A critical analysis approach is described, with reference to Burns & Grove's (1997) methods.	y- Study 1 - content analysis after Sandelowski (2000) descriptive rather than theory building. Study 2- analysis methods not described,	y- at each stage a recognised approach was followed and is described in the paper.
9. Clear statement of findings?	y	y	y	y	y	y	y	y
10. Contribution of the research?	y	y	y	y	y	y	y	y

Table 3.9: Measuring qualitative SWB studies against CASP criteria

CASP criteria	Drury et al, 2013	Freeney & Tiernan (2009)	French et al (2011)	Mackintosh (2007)	Rose & Glass (2006)	Rose & Glass (2009,2010)	Skinner et al (2011)	Utriainen et al(2011)
Acknowledged limitations	y	y	y	not discussed	not discussed	not discussed	not discussed	y

Chapter 4 Literature review: the mental health of UK mental health nurses

4.1 Introduction

This chapter presents a systematic review of the primary research literature on the mental health of mental health nurses. Research on UK mental health nurses is discussed in the context of non UK research on mental health nurses and studies of other UK mental health professionals. All tables are presented at the end of this chapter.

The aim of the review was to answer the research questions:

> How has subjective experience of mental health problems in mental health nurses been measured?
> What is the state of mental health nurses' mental health?
> What personal, demographic and workplace factors are associated with mental health problems in mental health nurses?
> What is the impact and influence of mental health problems on being a mental health nurse?

The chapter begins with a discussion of common themes in the study of nurses with mental health problems, namely prevalence, the wounded healer image, the impact of mental health problems on work functioning and the effect of stigma and discrimination within the profession. There follows a review of the UK research literature on the mental health of UK mental health nurses from 1999 to 2014, with supplementary discussion of earlier UK research and non UK studies in order to address gaps in the evidence. The heterogeneity of the studies precluded doing a meta analysis, so this chapter presents an analysis of the methods, quality and findings of each type of study, followed by a narrative response to the review questions. In chapter 2 a conceptual model for nurses' mental health and SWB was presented, but gaps in the model were identified. This review shows the extent to which those gaps, and the aims of the research may be addressed through already published research.

4.2 Background

Prevalence rates for symptoms of mental health problems in nurses and other health care workers vary from study to study and between professions. Commonly versions of the General Health Questionnaire (GHQ) (Goldberg and Williams, 1988) have been used to identify possible self reported symptoms of mental illness in health care workers. While the GHQ does not serve as a diagnostic measure nor does it confirm whether subject have been diagnosed or treated for mental health problems, it is often used population health because it measures 'caseness' or likely prevalence in a given group, It has also been reverse-scored as a measure population 'wellbeing' (Hu et al, 2007). Wall et al (1997), using the GHQ-12 on 11637 NHS staff, found psychiatric morbidity of 26.8% overall, with 30% for male and 29% for female nurses, in contrast to 17.8% caseness for the general population in the British Household Panel Survey (BHPS, Taylor et al, 1995). Alongside relatively high prevalence of common mental health problems, nurses have a comparatively high suicide risk (Hawton and Vislisel, 1999), with most nurse suicides having had contact with psychiatric services in the year preceding death (Hawton et al, 2002). In UK NHS staff, high levels of fatigue have been found to associate with psychiatric symptoms and psychological distress (Hardy et al, 1997).

The impact of mental health problems on healthcare workers has been qualitatively researched in various ways. For some researchers and theorists this has been through an exploration of the image of 'the wounded healer' (Jung, 1963; Caan et al, 2001; Conchar and Repper, 2014), whereby those in the mental health field may draw on personal experience to perform their therapeutic role. In their recent review of the literature Conchar and Repper cite 125 articles, however few of these reported on primary research on nurses. The literature on wounded healers has tended to take the form of editorials and personal reflective accounts, such as those of MacCulloch and Shattell (2009), rather than primary research. Within the wider field of mental health work there have been some recent studies that have addressed the 'wounded healer' image for therapists and mental health professionals. Barnett (2007) interviewed nine trainee and practicing psychotherapists about their personal history and motivation to work in mental health. She used the

wounded healer metaphor in relation to the two common themes that emerged: the influence of early life losses and therapists' 'narcissistic need' to be in a caring role. Telepak (2010) interviewed eight therapists in relation to their being 'wounded healers'. She differentiates between the 'wounded healer' and the 'impaired professional'. From her perspective 'wounded healers' belong to an age old tradition of helpers who use their own experiences successfully in their work. Impaired professionals, on the other hand, present potential risks to clients, in terms of decision making and boundary issues, because of their own psychiatric problems. Telepak found that therapists draw positively on their experiences but also negatively, in term of how they affect engagement with clients. Her interviewees also described concerns about stigma and disclosure and concluded that 'self care' was of vital importance to wounded healers being able to work.

In Hinshaw's (2008)accounts of the experiences of 14 US mental health professionals who disclosed their personal and familial experiences of mental health problems the common themes were confusion, searing pain, aloneness and isolation, vulnerability, everyday lives and experiences, shaping identity and career, stigma and treatment. Hinshaw's book is not a research text, although it does offer a contemporary perspective on how mental health workers make sense of their personal experience that has driven and affected the work. Similarly, Rippere and Williams' 'Wounded Healers' (1985, 1994 eds.) also offers narrative accounts from mental health workers, this time in the UK and specifically about depression. For Rippere and Williams, the key themes were: trouble at work, arrivals and departures, women and depression, living with depression, depression in retrospect and depression - no way out? There is very little in their work about any positive impact that personal experience of depression may have on mental health work.

In other studies, mental health problems in the healthcare workplace have been considered in terms of their impact on work performance. Gärtner et al (2010), in the Netherlands, systematically reviewed the literature on the impact of common mental disorders on nurses' work functioning. Their review included 16 studies, of which 13 were cross sectional surveys, which limited the facility to identify causation or the direction of influence between factors. They found a

number of themes in the literature regarding common mental disorders being associated with impaired work performance: general errors, medication errors, near misses, patient safety and patient satisfaction. Their review formed part of their randomised control study of a workplace mental health promotion intervention for nurses, albeit not specifically mental health nurses (Bolier et al, 2014; Gärtner et al, 2011). Also Letvak et al's (2012a, 2012b, 2013) studies of nurses in the US have found that physical and mental health impact on how nurses perform at and enjoy work. In their studies, age played a significant role in determining better mental health.

Another way in which nurses' experience of mental health problems has been explored has been through accounts of their experiences of stigma and discrimination. Attitudes of fellow nurses to colleagues with mental health problems have been measured through questionnaires using hypothetical scenarios and attitudinal questions (Chambers et al, 2010; Tei Tominaga, Asakura and Sakura, 2014; Glozier et al, 2006). Whereas Chambers et al (2010) found that European mental health nurses from five countries generally had positive, non stigmatising attitudes to mental health problems, when nurses have been asked about colleagues with mental health problems, stigmatising attitudes were evident. In Tei Tominaga, Asakura and Sakura's (2014) Japanese study, stigmatising attitudes were particularly prevalent in nurses who had personal experience of working with colleagues with mental health problems. Glozier et al (2006), in their UK study, found that nurses stigmatised colleagues with mental health problems more than those with physical problems, however they had an even less positive attitude to colleagues with alcohol problems. In Ross and Goldner's (2009) review of the literature on mental health problems, nursing and stigma, a multifaceted relationship was described, whereby nurses can function as stigmatisers, the stigmatised and as destigmatisers. They found mental health nurses themselves to be the subject of stigma within the nursing profession, just as nurses with mental health problems may also be stigmatised.

4.2.1 Previous reviews of the literature

There have been previous reviews of the international research literature on the mental state of mental health workers, mental health nurses and nurses in

general (Harvey et al, 2009; Gärtner et al, 2010; Edwards and Burnard, 2003; Walsh and Walsh, 2002). Commonly, the mental health of nurses has been considered in terms of stress and burnout, namely poor mental health as caused by work. Whilst the stress and burnout literature is of interest to the present study, and many stress and burnout studies have also included measures of mental ill health, those studies have not been included here apart from where mental health problems has been considered in the context of it being a 'stress outcome', meaning that nurses may develop mental health problems as a consequence of work stress.

Walsh and Walsh's (2002) review of the research on the mental health of mental health workers from 1988 to 1998 found that rates of psychological ill health, suicide, problem alcohol use, depression and burnout were relatively high in mental health workers. The reasons for this were, they say, possibly to do with patient factors, organisational factors and the personalities of those people who are attracted to mental health work. Edwards and Burnard's (2003) systematic review of stress and stress management techniques in mental health nurses differentiated between stressors, stress moderators and stress outcomes, according to Carson and Kuipers'(1998) model of stress. They found 17 UK studies looking at 'psychological distress' as a 'stress outcome' in UK mental health nurses. Harvey et al's (2009) review of the literature on the current mental health of the healthcare workforce found that employee mental health was due to an interplay between individual factors and workplace factors, with the dominant model for viewing healthcare worker mental health being job stress and burnout. In their review of the literature and comparison of findings with ONS data, Harvey et al (2009) concluded that:

> 'Overall, the prevalence of psychiatric disorder amongst health associated professionals was slightly lower than the average amongst all workers (11% compared to an overall prevalence of 13%). However, certain occupations within the healthcare sector had a higher prevalence of psychiatric disorder than expected, for example, nurse auxiliaries and care assistants.'

In summary, some previous review studies have shown that health and care staff have higher rates of mental ill health than the general population, with higher risk of fatigue and stress related disorders. The prevalence of mental illness varies between occupation within the health sector and some studies have found prevalence rates lower than that of other workers (Harvey et al, 2009). Commonly described aspects of the health care worker's experience of mental ill health have been stigma and discrimination, but also how health workers have been motivated to do mental health work because of their life experiences ('wounded healers'). There is some association between nurses experiencing common mental disorders and increased risk of harm to patient, through clinical errors and reduced patient satisfaction, for example.

4.3 Search strategy

An initial scoping review (Davies, Drey and Gould, 2009) was conducted to get a sense of the available literature and to refine the study terms. Its parameters were much less confined than the final review protocol. The scoping search identified much of the literature included in the review, and highlighted some challenges in reviewing the literature on this topic. The parameters of 1999 to 2015 were used, in order to take account of a previous review by Walsh and Walsh (2001) covering the same topic up to 1999.

The nature of the topic made the refinement of search terms a difficult task. Any search involving 'mental health nurses' and 'depression' or 'mental health problems', for example, brought up studies about nurses as researchers, implementers and team members as well as subjects. This challenge has also been discussed by Gärtner et al (2010), Harvey et al (2009) and Tyssen and Vaglum (2002).

The review protocol (Appendix 3) was developed using a PICOS approach (Liberati et al, 2009): registered nurses(Population), identified through the title root '*nurs*; any intervention or combination of interventions where mental ill health had been measured or mental health problems had been reported by participants as part of the intervention or as an outcome measure for an intervention (Interventions); no restrictions on control groups were set (Control);

any outcome, described by researchers as specifically measuring subjective wellbeing (Outcomes); all study designs, including qualitative study designs (Study Design).

A data abstraction pro forma was completed for each study, collating the study designs, settings, participants, sample sizes, measures of mental ill health used, the nature of the interventions/surveys, outcome measures and results (see Appendix 2 for an example). Analysis of the quantitative studies was undertaken through a comparison of methods, findings and rigour of each study. Similarly the quality, findings and methodological rigour of the qualitative studies was compared.

4.3.1 Inclusion criteria

All articles were assessed against the following inclusion criteria: English language, describing primary research on nurses, published between 1999 and December 2014, explicitly looking at nurses'experience of mental health problems and including mental health nurses. Commentary, anecdotal and review articles were excluded.

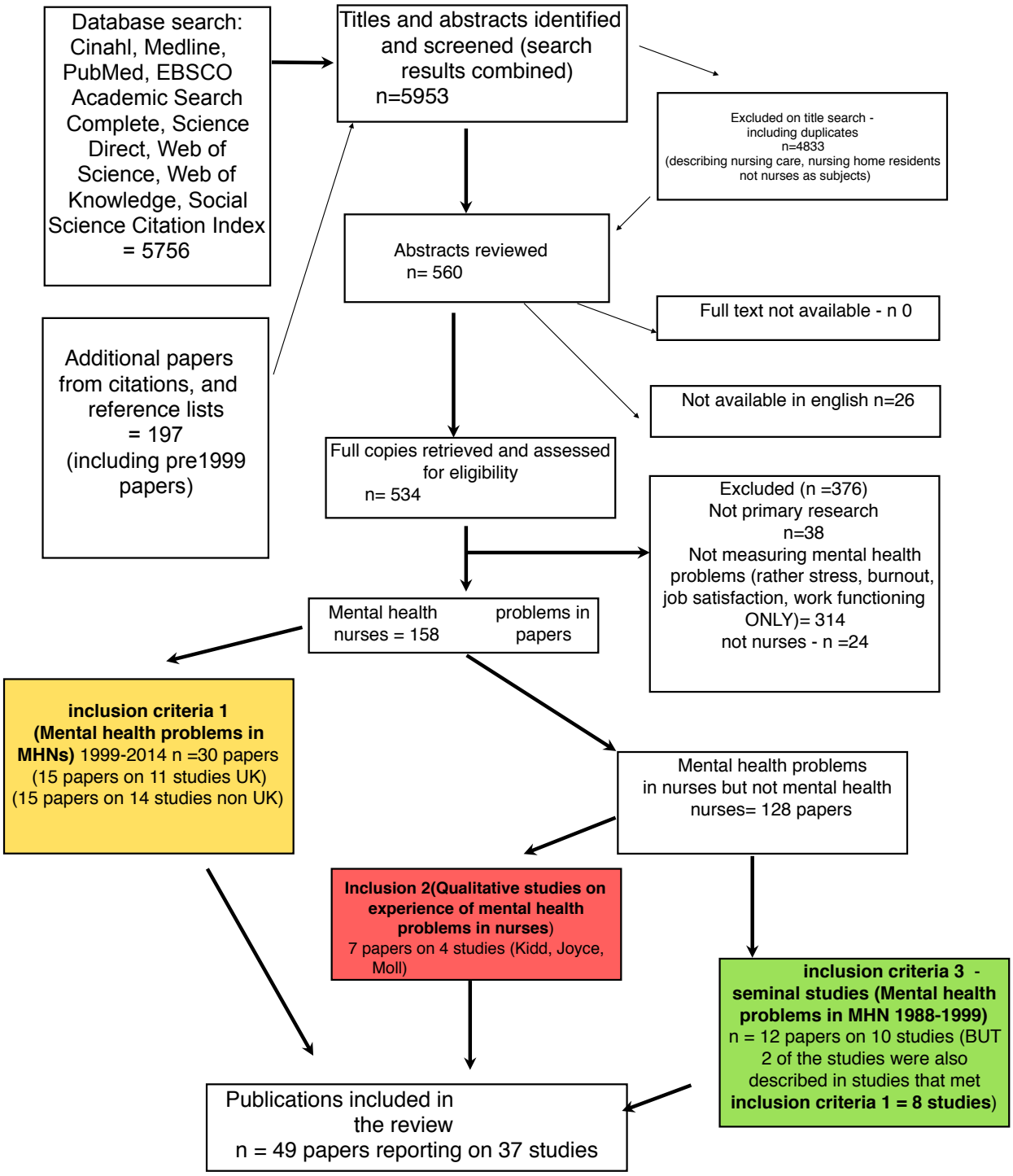
4.4 Search results

The study selection process is shown in Flowchart 4.1. A total of 5953 citations were retrieved using the search terms, citations and references. Of these 560 were identified for review. The discounted papers described nursing care or practice in nursing homes rather than the mental health of nurses. 26 papers were not available in English so 534 were retrieved for full review, Of these, 38 did not describe primary research. 24 did not describe research on nurses. 314 were rejected because they did not address mental health problems beyond the work-related, rather they focused on stress, burnout, job satisfaction, work functioning and quality of life. The selection of studies was further refined to focus on studies of mental health nurses, excluding those studies on other nurses (n 30). This left 11 studies in 15 papers of UK mental health nurses 1999-2014 and 15 papers on 14 international studies for the same time period.

In order to address the research questions the criteria for the review were expanded to include two other sets of studies. First, seven non UK qualitative and mixed methods papers describing three studies (including but not exclusively mental health nurses) were included. They were included because they were the strongest available examples of research on the lived experience of mental heath problems in nurses. Second, 12 further papers were included in the review, covering the mental health of nurses 1987 to 1998 (two papers from Australia and ten from the UK, describing 10 studies, two of which were also reported on papers within the original time frame: Prosser et al (1996) and Fagin et al (1996)). This was in order to present a more comprehensive picture of the state of nurses' mental health, albeit over a long time period. These earlier studies were of seminal importance to the more recent research. On reading the 1999 to 2015 literature, it was apparent that a number of pre 1999 studies were of importance to answering the review question because they offered vital insight into the mental health of UK nurses and were the benchmarks against which the findings of later studies had been measured. Each study has been colour coded in Table 4.2 as have the relevant boxes in Flowchart 4.1 in order to manifest the inclusion criteria for each paper.

The final 49 papers described 37 studies, of which 26 were cross sectional surveys, one study had a longitudinal element, one intervention study, five were mixed methods studies and four were qualitative studies (See Tables 4.1 and 4.2 for summary details of each study).

Flowchart 4.1 mental health of nurses: study selection process



4.4.1 A note on the excluded studies

Most studies excluded on full review did not describe the experience of mental health problems or use a measure of mental health problems. They solely presented research on the experience of stress, burnout or job satisfaction. Only those with explicit reference to the experience of mental health problems were included. The search found some studies using versions of the GHQ as a measure of 'stress' rather than mental ill health. They have not been included here. Where the GHQ was referred to as a measure of psychiatric caseness, the studies have been included.

Aside from the qualitative studies, studies including mental health nurses in a wider nursing population were excluded if their results did not describe mental health nurses or mental health workers as a distinct group. Bourbonnais, Comeau and Vezina (1999) surveyed 1378 nurses, of whom 64 worked in psychiatric wards in acute general hospitals, but no specific findings for this subgroup were given. Similarly, Enns, Currie and Wang (2014) included registered psychiatric nurses (RPNs) in their study of depression and absenteeism in Canadian nurses but distinct information on RPNs was not given. Weyers et al (2006) included but did not differentiate mental health nurses from other nursing staff in their study. Jones and Johnston's (2008) study of distress in first year student nurses was excluded because it did not provide specific findings about the mental health nursing students. Lambert et al (2004a, 2004b) detailed the percentages of psychiatric nurses included in their cross national studies of physical and mental health in hospital nurses but give no specific finding for the sub group. The same exclusion criteria applied to Laschinger and Grau's (2012) study of Canadian graduate nurses and Watanabe et al's (2015) protocol for an intervention study, which included psychiatric nurses in their target population although no differentiated results had been published at time of writing.

4.4.2 Included studies

Table 4.1 summarises the methods and outcomes of the included studies. Table 4.2 summarises the objectives, sample sizes, population and response rates.

In some studies mental health nurses were part of a wider mental health workforce being examined. The UK morale study (Johnson et al, 2011, 2012; Wood et al, 2011) included 1054 nurses in its study population of 2258 mental health staff. Some studies compared psychiatric caseness in mental health nurses or mental health nursing students with other populations. Cushway et al (1996) compared nurses with clinical psychologists. Dudley et al(1988) compared psychiatric and general nursing students. Pryjmachuk and Richards (2007) compared student mental health nurses with adult, learning disability and child branch student nurses. Sahraian et al (2008) and Shaktya et al (2012) compared psychiatric ward nurses with nurses from other specialties. Snelgrove (1998) compared occupational stress and job satisfaction in health visitors, district nurses and community mental health nurses. Psychiatric nurses were one group subject to scrutiny in Virtanen et al's (2012) analysis of health behaviours and morbidity across hospital specialties.

Some studies compared different groups of mental health nurses. Fagin et al (1995), Fielding and Weaver(1994) and Prosser et al (1996,1999) compared community and ward based mental health nurses. Mental health caseness, stress and coping were compared in three groups of ward based mental health nurses, as reported by Fagin et al (1996) and Carson et al (1999). Lee et al (2015) compared distress and post traumatic stress in forensic and general adult psychiatric hospital nurses. Some studies were of specific professional groups within psychiatric nursing. Jones et al (1987) reported findings of a study of nurses in one Special Hospital (currently described as a High Secure hospital). Reininghaus et al (2007) also surveyed High Secure hospital nurses, in this case 'a total population' sample from the four UK High Secure hospitals. The UK morale study (Johnson et al, 2011) compared inpatient, community and crisis resolution team staff. Lauvrud et al (2009) surveyed nursing staff in a forensic secure unit about post traumatic stress disorder (PTSD) symptoms as well as experience of violence and professional quality of life. Lin, Probst and

Hsu (2010) looked specifically at female psychiatric nurses. Tully (2004) measured ‘stress’ in mental health nursing students.

In some studies mental health nurses were not differentiated from other mental health colleagues. Van Daalen et al (2009) looked at emotional exhaustion and mental health problems in Dutch mental health workers, of whom an unspecified number were nurses. Similarly Van Humbeeck et al(2004) looked at mental health, burnout and job satisfaction in residential mental health workers, of whom 42% were nurses but were not reported on separately. Walsh et al (2002) measured mental health against other factors in community mental health team staff. Their sample of 79 staff comprised 37% nurses, but nurses as a group were not differentiated within the findings. Weyers et al (2006) included but did not differentiate mental health nurses from other nursing staff in their study. Wykes et al (1997) used the GHQ12 and the Beck Anxiety Inventory (BAI) alongside other measures in a study of community mental health staff but their results do not differentiate nurses from the other professional groups. Jones et al (2008) measured the impact of whole team training on ‘a multiprofessional group of 18 mental health workers practising within a single acute adult inpatient team’. It is safe to assume this includes nurses given that the study is reported in a nursing journal and was conducted by nurses.

In most studies measurement of nurses’ mental ill health was not the primary purpose. As discussed in Chapter 2, the dominant discourse on nurses' health and wellbeing is that of stress and burnout. This is apparent in the focus of the studies in this review. Also apparent is that the three models for the effect of the work environment on workers' wellbeing have been applied. The all-Wales study (Edwards et al, 2000, 2001; Burnard et al, 2000) used the GHQ-12 as a measure of mental ill health alongside a battery of other measures (the Maslach Burnout Inventory (MBI) (Maslach and Jackson, 1986), the CMHN (Community Mental Health Nurse) Stress questionnaire (Brown et al, 1995), the Rosenberg self-attitude scale (Rosenberg 1965), the Psychnurse Methods of Coping Questionnaire (McElphatrick et al, 2000)) in order to investigate stress, burnout and coping. Similarly, the Claybury study, as reported by Fagin et al (1995, 1996) and Carson et al (1995), used the GHQ-28 as one measure alongside other measures of stress, job satisfaction and coping: the Maslach Burnout

Inventory (MBI), the CMHN Stress questionnaire, the Rosenberg self-attitude scale, the Minnesota job satisfaction scale, and the Coping skills questionnaire (Cooper et al, 1988)). The South London study (Prosser et al, 1996, 1999) had burnout as its main concern, using GHQ-12 in conjunction with the MBI as a measure of job satisfaction. The UK nationwide inpatient morale study (Johnson et al, 2011, 2010; Wood et al, 2011) used the GHQ-12 as well as measures of burnout, affective wellbeing, job satisfaction job involvement and perceived job characteristics. Kilfedder et al's (2001) primary aim was to measure burnout in psychiatric nurses from one Scottish Trust. They used the GHQ-12, alongside other measures in 'a questionnaire based on a psychological model of occupational stress with burnout as the dependent variable. Kipping's (2000) doctoral thesis described a mixed methods study looking at stress and coping in mental health nurses, with the GHQ12 alongside measures of burnout, stress and sickness absence, interviews and focus groups.

4.5 Cross sectional studies

4.5.1 Methods: measures of mental ill health

13 measures of mental ill health were used in the 26 included studies. The original citations for all measures were retrieved and quality reviewed. The characteristics of these measures are summarised in Table 4.3.

The most commonly used measures were versions of the General Health Questionnaire (GHQ) (Goldberg and Williams, 1978). The GHQ has been described as 'a self-administered screening test for detecting minor psychiatric disorder in the general population' (Wall et al, 1997). It has been reverse scored to identify those with 'positive mental health' (Hu et al, 2007), and has been described as a measure of 'psychiatric morbidity' (Bressi et al 2009) and as a measure of 'psychological wellbeing' as well as a 'measure of stress' (Carpenter et al, 2003; Coffey and Coleman, 2001). The GHQ measures the domains of depression, anxiety, somatic symptoms and social withdrawal. It measures risk of symptoms by asking the respondent to state their experience of certain symptoms in the recent past. Its common use does afford the opportunity to compare findings between studies of health care workers and wider population

samples (Jackson et al, 2007). GHQ results are presented in a variety of ways, as means or as caseness percentages, and according to different ‘cut off points’.

The characteristics of measures used in each study are reported in Table 4.3. Like the GHQ, the Four Dimensional Symptom Questionnaire (4DSQ) (Terluin 1996) measures experience of common psychiatric symptoms in the recent past. The Symptom Checklist 90 (SCL-90) (Derogatis et al, 1973) measures a number of psychopathological features, including paranoid ideation as well as anxiety and depression. The SF-36 (Ware and Sherbourne, 1992) has a mental health sub scale, which measures general mental health. The Beck Depression Inventory (BDI and BDI-ii) (Beck et al, 1988), Brief Symptom Inventory (BSI) (Derogatis, 1993), Composite International Diagnostic Interview (CIDI) (World Health Organization, 1997), and Taiwanese Depression Questionnaire (TDQ) (Lee et al, 2000) all measure reported depressive symptoms in the recent past, as the Hamilton’s Anxiety Scale (Hamilton, 1976) does for anxiety and the PTSD Checklist Civilian Version (PCL-C) (Weathers et al, 1994) for post traumatic stress disorder.

Virtanen et al’s (2012) study was the only study that identified health care workers with mental health histories by asking a survey question about ‘ever being diagnosed with a mental disorder’. Research has tended to consist of cross sectional surveys and to focus on the experience of signs of stress and burnout at the time of data collection, rather their past experiences or reported diagnosis of mental health problems.

In most studies, measurement of mental ill health was combined with other measures, with symptoms of mental illness being correlated with other characteristics. Ryan and Quayle (1999), for example, used the GHQ-60 as their ‘stress measure’ alongside an occupational stress indicator and a ways of coping questionnaire. Sahraian et al (2008) used the GHQ-28 and the MBI as a combined measure of ‘burnout’. For Shen et al (2005) the SF-36 measure of general mental health was an adjunct to the measures of occupational stress and psychological work conditions in nurses in all five national psychiatric institutions in Taiwan. Tully used the GHQ-12 as a measure of ‘stress’ with a

ways of coping questionnaire and a student nurse stress measure. Wang et al (2015) measured depression alongside stress and resourcefulness in their study of Taiwanese psychiatric nurses.

Jones et al (1987) combined the use of the GHQ-12 and anxiety and depression measures with measures of job stress, job satisfaction and job demands. Munro, Rodwell and Harding (2008) used similar measures. Karanikola and Kaite (2013) and Karanikola,and Papathanassoglou (2013) combined anxiety and depression measures with measures of work satisfaction and burnout. For Lee et al (2015) the GHQ-28 was combined with measures of PTSD, perceived violence, stress and exposure to traumatic events. Lin, Probst and Hsu (2010) were primarily concerned with depression, but combine the use of the BDI-II with stress, coping and support measures. Madathil, Heck and Schuldberg (2014) measured depression alongside burnout and perceptions of leadership. Reininghaus et al (2007) used the GHQ-12 alongside measures of stress, coping, self esteem and support, and questions about assault and perceived dangerousness at work.

4.5.2 Findings

The findings and observations on rigour for the cross sectional surveys are summarised in Table 4.4. Studies tended to either report mean scores or caseness percentages (as summarised in Table 4.5). In the studies using versions of the GHQ, caseness of mental health nurses in the UK ranged from 42% in early career mental health nurses (Kipping, 2000) and 42% in UK CMHNS (Fagin et al, 1995) to 27.9% in ward based psychiatric nurses (Fagin et al, 1995) and 28% in psychiatric nursing students (Prjymachuk and Richards, 2007). Fagin et al (1995) pointed out that the caseness in their studies was higher than in ‘community samples’. Wykes et al (1997) reported their caseness of 30% in UK community staff to be similar to that of the general population and to other studies. Karanikola and Kaite (2013), using measures of depression and anxiety in Greek psychiatric nurses, reported their caseness of 15.3% depression and 11% anxiety to be lower than the general population norm of 20%. Pryjmachuk and Richards(2007) found 28% of psychiatric nursing students to have caseness compared to 33.7% of nursing students overall.

Virtanen et al (2012) found that 18% of psychiatric staff and 17% of psychiatric nurses in 21 Finnish hospitals reported psychiatric problems. What may be surmised here is that prevalence of mental health problems has been reported as variously higher and lower than population norms, with different measures yielding different accounts of caseness.

4.5.3 Quality

The quality of studies was appraised using a checklist following STROBE criteria (Von Elm et al, 2007) for observational studies, after Gärtner et al (2012) (see Table 4.6) and CASP criteria (see observations on rigour for each study in Table 4.4). The STROBE measure was used because of the precedent set by Gärtner et al for its use when looking at research on mental disorders in nurses. Overall the quality of the studies was high, reflecting appropriate methodology, analysis and reporting. The majority of included studies met criteria for quality regarding the statistical tests used, details of the assessment measures used (in this instance measures of psychiatric caseness) and for providing descriptions of the study population being investigated. The exceptions were Dudley et al (1988) who did not give detail of the characteristics of their chosen assessment measure. All studies described the source of their participants and methods of recruitment.

Response rates among the studies did not all meet the STROBE standard of over 50%, although most did. A number of study reports did not give their response rates (Madathil et al(2014); Jones et al (1987); Fagin et al (1995); and Dudley et al (1988)).

4.6 Longitudinal studies

4.6.1 Methods

One longitudinal study was identified. In 1994 Prosser et al (1996) surveyed 121 staff from three team settings (community, inpatient and day services) in London, of whom 59% (n 71) were nurses, using the GHQ12, the MBI and the Job Diagnostic Survey (Hackman and Oldham, 1975) along with demographic

and workplace questions. In 1999 Prosser et al reported on three years worth of survey responses from these teams, with the aim of measuring whether the move to a more community based model was accompanied by deteriorating mental health, burnout and less job satisfaction. The 1995 sample comprised 100 staff and the 1996 sample comprised 94 staff.

4.6.2 Findings

In the initial study Prosser et al (1996) found that community staff had higher GHQ scores than ward based and day centre staff, denoting more prevalent symptoms of mental health problems in this professional group. This was also associated with higher scores on the 'emotional exhaustion' sub scale of the MBI. The mean GHQ score overall (11.8, SD 5.0) was described as 'near that of highly stressed groups'. Over the three years the difference in GHQ12 scores was not significant. However, over time inpatient staff mean GHQ scores went up (from 10.9 to 11.9) whereas community staff GHQ scores went down (from 14.4 to 11.8), denoting a reduction in psychiatric symptoms over time, although, in regression analyses 'time' did not emerge as a significant factor in overall community team scores. Logistic regression showed the relationship between variables to not be consistent over the three years, for example with leaving being associated with lower job satisfaction in one year and greater job satisfaction the following year. Being in the community and being of white ethnic origin were the two explanatory variables for high GHQ scores found in this study.

4.6.3 Quality

The quality of Prosser et al's study was measured using Specialist Unit for Review Evidence (SURE) (2013) criteria, as summarised in Table 4.7. Prosser et al's (1999) study had some limitations, namely that the same individuals within the teams were not necessarily surveyed at the three time points and that there was a progressively low response rate (from 76% to 60%). However, they investigated non responders and did not find a difference between responders and non responders. Prosser et al's (1999) study had a small sample and was in a specific location at a point in time with the intention of measuring the impact

of a specific development in UK mental health policy (the move to community care). Its generalisability to a wider group of mental health staff now is limited.

4.7 Intervention studies

4.7.1 Methods

There was one intervention study that met the inclusion criteria. Jones et al (2008) reported findings of a study measuring the impact of a training programme on psychological skills on 18 UK adult acute mental health workers' mental health using the GHQ12 along with measures of stress, self esteem, job satisfaction and burnout as well as their knowledge of the content of the training. They surveyed participants at three time points: one month prior, immediately prior and immediately after the training intervention.

4.7.2 Findings

Jones et al (2008) provided only a brief report of their findings. Regarding 'psychological distress' (as measured by the GHQ 12), this was reportedly 'stable' in contrast to job satisfaction and aspects of burnout, which showed positive changes following the intervention.

4.7.3 Quality

The quality of the intervention study was measured using Specialist Unit for Review Evidence (SURE) (2013) criteria, as summarised in Table 4.7. Jones et al's (2008) study was presented in a brief research report. Probably due to the reporting format, it did not provide sufficient detail to meet the SURE criteria used to appraise quality (see Table 4.7). It did not give response rates, nor did it give detail of the demographic characteristics of the study participants. It did not give details of how the assessment measures (in this case the GHQ-12 amongst other measures) were used. This is particularly problematic in regard to the GHQ12 as it can be used in more than one way. The statistical tests and their findings were not provided in detail, save to say that mean scores were compared.

4.8 Qualitative studies

4.8.1 Methods

Seven papers describing four qualitative studies on the experience of healthcare workers with mental health problems were included. Of these, none looked exclusively at mental health nurses, but participants in one study (Moll, 2010; Moll et al, 2013) were recruited exclusively from a 'mental health and addictions' hospital in Canada, where clinical roles may be assumed to include mental health nurses. Participants in the studies described by Joyce et al (2007, 2009) in Australia and Kidd (2008) and Kidd and Finlayson(2010) in New Zealand did include mental health nurses but they were not analysed separately in the findings. The methodological and thematic focus of these studies was so close to the concerns of the present study that they have been included for review, nonetheless. Also Gilbert and Stickley (2012) presented a thematic analysis of 'wounded healer' perspectives from 30 UK mental health nursing and social work students.

Moll, Joyce, Kidd and their colleagues all described their methodological approach as ethnographic, with Moll (2010) describing her study as 'institutional ethnography', Kidd (2008) an 'autoethnography' and Joyce et al (2007) describing theirs as 'discourse analysis and ethnography'. Each study aligned itself with an ethnographic approach because of a concern for the social milieu and cultural context of the phenomenon of mental ill health and work. Joyce, Hazelton and Macmillan undertook 29 interviews with nurses who had experience of mental health problems. Kidd analysed accounts of personal experience of mental health problems from 19 nurses, including herself. These accounts took written and pictorial form, and some accounts took the form of transcribed interviews. Moll(2010) interviewed 20 employees with mental health histories and 12 stakeholders employed by the organisation who had some contact with staff with mental health problems. She also undertook an analysis of textual material on mental ill health provided by the organisation being studied, for example occupational health materials. Both Kidd's (2008) and

Moll's (2010) works were originally doctoral theses that were available in full on line.

Gilbert and Stickley's (2014) UK research study was on a much smaller scale, comprising a five question 'qualitative survey' of 30 mental health nursing and social work students from one institution. The methodological antecedents and justification for this approach were not given, and the researchers even state that an interview methodology would have better suited their aims.

4.8.2 Findings

The findings of the qualitative studies are summarised in Table 4.8. The three ethnographic studies analysed the experiences of mental health problems from different angles. Moll (2010) situated her participant experiences in the context of one organisation and her findings were centred on the core process of 'silencing'. This referred to the way in which individuals with mental health problems and their colleagues dealt with collegiate mental health problems within the culture of the organisation. Kidd's work (2008, Kidd and Finlayson, 2010), in keeping with her autoethnographic approach, concerned itself more with the individual experiences of nurses with mental health problems. She differentiated between three types: 'the vulnerable nurse' who went into the profession with preexisting personal or familial mental health problems, 'the nurse with co-existing mental health problems', who balanced working and being a person with a mental health problems, and nurses who had become 'ill' as a result of work. Joyce et al (2007, 2009) developed two of three overarching themes in their papers. The 2007 paper discusses the theme of 'crossing the boundary', when nurses become mental health service users. This has three aspects: developing a mental health problems, experiencing hospital admission and treatment and 'being managed' as a nurse/ patient. In their 2009 paper they explored the theme of 'support and trust', which encompassed sub themes of 'declaring mental health problems', and collegial, managerial and enhancing support. The first paper was concerned with process, with how nurses moved from one role to another. The second paper was more concerned with interaction, how nurses with mental health problems negotiate with and

experience others in the work environment. The focus on process and interaction is in keeping with their 'discourse analysis' approach.

There were some common concerns across the three studies. They all made reference to disclosure, stigma and discrimination, both in the body of their findings and in setting of the context for their studies. Moll's 'six practices of silence' were concerned with how the individual and the organisation conceal or disclose workers' mental health problems. She talked about some workers 'stigma busting' through use of strategic disclosure. According to Kidd, nurses with coexisting mental health problems have to negotiate stigma, discrimination and bullying in various forms, as well as dealing with 'internalised stigma'. Kidd also talks about how nurses may choose to disclose or not. For Joyce et al (2009) nurses 'negotiate the boundary' between nurse and patient, through disclosure but only in circumstances where trust and support were available.

4.8.3 Quality

Table 4.9 presents a review of the quality of each qualitative paper according to CASP (2006) criteria. All studies had clear statements of aims, suitable for qualitative methodology and cited the theoretical or methodological antecedents to their approach.

A variety of recruitment strategies were used, with varying success. Both Joyce and Kidd reported that calls for participants via a national journal had been the most successful means of access. Both Joyce and Moll used posters in their chosen research sites. Moll also used a snowballing approach via participants and via a research advisory group. All studies undertook purposive sampling, which was justifiable given the specificities of the group to be studied. Interviews were undertaken in all three studies and informed consent was sought and anonymity maintained. 'Relational ethics' were considered in Kidd's thesis, in accordance with her personal and emancipatory approach. Both Kidd and Moll described the provisions made to support interviewees given the sensitive nature of the topic. Joyce's papers did not discuss ethical concerns or the relationship between researcher and participants in as much detail. This does not mean that these were not addressed in the study as a whole. Given

that Moll and Kidd's studies were described in both doctoral theses and journal articles, there was more opportunity to evidence discussion of ethical and relational matters.

Similarly, the two papers from Joyce's study did not describe the data analysis approach in detail, whereas Moll and Kidd did. Kidd described her analytical decision making at each stage. Moll described the use of triangulation and journal writing to develop findings. As shown in Table 4.8, Kidd and Joyce found three core themes with numerous sub themes through their analysis. Moll described her main finding as 'a core underlying process' which could be detailed in 'six key practices.' All studies contained clear statements of their findings and put those findings in the context of the contribution the research was making to both research and nursing practice. The study authors acknowledged the limitations to generalisability of the size and specificity of their samples.

Gilbert and Stickley's (2014) study did not meet a number of CASP quality criteria. While the recruitment strategy and research questions were described, and the findings were clearly presented, the paper did not reflect an appropriate methodology for the research question. This was acknowledged by the authors. They also did not seek ethics committee approval for their study and did not discuss relationships and bias, despite their undertaking research with their own university students. Whilst this study could potentially have the most to offer the present one in terms of its study theme and UK population, the quality of the research was poor.

4.9 Mixed methods studies

4.9.1 Methods

Kipping's (2000) PhD thesis comprised a survey of 338 nurses followed by interviews with 28 nurses and nine focus groups. Her research was part of a wider study by Kings College London of mental health nurses' early careers. The survey comprised the MBI and the GHQ 12 along with demographic questions and questions on sources of and experiences of stress. The interview

topic guide asked about stress, coping and support. The focus group topic guide was on the characteristics of a good patient, nurse, team and organisation. Kipping's was a sequential explanatory mixed methods study, however she did not situate her work within the mixed methods paradigm. The results of the GHQ 12 are of interest to the present review, however the findings of the qualitative aspect have limited relevance to this study's research question.

The Claybury study (Fagin et al, 1996; Carson et al,1999) compared 250 CMHNs with 323 ward based psychiatric nurses (WBPNs) working in the North East Thames Regional Health Authority. Its aim was to assess stress and coping through responses to a questionnaire comprising demographic questions (including questions about sickness absence, alcohol and tobacco consumption), the GHQ 28, the Maslach Burnout Inventory (MBI) (Maslach and Jackson, 1986), the Rosenberg Self Esteem Questionnaire(RSEQ) (Rosenberg, 1965), the Minnesota Job Satisfaction Scale (MJSQ) (Weiss et al, 1967), a coping skills questionnaire and the Claybury CPN Stress Questionnaire(CPNSQr) (Carson et al, 1991). Group discussions and semi structured interviews were also undertaken with 20% of the participants. The all-Wales CMHN Study (Edwards et al, 2001; Edwards et al, 2000) used similar survey measures as the Claybury study, as well as three open ended written questions. These studies were not presented as 'mixed methods' by the authors and their findings have been presented in distinct research papers rather than as a mixed methods study.

In Johnson et al 's (2011) 'morale study' the concept of morale was linked to wellbeing, which the authors suggest may be measured through looking at job stress, job satisfaction and burnout. They used Warr's (1990) three dimensional model of work-related wellbeing which has three subscales: dissatisfaction to satisfaction, anxiety to contentment (or comfort), and depression to enthusiasm, alongside other survey measures: the MBI, The Job-Related Well-Being Scale (JRWBS) (Warr 1990), a job satisfaction scale, the GHQ 12, the Job Involvement Scale (JIS) (Tummers 2001), ratings of own and team morale, a job characteristics scale and the Team Identity Scale (TIS) (Priebe et al, 2005), interviews and focus groups, along with a review of sickness and leavers' data.

The qualitative element of the study comprised interviews and focus groups as a distinct module within the study, with the aim of investigating the ‘underlying mechanisms’ of morale. The staff chosen to take part in the qualitative phase were purposively sampled from the initial quantitative phase. The interviews focused on ‘what made the participants feel happy or unhappy at work’ and frequency of themes was analysed using NVivo 7 software.

Moll (2014) has described hers as a ‘qualitative case study’ of the experience of mental ill health within a large organisation. Like Kipping’s (2000) work, it was part of a larger study, this time looking at implementation of early interventions for mental health (Moll, 2015). Moll conducted in depth interviews with eight healthcare workers with mental health histories and eight workplace stakeholders. She also conducted an online survey of 67 employees. The survey comprised open ended questions similar to those used in the interviews.

Van Humbeeck et al (2004) conducted interviews and surveys with 56 professionals providing residential mental health care in sheltered living in Flanders, Belgium. Their interviews were semi structured, as they followed the Camberwell Family Interview (CFI) format (Vaughn and Leff, 1976), meaning that the participants were asked to talk about their clients and then their comments were scored for the degree of expressed emotion. Alongside the CFI, the researchers used the Perceived Criticism Scale (Hooley and Teasdale, 1989), the MBI, a job satisfaction questionnaire and (of interest to this review) a psychiatric symptom checklist (SCL-90, Arrindell and Ettema, 1975). Neither Van Humbeeck, Van Audenhove and Declercq (2004) nor Moll (2010) describe their research as mixed methods.

4.9.2 Findings

In Kipping’s(2000) study 42% of the early career mental health nurses met criteria for GHQ caseness. She found that multiple factors were triggering stress and burnout, and that the nurses were only partially aware of this. Kipping suggested that this mean that they used ‘coping strategies’ that exacerbated rather than reduced stress experiences.

Johnson et al(2011, 2012) found that 39% of CMHT staff met GHQ caseness thresholds. Of the inpatient staff, between 22% (wards for older people) and 31% (CAMHS wards) met these levels. Rehabilitation ward staff, followed by staff from wards for older people, forensic units and Crisis Resolution Teams, had the lowest GHQ caseness and lower emotional exhaustion. Johnson et al(2011, 2012) found that happiness at work was associated by participants with relationships with colleagues and interactions with patients, and with feeling listened to and valued by managers. Supervision and the physical environment were also considered to affect morale.

In the Claybury study CMHNs (41%) had significantly higher GHQ 28 caseness than WBPNs (28%), with their mean score being 4.8 compared to 3.4 in WBPNs. High caseness was associated with high emotional exhaustion and depersonalisation scores on the MBI. For WBPNs predictors of high GHQ scores were: happiness with present life, high emotional exhaustion, self perceived level of physical fitness, intrinsic job satisfaction, self attitude and number of patients on caseload. For CMHNs the biggest predictors of highGHQ scores were high emotional exhaustion, self perceived physical fitness, happiness, a high CMHN stress score, self attitude and having completed a recent ENB training course. Higher levels of smoking and drinking were associated with high GHQ scores in CMHNs as were high levels of sickness absence.

The all-Wales study found that 35% of those surveyed met the threshold (of 2) for GHQ-12 caseness (Edwards et al, 2000) compared with 41% in Claybury. For the participants, stress was linked to emotional exhaustion, high alcohol consumption and job insecurity (Edwards et al, 2000). Most common ways of coping with or moderating stress were activities that the CMHNs did such as having a stable and separate home life, having hobbies and people to talk to (Coyle et al, 2000). Peer support and personal strategies were commonly cited as ways of coping in the open ended answers. These were similar to the ways that Canadian social workers described maintaining their wellbeing in Graham and Shier’s (2010a, 2010b, 2011) work.

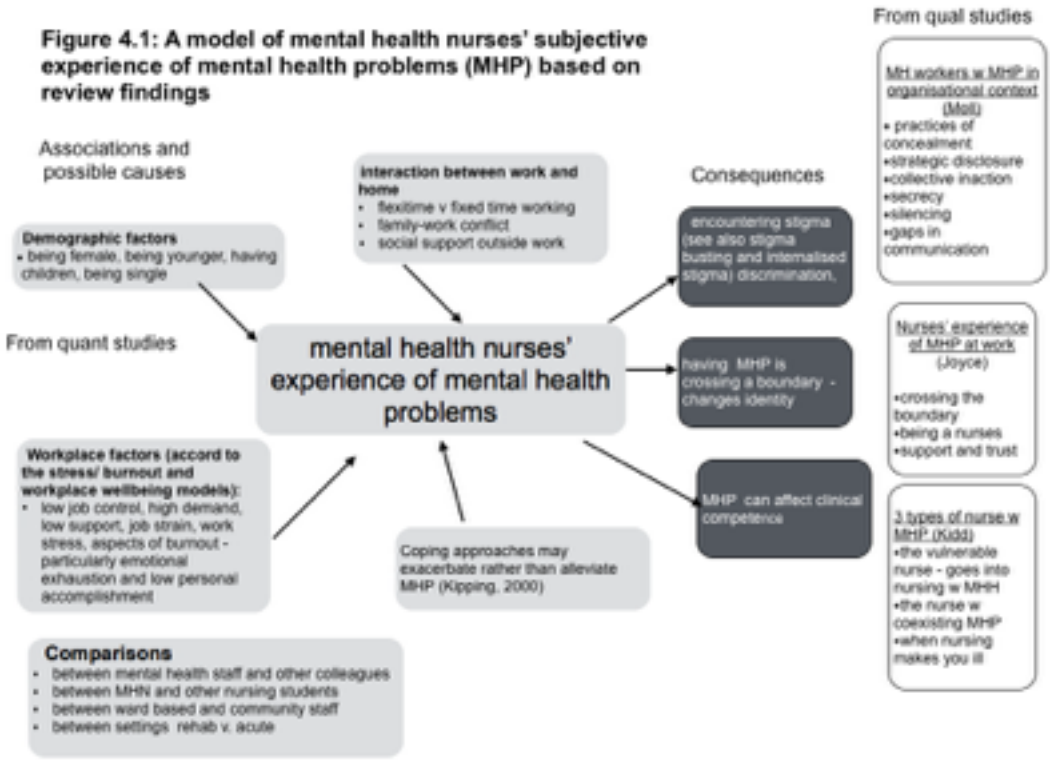
As with Moll's earlier work (2010, 2013), the theme of 'silence' was central to her 2014 study findings on mental health in the workplace. She talked about a web of silence and inaction, with research participants reporting uncertainty, stigma and shame. Moll has also identified confidentiality, workload pressure and concerns about professional competence as themes.

In Van Humbeeck's study mean scores for the SCL-90 were 107.6 (SD 15), which were low compared to norms. The professionals reported 'very few' complaints psychological or physical. They also reported low burnout, in contrast to similar studies. The researchers did not find an association between expressed emotion, burnout, job satisfaction and burnout within their subject group.

4.9.3 Quality

The quality of the qualitative aspects of the mixed methods studies was appraised using STROBE criteria (Von Elm et al, 2007) (Table 4.6) in the same way as the cross sectional surveys. The studies all met quality criteria for their reporting on recruitment, characteristics of their sample, description of the variables measured and assessment and statistical tests used. The Claybury and all-Wales study's response rates were below the STROBE 50% quality standard, at 49%, 47% and 46%. Van Humbeeck and colleagues did not give a response rate for their study. The Claybury and all-Wales authors acknowledge the limitations to generalisability that their response rates suggest. Van Humbeeck and colleagues identified the timings of their survey administration and their small sample size (n52) as limiting their opportunity to gather statistically significant findings.

The qualitative elements of Johnson et al's (2012) morale study, the all Wales (Edwards et al, 2000) and Claybury studies (Fagin et al, 1995) were clearly secondary to their quantitative elements, with the qualitative aspects being undertaken under the auspices of the wider quantitatively focused study. Kipping's and Moll's qualitative study elements were appraised using CASP criteria (Table 4.9). They were found to be methodologically sound in all



aspects, apart from that Moll did not discuss ethics or data analysis approaches in detail in her paper.

4.10 Discussion: answering the review questions

Figure 4.1 presents a model of mental health nurses' experience of mental health problems based on this review findings. It shows that mental health nurses' experience of mental health problems is associated with a number of factors. Certain demographic factors, particularly gender, relationship status, age and having children have been associated with the presence of psychiatric symptoms in some but not all studies. Psychiatric symptoms, namely GHQ caseness, depression and anxiety, have been associated with workplace characteristics and experiences of work that have been measured using tools designed to identify stress, burnout, job satisfaction and the three models of work engagement discussed in Chapter 2. Some studies have found that experience of mental health problems is associated with the interaction between home and work life. When comparisons between mental health nurses and other nursing colleagues, fellow mental health workers and between mental health nurses in different settings have been made there is no definitive account

of relative likelihood of mental health problems between groups. The qualitative data on nurses with mental health problems characterises the experiences as one in which stigma and discrimination loom, where nursing identity and competence are seen to be at risk and where disclosure and management of mental health problems is affected by the degree of support and trust within their working environment.

4.10.1 How has subjective experience of mental health problems in mental health nurses been measured?

Research on the experience of mental health problems of mental health nurses has been limited in its approach thus far. Survey studies have assessed caseness or presence of psychiatric symptoms in a variety of mental health nurse populations. In all but one study with a quantitative element (Virtanen et al, 2012) this has been through the use of validated measures of symptoms or distress. Versions of the GHQ are the most commonly used means of identifying nurses with mental health problems. Given that the GHQ measures recent self reported symptoms rather than asking participants whether they have been diagnosed or treated for mental health problems, its use does not necessarily give a comprehensive picture of who is currently being treated for or experiencing mental health problems or who has experience of mental health problems on which they draw in their work. Where nurses' mental ill health has been measured it has tended to be in conjunction with other characteristics or self reported states, such as job satisfaction or burnout. The majority of research on mental health nurses' mental health has focused on stress, burnout and coping and how they might impact on or be impacted by work.

There is some qualitative research on nurses' experience of mental health problems. Mental health nurses have been included in those studies but there has not been a qualitative study looking specifically about mental health nurses with mental health problems' experiences. With the exception of Gilbert and Stickley (2014), the qualitative studies that have been done are methodologically sound and present similar thematic findings.

Of the several mixed methods studies that have been referred to in this review, only Moll's (2014) really addresses the personal experience of mental health problems. The qualitative elements of the other mixed methods studies are really addressing research questions on experiences of stress and views about morale and coping at work. There has been a lack of longitudinal or intervention studies looking at mental health nurses' mental health. This is an area of growth however, with Gärtner et al's (2010) randomised controlled trial of a health intervention for nurses, Moll's (2015) published protocol for a randomised parallel group trial of a workers mental health intervention and Watanabe's (2015) protocol of a 'Happy nurse' project trial of the effectiveness of a mindfulness stress management intervention.

There is a need for research on mental health nurses' mental health from the perspective of positive psychology, happiness and SWB, which uses a measure of mental health that accounts for whether the person considers themselves to have mental health problems and is receiving care and treatment, as opposed to reporting symptoms that might suggest caseness. There is a lack of research, both qualitative and quantitative, on UK mental health nurses' historical or familial experience of mental health problems. This is a deficit in the understanding of how nurses manage and use their experiences in their work.

4.10.2 What is the state of mental health nurses' mental health?

Studies of UK mental health nurses have found higher GHQ caseness than that presented for NHS staff overall; at 26.8% (Wall et al, 1997), 31% (Fagin et al, 1996), 35% (Edwards et al, 2000), 42% (Kipping, 2000). Most recently Johnson et al, in the UK wide morale study of 2258 mental health workers found a caseness using the GHQ-12 of 29% overall, and 39% for CMHT staff (n 1054). In two studies where psychiatric nursing students were compared with general nursing students, mental health nursing students had lower percentage caseness than general nursing students using the GHQ (Pryjmachuk and Richards, 2007) and the CES-D (Dudley et al, 1988). Evidence suggests that nurses' experience of mental ill health alters over the career, though, with Kipping's early career UK nurses having a GHQ12 caseness of 42%, compared to Pryjmachuk and Richards' (2007) students' 28%. Because all of the studies

reviewed here apart from Virtanen et al (2012) have used self rating scales focused on presentation of symptoms which do give an insight into potential for diagnosis but should not be relied on as confirming a diagnosis, the evidence does not give a definitive account of how many mental health nurses have been diagnosed, are being treated or consider themselves to have mental health problems. There is further research to be done which explores the subjective experience mental health problems within this population.

4.10.3 What personal, demographic and workplace characteristics are associated with mental health problems in mental health nurses?

Measures of mental ill health have been used in conjunction with other psychometric and demographic measures in most studies. The all Wales study (Edwards et al, 2000) found not only 35% GHQ caseness, but also high levels of emotional exhaustion. Johnson et al 2010) also found emotional exhaustion to be the most prevalent high score of mental health staff's MBI. However, Johnson et al found wide variation between caseness and burnout scores between staff from different types of settings, with acute ward staff reporting higher levels of symptoms than rehab staff. Lauvrud, Nonstad and Palmstierna (2009) found that PTSD was low in forensic staff but that length of experience in the field and low levels of compassion satisfaction were associated with more PTSD symptoms. Lee et al (2015) compared psychiatric nurses in general mental health versus forensic settings and found there to be higher GHQ28 caseness in mainstream nurses versus the forensic ones, but similar levels of PTSD diagnosis. They also found that work stress, particularly the experience of workplace violence and staffing issues, was associated with psychological distress. Lin et al (2010) found that job stress was associated with depressive symptoms, while social support could mitigate for depression. This was also suggested in Reininghaus et al's (2007) study of nurses in High Secure hospitals.

Consistently a difference between hospital and community settings has been found, however the association has differed in different studies. Johnson et al (2010) found acute psychiatric ward staff to have higher psychological distress, using the GHQ 12, whereas Carson et al (1995) and Prosser et al (1996) found

community staff to have worse mental health than their ward based colleagues. The historical context of these findings may be of relevance here, with 1995-6 being the era of 'moving care in the community' whereas more recently the level of acuity of psychiatric inpatients has been a cause for concern (RCN, 2014b), suggesting that they rather than CMHNs may present with more mental ill health. As discussed earlier, inclusion criteria for this review were broadened to account for seminal and methodologically useful studies, however, the heterogeneity of the groups of nurses being studied must be acknowledged.

The working environment and the interface between work and home were found to influence mental health. Home-work conflict has been found to be strongly associated with worse mental health outcome in psychiatric nurses and psychologists (Cushway et al, 1996). Karanikola and Kaite (2013) found that depressive and anxiety symptoms were negatively correlated with mental health nurses' experiences of autonomy, interactions with other nurses and with physicians, organisational policies and status. For Kipping (2000), 'stress and burnout' were correlated with intra individual (for example, unconscious motivations) and organisational processes (for example, the culture and power dynamics at work) as well as interpersonal ones. Madathil et al's(2014) study found that depression and burnout were impacted upon by leadership styles within nurses' working environments, particularly that depressive symptoms were negatively associated with nurse managers having a transformational leadership style. For Shen et al (2005), a low mental health score was associated with low job control and support alongside high job demands and stress. For Walsh and Walsh (2002) mental health problems were linked to caseload size, gender and caseload make up, with (surprisingly) smaller, lighter caseloads being associated with CMHT staff having worse rather than better mental health.

4.10.4 What is the impact and influence of mental health problems on being a mental health nurse?

The qualitative studies on the experience of nurses with a mental health problems offer insight into the interaction between the experience of mental health problems and being a mental health nurse. In Moll's ethnographies

(2010, 2013, 2014), ‘silence’ was the key theme. For her subjects the experience of mental health problems pervaded their mental health work experience within an institution but they were not encouraged to be open about it, despite overt calls to be open. Moll’s subjects talked about ‘strategic disclosure’ and active ‘concealment’ which were at odds with the public messages within the organisation to be open and talk about their mental health problems.

Kidd’s (Kidd, 2008; Kidd and Finlayson, 2010) and Joyce et al’s (2007, 2009) subjects talked about their experiences of having mental health problems and being a nurse. For some of Kidd’s subjects nursing work was seen as triggering mental health problems or exacerbating preexisting vulnerabilities. For others the experience of mental health problems was separate from work but still it impacted on working practice. As with Moll’s (2010) study, stigma and disclosure were key concerns. Joyce et al’s (2007, 2009) nurses with mental health problems ‘crossed a boundary’ when becoming a nurse and a patient. Again, being a nurse with mental health problems was an experience affected by the attitudes of colleagues, with disclosure and stigma again arising as part of the experience. Nurses were concerned about the impact of their mental health on their clinical competence both as a result of developing a mental health problems and also of experiencing psychiatric symptoms.

4.11 Conclusion

This literature review aimed to identify the means by which mental health nurses’ experience of mental health problems has been measured and to what it correlates. Diagram 4.1 represents a model of mental health nurses' mental health according to review findings. There is no single unifying way in which mental health nurses’ mental health has been measured, apart from the numerous uses of versions of the GHQ, and no survey studies have asked nurses about their past or familial experience of mental health problems.

Study designs have offered limited generalisability because of their geographically specific samples, usually focusing on one hospital or set of teams. The morale study (Johnson et al, 2010) offers a recent and large scale

account of the state of UK mental health nurses' mental health across settings, however, the study of mental health problems in psychiatric staff was not its core concern and the use of the GHQ to measure psychological distress had its limitations in terms of what the GHQ actually measures.

Comparisons between different groups of mental health nurses and between mental health nurses and normative groups present a mixed picture. Findings are not consistent and suggest that mental health nurses may report different degrees of mental ill health at different times in their careers and in different work settings. This suggests that first, research studies that ask direct questions about experience, diagnosis and treatment should be undertaken and second, that longitudinal studies using consistent samples should by devised.

Qualitative study findings are limited in number and there has been no high quality qualitative research on UK mental health nurses' experience of mental health problems. The available research does have some consistency of findings, with disclosure, stigma and the attitudes and support of colleagues being vital elements of the workplace experience of mentally ill mental health nurses. As was first proposed in Chapter 2, further research should address the prevalence and correlates of mental health problems in UK mental health nurses. It should also explore the lived experience of being a mental health nurse with mental health problems, with a sample of nurses drawn from a survey of mental health nurses' experience of mental health problems. Such study would be a starting point for longitudinal and intervention research.

Table 4.1: Summary of included mental health studies

Study	Method	MH measure	Other characteristics measured	Study population	Study objective	Study outcome (directly quoted and summarised from the source)
Cushway, Tyrer & Nolan (1996)	scale devt/ cross sectional survey	SCL-90-R, GHQ28	stress, coping	154 clinical psychologists, 111 mental health nurses from the West Midlands, UK	to develop of the Mental Health Professionals Stress Scale (MHPSS): a self-report method of identifying sources of stress for mental health professionals.	Nurses had higher mean SCL-90-R and GHQ28 scores than psychologists; higher for women
Dudley, Langeldud decke & Tennant (1988)	cross sectional survey	CES-D	anxiety, personality, hypochondria	212 psychiatric and 312 general nursing students	To compares general and psychiatric nurse trainees, in terms of psychological (symptomatic) morbidity, personality, hypochondriasis and illness behaviour, and drug and alcohol use.	In a comparison of two groups of nurse trainees, general nurse trainees showed a small but significantly greater degree of psychopathology than psychiatric nurses. General nurse trainees had significantly higher scores on neuroticism, trait and state anxiety and depression.
Edwards et al (2000, 2001)	cross sectional survey	GHQ12	burnout, stress, coping, self esteem	301 CPNS (49%rr)	to examine stressors in an all Wales study	The GHQ-12 measure indicated that 35% of CMHNs had psychiatric caseness. 51% of CMHNs were experiencing high levels of long-term emotional exhaustion.
Fagin et al (1995); Brown & Leary (1995), Leary & Brown (1995)	comparative cross sectional survey	GHQ28	burnout, stress, self esteem, job satisfaction, coping	250 CPNs and 323 ward-based psychiatric nurses (WBPNs) nurses	to study stressors and coping strategies in UK psychiatric nurses	41% of CPNs scored highly on the GHQ28. CPNs and WBPNs had high occupational burnout, especially emotional exhaustion, with WBPNs having higher emotional detachment and less personal fulfilment.
Fagin et al (1996), Carson et al (1999)	comparison of findings of 3 cross sectional surveys	GHQ28	burnout, stress, self esteem, job satisfaction, coping	ward based psychiatric nursing staff in three studies (combined n 648)	to compare findings from three studies of ward based mental health nurses on mental health caseness, stress and coping.	There were no significant differences between levels of psychological distress on GHQ Total Score, but there were differences in caseness rates. In Study 3, 38% of nurses met caseness. The main stressors for ward staff were to do with staff shortages, health service changes, poor morale and not being notified of changes before they occurred.

Table 4.1: Summary of included mental health studies

Study	Method	MH measure	Other characteristics measured	Study population	Study objective	Study outcome (directly quoted and summarised from the source)
Fielding & Weaver (1994)	cross sectional survey	GHQ12	burnout, work engagement	67 hospital and 55 community mh nurses	to compare hospital and community based mental health nurses in relation to perceptions of the work environment and their psychological health	There were no overall differences between the two groups in relation to psychological health, although the pattern of factors associated with emotional well-being differed. Finally, analyses of the Community data revealed that those nurses with 'flexitime' arrangements evaluated their work environments less positively and showed higher levels of psychological strain than did those working 'fixed-time' schedules.
Gilbert & Stickley (2014)	qualitative survey'	n/a	n/a	30 mh nursing and social work students	to focus on the role of lived-experience in mental health education and practice as perceived by undergraduate students.	A number of students had previously (and were currently) experiencing mental distress as 'wounded healers.'
Johnson et al (2011, 2012), Wood et al (2011)	mixed methods study	GHQ12	burnout, job related wellbeing, demand and control, job involvement, job satisfaction	2258 staff (60%rr) of which 1054 (47%) were nurses	To describe in-patient staff morale, measured by a cluster of indicators, in a large representative sample of wards.To compare morale between ward and community mental health team (CMHT) and crisis resolution team (CRT) staff and investigate staff's reported reasons for leaving wards.	Most NHS inpatient mental health staff report fairly good job satisfaction and a sense of achievement from their work. There were large variations between types of ward in both emotional exhaustion and GHQ score, a general measure of psychological distress. Generic acute ward staff showed most sign of stress: 49% met threshold for burnout on the emotional exhaustion scale and 29% met criteria for psychological distress on the GHQ. On rehabilitation wards, which had the most benign profile, 29% were burnt out on emotional exhaustion.

Table 4.1: Summary of included mental health studies

Study	Method	MH measure	Other characteristics measured	Study population	Study objective	Study outcome (directly quoted and summarised from the source)
Jones et al (1987)	cross sectional survey	GHQ12 and anx/ dep scales	job stress, job satisfaction	349 psychiatric nurses	to measure psychological distress in psychiatric special hospital nurses	Nurses experience relatively high levels of psychological distress, females more than males, but females reported higher job satisfaction.
Jones et al (2008)	repeated measures survey design with three time points.	GHQ12	stress, self esteem, job satisfaction , burnout	18 mental health team workers	to measure the impact on levels of knowledge, well-being and morale in an acute inpatient mental health team following training in evidence- based psychological interventions.	Comparison of group mean scores at T1 and T2 indicated that no significant changes occurred in any of the outcome measures prior to the training intervention. By contrast, comparison of mean scores at T2 and T3 demonstrated that after completion of training, the team achieved a highly significant improvement in total knowledge of core psychological skills. The data also indicated that levels of perceived stress, self-esteem and psycho-logical distress within the team remained stable over the period of the training.
Joyce et al (2007, 2009)	interviews	n/a	n/a	29 nurses	to explore the workplace experiences of nurses who have a mental illness.	One significant finding was the theme 'Crossing the boundary - from nurse to patient'. This encompassed three sub-themes: 'Developing a mental illness', 'Hospital admission', and 'Being managed'. significant finding was a theme depicting the need for support and trust. This superordinate theme encompassed four subelements: declaring mental illnesses, collegial support, managerial support, and enhancing support.

Table 4.1: Summary of included mental health studies

Study	Method	MH measure	Other characteristics measured	Study population	Study objective	Study outcome (directly quoted and summarised from the source)
Karanikola & Kaite (2013), Karanikola ,& Papathanassoglou (2013)	cross sectional survey	Hamilton's Anxiety Scale, Beck's Depression Inventory,	job satisfaction, burnout	225 Greek psychiatric nurses	to explore among Greek-Cypriot mental health nurses (MHNs) the level of professional satisfaction, potential differences with regard to vocational characteristics, and associations with anxiety and depressive symptoms,	The majority of Greek-Cypriot MHNs exhibit no clinically significant symptomatology of burnout, anxiety or depression. However, approximately one out of five participants reported moderate or above moderate symptoms of emotional exhaustion, and about one out of two similar levels of depersonalization. One out of ten participants reported clinical symptoms of anxiety and depression.
Kidd (2008, 2010)	in depth interviews	n/a	n/a	18 nurses	to explore experience of nurses with mental illness	Nurses who have experienced, or are vulnerable to, mental illness negotiate a nexus of hyphens between societal, professional and personal expectations of the nurse. Ongoing unsuccessful negotiation of their identities is exhausting and leads to enduring distress. Bullying surfaced as a feature of the hyphen between the nursing and tangata whaiora identities, as well as being a part of each identity as colonising, silencing and/or discriminatory acts.
Kilfedder, Power & Wells (2001)	cross sectional survey	GHQ12 (Goldberg, 1992)	Understanding, predictability & control, Job Future Ambiguity, Role conflict, stress, positive and negative affect, psychosomatic symptoms, burnout, job satisfaction	510 psychiatric nurses (48.8%rr)	To measure levels of burnout in a sample of Scottish psychiatric nurses, using a comprehensive model.	Psychiatric nurses had low scores on emotional exhaustion and depersonalisation sub scales of MBI compared with normative data, 2% had high burnout.

Table 4.1: Summary of included mental health studies

Study	Method	MH measure	Other characteristics measured	Study population	Study objective	Study outcome (directly quoted and summarised from the source)
Kipping (2000)	mixed methods - cross sectional survey and interviews	GHQ12	stressors, burnout, sickness absence	276 MHN in the UK	The aims were to: identify factors contributing to MHNs' experiences of stress assess the effects of stress on MHNs explore the ways in which MHNs cope with stres	Many mental health nurses were experiencing high levels of stress and burnout, triggered by a complex array of processes intra- individual, interpersonal, organisational and wider societal processes. Coping strategies often exacerbated rather than reduced stress.
Lauvrud,Nonstad & Palmstierna (2009)	cross sectional survey	PTSD Checklist, civilian version (PCL-C) (Ruggiero et al, 2003)	professional quality of life, compassion fatigue	70 nursing staff in a forensic unit (70%rr)	to explore relations between, and occurrence of, job satisfaction, burnout and post traumatic stress symptoms among nurses in high frequency violence environment.	The prevalence of post traumatic stress symptoms was low. Low scores were found on compassion satisfaction. Length of psychiatric nursing experience and low scores on compassion satisfaction were correlated to increased post traumatic stress symptoms.
Lee et al(2015)	cross sectional survey	GHQ28 (Goldberg, 1970)	perceived aggression, stress, prior exposure to traumatic events outside of work, post traumatic stress	196 hospital based psych nurses	to directly compare exposure to inpatient aggression and work stress in mainstream and forensic MHN, and to develop a model to understand the development of psychological ill health in MHN.	14–17% of mainstream and forensic nurses met the diagnostic criteria for post-traumatic stress disorder, and 36% scored above the threshold for psychiatric caseness. A tentative model of post-traumatic stress and general distress in nurses was developed, illustrating the impact of aggression and stress on well-being.

Table 4.1: Summary of included mental health studies

Study	Method	MH measure	Other characteristics measured	Study population	Study objective	Study outcome (directly quoted and summarised from the source)
Leka, Hassard,& Yanagida (2012)	cross sectional survey	GWBQ - General Well-Being Questionnaire (Cox & Gotts 1987)	Job Content - demand support control	378 psychiatric nurses (76%rr)	to examine what stressors in the workplace and demographic factors were associated with signs and symptoms of poor well-being among psychiatric nurses.	High rates of emotional exhaustion in psychiatric nurses were found to be predicted by young age, high psychological demands paired with low social support in the workplace, job strain (a proxy to occupational stress) and job strain paired with low social support. There was evidence of significant relationships between demographic factors and several work and organizational stressors and poor mental health among Japanese psychiatric nurses
Lin, Probst & Hsu (2010)	cross sectional survey	BDI-II (Beck, Steer, & Brown, 1996) Chinese version	stress, coping, interpersonal support	141 psychiatric nurses	to examine job stress, coping behaviour used, social support and level of depression among psychiatric nurses.	Depression scores were correlated with job stress and affective-oriented coping, but social support could work to reduce the effect of stress on depression among psychiatric nurses.
Madathil, Heck & Schuldberg (2014)	cross sectional survey	Three of the six items used to assess depressive symptoms on the Brief Symptom Inventory (BSI; Derogatis, 1975	burnout, leadership	89 psychiatric nurses	to examine the relationships between leadership style of psychiatric nurse supervisors, work role autonomy, and psychological distress in relation to psychiatric nurse burnout.	MHNs were experiencing high levels of emotional exhaustion and depersonalization when compared to a normative sample of mental health workers. Results also showed that leadership style and work role autonomy are likely to be environmental factors that protect against burnout in nurses. The relationship between depressive symptoms and the burnout component of personal accomplishment may be influenced by nurses' perceptions of the leadership style in their work environment.

Table 4.1: Summary of included mental health studies

Study	Method	MH measure	Other characteristics measured	Study population	Study objective	Study outcome (directly quoted and summarised from the source)
Moll(2010), Moll et al (2013)	interviews	n/a	n/a	20 mental health employees and 12 stakeholders	to explore the experiences of mental health care workers with mental health issues and to account for how the social relations of work shaped their experiences	There was a disjuncture between the public mandate of advocacy, open dialogue, and support regarding mental health issues, and the private experience of workers, characterized by silence, secrecy and inaction. Silence was an active practice that took many forms; it was pervasive, complex, and at times, paradoxical.
Moll (2014)	mixed methods - case study - online survey and interviews	n/a	n/a	83 health care workers	to explore the key forces that shape early intervention and support for healthcare workers who are struggling with mental health issues, and to identify barriers and opportunities for change.	There were many reports of silence and inaction in response to employee mental health issues. Stigma regarding mental ill health, a discourse of professional , social tensions, workload pressures, confidentiality expectations and lack of timely access to mental health supports were key forces in preventing employees from getting the help that they needed.
Munro, Rodwell & Harding (1998)	cross sectional survey	GHQ12	job satisfaction, job control, job demands social support	60 mh nurses	to examine the effects of occupational stress in psychiatric nursing on employee well! being using the full Job Strain Model	The full Job Strain Model signicantly predicted job satisfaction and mental health in Australian psychiatric nurses. Social support was shown to be an important component of the Job Strain Model[
Prosser et al (1996, 1999)	longitudinal, comparative study	GHQ12	burnout, job satisfaction	121 mental health staff in 1994, 100 in 195, 94 in 1996	to compare stress and job satisfaction between community and ward based mh staff;	There was no significant change over time in the outcome measures, once confounding by job and demographic variables was examined. Being based in the community was associated with higher GHQ12 scores (P= 0.02) when compared to inpatient staff over three years.

Table 4.1: Summary of included mental health studies

Study	Method	MH measure	Other characteristics measured	Study population	Study objective	Study outcome (directly quoted and summarised from the source)
Pryjmachuk & Richards (2007a, 2007b)	cross sectional survey	GHQ12	stress, coping	1005 nursing students	to explore interbranch differences among the students in terms of the sources of stress To determine which variables from a pool of potential predictors predict General Health Questionnaire 'caseness' in pre-registration nursing students.	Self-report of pressure, whether or not respondents have children in the household (more specifically, whether these children are pre-school or school-age), the degree to which respondents had personal problems and the extent to which task- and emotion-oriented coping were employed were predictors of GHQ caseness in pre-registration student nurses
Reininghaus et al (2007)	cross sectional survey	GHQ12	stress, coping, self esteem	636 nurses in secure MH	to explore the causal role of generalized and specific stress resistance resources (SRRs) in the stress process following physical assault.	Physical assault was associated with psychological distress; perceived social support, particularly manager's support had a mediating effect on psychological distress.
Ryan & Quayle (1999)	cross sectional survey	GHQ60	coping	179 nurses	to measure levels of stress among psychiatric nurses at all grades and in all work locations, as well as the sources of any stress reported.	Levels of stress in this sample were not as high as that reported in other studies. The mean GHQ60 score for the sample was 4.7.
Sahraian et al (2008)	cross sectional survey	GHQ28	burnout	180 nurses incl psychiatric nurses	to compare the levels of burnout among nurses in different nursing specialties.	Nurses of psychiatry wards showed significantly higher levels of emotional exhaustion and depersonalization in comparison with nurses working in other wards, Also, nurses who were single were more emotionally exhausted.
Shen, Cheng, Tsai et al (2005)	cross sectional survey	International Quality of Life Assessment Short Form-36 (IQOLA SF-36) (Ware t al, 1993)	job demand-control-support, stress	408 psychiatric nurses	to explore the work-related stress and risk factors of nurses in psychiatric institutions in Taiwan	A lower mental health score was associated with low job control, high psychological demand, low workplace support, and perceived occupational stress.

Table 4.1: Summary of included mental health studies

Study	Method	MH measure	Other characteristics measured	Study population	Study objective	Study outcome (directly quoted and summarised from the source)
Snelgrove (1998)	cross sectional survey	GHQ12	stress, job satisfaction	56	to examine self-reported stress and job satisfaction	The results showed that levels of stress were a function of occupation with significant variation between groups.. Sources of stress correlated significantly and positively with GHQ scores. There were four main factors concerned with sources of stress: emotional involvement, unpredictable events at work, change and instability at work, work content. Job satisfaction scores correlated significantly and negatively with GHQ scores.
Tully (2004)	cross sectional survey	GHQ30	stress, coping	35 student mental health nurses	to examine the affective well-being of diplomate psychiatric student nurses (n = 35) dur- ing their first (n = 20) and second (n = 15) years of training. The	The levels of distress reported in this study were significantly high, with all respondents scoring above the conventional cut-off score of 5 on the GHQ. This suggests that those students are at least at risk of developing a physical or psychiatric illness.. Second year students were significantly more stressed than first year students and more stressed than the fourth year medical students in Firth (1986) study.

Table 4.1: Summary of included mental health studies

Study	Method	MH measure	Other characteristics measured	Study population	Study objective	Study outcome (directly quoted and summarised from the source)
Van Daalen et al (2009)	cross sectional survey	Four Dimensional Symptom Questionnaire (4DSQ) (Terluin 1996)	emotional exhaustion	1650 mental health employes including nurses	to investigates the relationship between four job characteristics and family-to-work conflict on emotional exhaustion and mental health problems.	For employees working in High Patient Interaction (HPI) jobs, women reported more mental health problems (P = ¡0.12, P < 0.01) than men. Employees working in HPI jobs who report low levels of social support from colleagues or experience high levels of emotional demands report more mental health problems than employees in HPI jobs who reported high levels of social support or low levels of emotional demands. Family-to-work conflict was related to mental health problems of employees working in both job types indicating that employees who experience family-to-work conflict report more mental health problems than those who do not experience family-to-work conflict.
Van Humbeeck ,Van Audenhove & Declercq (2004)	Camberwell Family Interview and questionnauire	Symptom Checklist SCL 90 (Arrindell and Ettema 1975)	expressed emotion, job satisfaction, burnout	52 mh workers	to investigate the relationship between expressed emotion (EE), burnout and symptoms in residential mh workers	Little indication of association between EE and working conditions as measured with the CFI. For the PCS, a significant relationship was found between the resident version of the PCS and burnout. The professionals who were perceived by the residents as being very critical were less depersonalised and less emotionally exhausted than those who were not so perceived.
Virtanen et al (2012)	cross sectional survey	Information on current or past diagnosed mental disorders	sickness absences, demographic and lifestyle factors	8003 hospital employees incl psych	to examine whether indicators of poor health and health risk behaviors among hospital staff differ between the ward specialties.	Psychiatric staff had higher odds of smoking, high alcohol use, physical inactivity chronic physical disease, current or past mental disorders, and co-occurring poor health indicators compared to those working in other specialties. They also had higher odds of sickness absence due to mental disorders and depression at follow-up after adjustment for baseline health and covariates.

Table 4.1: Summary of included mental health studies

Study	Method	MH measure	Other characteristics measured	Study population	Study objective	Study outcome (directly quoted and summarised from the source)
Walsh et al (2002)	cross sectional survey	GHQ12	burnout, job satisfaction, work characteristics	79 CMHT staff	to investigate whether perceived work characteristics can account for the associations between staff mental health and caseload factors.	Multiple regression revealed that staff mental health was positively related to level of client need. This counter-intuitive result may be understood by the additional finding that level of client need was positively related to role clarity. Further, a higher proportion of clients with psychosis was associated with lower role clarity and higher demand. Staff mental health was also related to caseload size and client gender.
Wang et al (2014)	cross sectional survey	Taiwanese Depression Questionnaire (Lee, Yang, Lai, Chiu, & Chau, 2000)	resourcefulness	154 nurses	to explore the relationships among work stress, resourcefulness, and depression levels of psychiatric nurses.	Psychiatric nurses' work stress was found positively correlated with their depression level (r=.70, p b .001), and negatively related to resourcefulness.Work stress significantly predicted depression level.
Wykes, Stevens, & Everitt (1997)	cross sectional survey	GHQ28 (Goldberg and Williams 1988); BAI (Beck 1990)	burnout, daily hassles, stress	61 CMHT staff	to investigate whether community care is sustainable by examining the levels of stress and burnout that affect community mental health staff.	30% scored above the threshold for "psychiatric caseness" This is similar to the scores. The mean score on the Beck Anxiety Inventory was 5.89 (SD = 6.39), but the range was 0-34, with 21% scoring 10 or more.

Table 4.2: Objectives, sample sizes, populations and response rates for studies on nurses' experience of mental health problems

Author	Study objective	Study population	Sample size	Response rate
Cushway, Tyrer & Nolan (1996)	to develop of the Mental Health Professionals Stress Scale (MHPSS): a self-report method of identifying sources of stress for mental health professionals.	clinical psychologists, comm and hospital mental health nurses from the West Midlands, UK	154 clin 111 nur	70% 53%
Dudley, Langelduddeck e & Tennant (1988)	to compares general and psychiatric nurse trainees, in terms of psychological (symptomatic) morbidity, personality, hypochondriasis and illness behaviour, and drug and alcohol use.	psychiatric and general nursing students from 6 hospitals in Australia	212 psych 312 gen	'no refusals'
Edwards et al (2000, 2001)	to examine stressors in an all Wales study	CPNs in Wales	301	49%
Fagin et al (1995); Brown & Leary (1995), Leary & Brown (1995)	to study stressors and coping strategies in UK psychiatric nurses	CPNs and ward-based psychiatric nurses (WBPNs) nurses from the North East Thames region of England	250 CPNs 323 ward	not given
Fagin et al (1996), Carson et al (1999)	to compare findings from three studies of ward based mental health nurses on mental health caseness, stress and coping.	UK ward based psychiatric nursing staff in three studies	648	46-47%
Fielding & Weaver (1994)	to compare hospital and community based mental health nurses in relation to perceptions of the work environment and their psychological health	hospital and community mh nurses from 2 health authorities in North Humberside	67 hosp 55 comm	72% 45%
Gilbert & Stickley (2014)	to focus on the role of lived-experience in mental health education and practice as perceived by undergraduate students.	mh nursing and social work students from one UK university	30	not given
Johnson et al (2011, 2012), Wood et al (2011)	To describe in-patient staff morale, measured by a cluster of indicators, in a large representative sample of wards.To compare morale between ward and community mental health team (CMHT) and crisis resolution team (CRT) staff and investigate staff's reported reasons for leaving wards.	mental health workers from 100 wards and 36 CMHTs in England	2258 of whom 1054 (47%) were nurses	60%
Jones et al (1987)	to measure psychological distress in psychiatric special hospital nurses	psychiatric nurses from 1 UK special hospital	349	49%%
Jones et al (2008)	to measure the impact on levels of knowledge, well-being and morale in an acute inpatient mental health team following training in evidence- based psychological interventions.	members of an adult acute inpatient mental health team in England	13	72%
Joyce et al (2007, 2009)	to explore the workplace experiences of nurses who have a mental illness.	mental health and general nurses in New South Wales, Australia	29	n/a

Table 4.2: Objectives, sample sizes, populations and response rates for studies on nurses' experience of mental health problems

Author	Study objective	Study population	Sample size	Response rate
Karanikola & Kaite (2013), Karanikola,& Papathanassoglou,, 2013)	to explore among Greek-Cypriot mental health nurses (MHNs) the level of professional satisfaction, potential differences with regard to vocational characteristics, and associations with anxiety and depressive symptoms, to explore the levels of burnout and associations with anxiety and depressive symptoms among Greek-Cypriot psychiatric–mental health nurses (PMHNs)	Greek Cypriot psychiatric nurses	225	75.8%
Kidd (2008), Kidd and Finlayson (2010)	to explore experience of nurses with mental illness	nurses from a range of backgrounds in New Zealand	18	n/a
Kilfedder, Power & Wells (2001)	To measure levels of burnout in a sample of Scottish psychiatric nurses, using a comprehensive model.	Scottish psychiatric nurses from 1 NHS Trust	510	48.8%
Kipping (2000)	to identify factors contributing to MHNs' experiences of stress assess the effects of stress on MHNs and to explore the ways in which MHNs cope with stress	UK mental health nurses who qualified in 1993/1994	276	85%
Lauvrud,Nonstad & Palmstierna (2009)	to explore relations between, and occurrence of, job satisfaction, burnout and post traumatic stress symptoms among nurses in high frequency violence environment.	nursing staff on a forensic unit in Broset, Norway	70	70%
Lee et al(2015)	to directly compare exposure to inpatient aggression and work stress in mainstream and forensic MHN, and to develop a model to understand the development of psychological ill health in MHN.	hospital based psychiatric nurses from one state forensic and three general psychiatric hospitals in Australia	196 99 gen 97 foren	 58% 65%
Leka, Hassard,& Yanagida (2012)	to examine what stressors in the workplace and demographic factors were associated with signs and symptoms of poor well-being among psychiatric nurses.	psychiatric nurses from 6 hospitals in Japan	378	76%
Lin, Probst & Hsu (2010)	to examine job stress, coping behaviour used, social support and level of depression among psychiatric nurses.	psychiatric nurses from one psychiatric hospital in Taiwan	141	91.6%
Madathil, Heck & Schuldberg (2014)	to examine the relationships between leadership style of psychiatric nurse supervisors, work role autonomy, and psychological distress in relation to psychiatric nurse burnout.	psychiatric nurses from hospitals in Montana and New York	89	not given
Moll(2010), Moll et al (2013)	to explore the experiences of mental health care workers with mental health issues and to account for how the social relations of work shaped their experiences	mental health employees and mental heath stakeholders in a large Canadian mental health organisation	32	n/a
Moll (2014)	to explore the key forces that shape early intervention and support for healthcare workers who are struggling with mental health issues, and to identify barriers and opportunities for change.	health care workers in a large multisite care organisation in Canada	83	not given

Table 4.2: Objectives, sample sizes, populations and response rates for studies on nurses' experience of mental health problems

Author	Study objective	Study population	Sample size	Response rate
Munro, Rodwell & Harding (1998)	to examine the effects of occupational stress in psychiatric nursing on employee well!being using the full Job Strain Model	mh nurses from one private psychiatric facility in Australia	60	60%%
Prosser et al (1996, 1999)	to compare stress and job satisfaction between community and ward based mh staff; to examine whether the adoption of a more community based model in an inner city psychiatry service is accompanied by increasing "burnout", deteriorating mental health and decreasing job satisfaction amongst staff	121 mental health staff in inner South London of whom 66% (1994), 63% (1995) and 68% were nurses(1996),	1994 - 121 1995 -100 1996 - 94	76% 60% 62%
Pryjmachuk & Richards (2007a, 2007b)	to explore interbranch differences among the students in terms of the sources of stress they identify, the levels of stress they experience, and the ways in which they cope; To determine which variables from a pool of potential predictors predict General Health Questionnaire 'caseness' in pre-registration nursing students.	nursing students at one North of England university	1005 of whom 151 were mh	76%
Reininghaus et al (2007)	to explore the causal role of generalized and specific stress resistance resources (SRRs) in the stress process following physical assault.	nurses in the 4 UK special hospitals	636	22-28%
Ryan & Quayle (1999)	to measure levels of stress among psychiatric nurses at all grades and in all work locations, as well as the sources of any stress reported.	psychiatric nurses from the South Eastern Health Board of Southern Ireland	179	42%%
Sahraian et al (2008)	to compare the levels of burnout among nurses in different nursing specialties.	nurses, including psychiatric nurses, working in the 5 public hospitals in Shiraz, Iran	180	100%
Shen, Cheng, Tsai et al (2005)	to explore the work-related stress and risk factors of nurses in psychiatric institutions in Taiwan	nurses in 5 state owned psychiatric hospital in Taiwan	518	91.4%
Snelgrove (1998)	to examine self-reported stress and job satisfaction in 1 UK health authority	Health visitors, district nurses and community psychiatric nurses	143 56 HVs 56 DNs 19 CPNs	51.6%
Tully(2004)	to examine the affective wellbeing of diplomate psychiatric student nurses (n = 35) during their first (n = 20) and second (n = 15) years of training.	student mental health nurses from one college in Southern Ireland	35	not given
Van Daalen et al (2009)	to investigates the relationship between four job characteristics and family-to-work conflict on emotional exhaustion and mental health problems.	mental health employees from 10 Dutch mental health care organisations, including nurses	1650	67%
Van Humbeeck,Van Audenhove & Declercq (2004)	to investigate the relationship between expressed emotion, burnout and symptoms in residential mh workers	mental health workers, of whom 42% were psychiatric nurses, working in mental health rehabilitation care in Flanders, Belgium	52	not given

Table 4.2: Objectives, sample sizes, populations and response rates for studies on nurses' experience of mental health problems

Author	Study objective	Study population	Sample size	Response rate
Virtanen et al (2012)	to examine whether indicators of poor health and health risk behaviors among hospital staff differ between the ward specialties.	hospital employees including psychiatric nurses from 21 Finnish hospitals	8003, of whom 843 were psych nurses	80%
Walsh et al (2002)	to investigate whether perceived work characteristics can account for the associations between staff mental health and caseload factors. Seventy-nine	CMHT staff from the UK	79	44%
Wang et al (2015)	to explore the relationships among work stress, resourcefulness, and depression levels of psychiatric nurses.	psychiatric nurses from 6 medical centres in Taiwan	154	81%
Wykes, Stevens, & Everitt (1997)	to investigate whether community care is sustainable by examining the levels of stress and burnout that affect community mental health staff.	CMHT staff from 6 teams in the UK	61	82.3%

Table 4.3: Measures of mental ill health used in included studies

Mental Health measure	Measure description	Used by	Elements of mental ill health measured
Four Dimensional Symptom Questionnaire (4DSQ) (Terluin 1996)	Measures four dimensions of common mental health problems: distress, depression, anxiety and somatisation. Van Daalen et al removed the somatisation items. Consists of 16 dichotomous items (1 = no, 2 = yes) The scale score was obtained by calculating a mean score across all 16 items, leading to one scale ranging from 1 to 2. Sample items are: “Did you have problems getting asleep last week?”, “Did you feel everything was pointless last week?”, “Did you feel anxious last month?”.	Van Daalen et al (2009)	distress, depression, anxiety, somatisation
Beck Anxiety Inventory (BAI) (Beck 1990)	A self report measure of anxiety. Candidates answer 21 questions using a 0 to 3 point Likert scale to rate the presence of symptoms in the past month. The minimum score is 0 and the maximum 63. A score of 0 of 21 = low anxiety, a score of 22 –35 = moderate anxiety, a score of 36 and above = potentially concerning levels of anxiety	Wykes, Stevens, & Everitt (1997)	anxiety
Beck Depression Inventory (BDI and BDI-ii) (Beck et al, 1988)	The Beck Depression Inventory (BDI) has been widely used as a screening instrument to detect depression both in clinical practice and in research projects (Beck et al. 1988) The minimum score is 0 and the maximum 63. Ratings from 0 to 9 are considered in the normal range, 10–19 marginal, 20–29 moderate, 30–39 moderate to severe, and 40 or above severe (Beck et al., 1961) The Beck Depression Inventory, second version (BDI-II) is in line with the depression criteria of the Diagnostic and Statistical Manual of Mental Health Disorders, Fourth Edition (DSM–IV) . The score range of normal, mild depression, moderate depression and severe depression for the Chinese version of BDI-II was 0–16, 17–22, 23–30 and 31–63,	Karanikola & Kaite (2013); Karanikola & Papathanassoglou (2013) Lee (2014); Lin, Probst & Hsu (2010)	depression
Brief Symptom Inventory (BSI) (Derogatis, 1975)	3 of the 6 items used to assess depressive symptoms on the BSI e.g., Feeling lonely, Feeling blue, and Feeling no interest in things) were used as an index of depressive symptoms. The remaining three items of this scale (e.g., Thoughts of ending one’s life, Feeling hopeless about the future, and Feelings of worthlessness) were omitted from the survey due to ethical concerns regarding participants’ possible reports of harm to self or others and the researchers’ inability to assess risk’ (Madathil, Heck & Schulberg, 2014) ‘Depression and anxiety are both be measured with the corresponding subscales of the Brief Symptom Inventory (BSI) Each subscale has 6 items with a 5-point response scale (0 = not at all,4 = extremely) For both subscales, mean scores of ≥0.42 are used for case identification, with a sensitivity of 0.86 and a specificity of 0.66 for depression and a sensitivity of 0.83 and a specificity of 0.62 for anxiety. (Gärtner et al, 2011)	Madathil, Heck & Schulberg, 2014	depression
Center for Epidemiological Studies–Depression (CES-D) measure (Radloff, 1977)	Respondents indicate how many days (<1 up to 5–7) during the past week they have experienced 20 different thoughts and feelings. Items on the CES-D describe mood, physical symptoms, psychosocial interactions, and functioning. The response options range from (0) rarely or never to (4) most or all of the time and the scale score is the sum of all responses. That is a screening measure, not a diag- nostic tool. Depression is defined by the obtained CES-D score, equal or higher than 17. The sum of the score of each response is calculated after the answers to the positive questions are reversed. The sum ranges from 0 to 60.	Dudley, Langelduddecke & Tennant (1988)	depression

Table 4.3: Measures of mental ill health used in included studies

Mental Health measure	Measure description	Used by	Elements of mental ill health measured
diagnostic info	Information on current or past diagnosed mental disorders was based on the survey response (whether a doctor had ever diagnosed the participant as suffering from a mental disorder), SII register data on psychiatric sickness absence during the survey year, state-subsidized psychotherapy, or purchased antidepressant medication during the survey year.' (Virtanen et al, 2011)	Virtanen et al (2012)	psychiatric diagnosis or treatment
GHQ12 - General Health Questionnaire (GHQ) (Goldberg & Williams, 1988)	The GHQ-12 is a scale that measures psychological distress. 'The 12-item General Health Questionnaire (GHQ-12) is a self-report measure of psychological morbidity, intended to detect "psychiatric disorders...in community settings and non-psychiatric settings". It is widely used in both clinical practice, epidemiological research and psychological research' (Hankins, 2008) 2 scores are obtained. These are firstly, the total GHQ score, which ranges from 0 to 12 when using a binary coding method (Goldberg & Williams 1988), and secondly, a 'caseness' score. Cut off scores for caseness range from 2 to 3 to 4, depending on the study.	Edwards et al (2000, 2001); Fielding & Walker (1994); Johnson et al (2011, 2012); Jones et al (1987); Wood et al (2011); Kilfedder, Power & Wells (2001); Kipping (2000); Munro, Rodwell & Harding (1998); Prosser et al (1996, 1999); Pryjmachuk & Richards (2007a,b); Reininghaus et al (2007); Snelgrove (1998); Walsh et al (2002)	psychological distress and psychiatric caseness as 'somatic symptoms, anxiety and insomnia, social dysfunction and severe depression.'
GHQ28 - General Health Questionnaire (GHQ) (Goldberg & Williams, 1988)	'The GHQ-28 (Goldberg, 1978) was developed as a research tool and has four scales : somatic symptoms, anxiety and insomnia, social dysfunction and severe depression. Each of the 28 items was scored both by the Likert method, where each item has a range of 0 to 3 (maximum score 84), and the GHQ method, where items are scored as 0 or 1 (maximum score 28) Means for each scale and for the overall GHQ were obtained using the Likert method, and prevalence estimations of poor mental health were assessed using the GHQ method. Using this latter method a cut- off score of 5 was used to indicate 'caseness' (there is found to be 87 per cent concurrence with psychiatric assessment, according to the GHQ manual) (Cushway, Tyler & Nolan, 1996)	Fagin et al (1995, 1996); Carson et al (1999); Brown & Leary (1995); Leary & Brown (1995); Lee et al(2015); Sahraian et al (2008);	
GHQ30 - General Health Questionnaire (GHQ) (Goldberg & Williams, 1988)	The GHQ30 30 covers 4 areas of psychiatric distress including depression, anxiety, social impairment and hypochondriasis and is scored using a Likert type scale. Scores equal to or greater than 5 were defined as caseness, (Lindo et al, 2006)	Tully (2004)	
GHQ60 - General Health Questionnaire (GHQ) (Goldberg & Williams, 1988)	This version contains 60 items, producing an overall score that can be compared with a prescribed cut-off score.	Ryan & Quayle (1999)	

Table 4.3: Measures of mental ill health used in included studies

Mental Health measure	Measure description	Used by	Elements of mental ill health measured
General Well-Being Questionnaire (GWBQ) (Cox & Gotts 1987)	The GWBQ is a 24-item instrument used to capture sub-optimal health, consisting of self-reported symptoms of general malaise. It presents a multi- factored set of general, non-specific symptoms of ill-health including reportable aspects of cognitive, emotional, behavioural and physiological function, none of which is clinically significant in themselves. It consists of two subscales of suboptimum health, each comprised of 12 items: (a) Worn out/Exhausted and; (b) Tense/Nervous. Respondents were asked to indicate how often they had experienced the 24 symptoms (within the last 6 months) on a scale from 'never' (0)– 'all the time' (4) For final analysis, the scores were reversed to make it consistent with other scales, which meant that a high score indicated higher well-being (Karimi et al, 2013)	Leka, Hassard,& Yanagida (2012)	
Hamilton Anxiety Scale (HAM-A) (Hamilton, 1959, 1976)	This scale is usually administered by a clinician and includes clinician's observations. For this self report use the cliniician's assessment was removed, leaving 13 items. The respondents were instructed to report to the statement "Please note the degree to which you experience any of the following:" by choosing one of the five alternative answers, according to the scale range, from 0 to 4 (0: no experience, 4: very intense manifestation), with 0 denoting absence of anxiety symptoms and 4 indicating very severe symptoms. The scale's 13 items are: anxious mood, tension, fears, sleep disturbances, cognitive disturbances, depressed mood, musculoskeletal symptoms, sensory symptoms, cardiovascular symptoms, respiratory symptoms, gastrointestinal symptoms, genitourinary and autonomic nervous system symptoms. A total score is calculated to represent an overall anxiety level, with possible scores ranging from 0 to 52.	Karanikola & Kaite (2013), Karanikola & Papathanassoglou (2013)	anxiety
PTSD Checklist, civilian version (PCL-C) (Ruggiero et al, 2003) (PCL) (Weathers et al. 1993)	A 17- item self report measure developed to assess symptoms following the criteria for post traumatic stress disorder in the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) The different symptoms using a 5-point Likert scale to rate the extent to which they had been bothered in the past month by 17 symptoms of post traumatic stress in the past month. Responses generate a total severity score (ranging from 17 to 85) Alternatively, a response of three or above on an item indicates individual symptom endorsement (Weathers et al. 1993), with a PTSD diagnosis established when one symptom from the re-experiencing cluster, three symptoms from the avoidance and numbing cluster, and two symptoms from the hyperarousal cluster are endorsed (in accordance with the DSM-IV-TR) (Lee et al, 2015)	Lauvrud,Nonstad & Palmstierna (2009); Lee et al (2015)	post traumatic stress disorder
SCL-90-R (Derogatis, 1983))	A shortened 18-item version of the SCL-90-R (Derogatis, 1983) was included. It presents a list of problems and complaints and asks respondents to rate how much the problem has bothered or distressed them in the last two weeks. Each item was scored on a five-point response scale, from 0 to 4 ('not at all', 'a little bit', 'moderately', 'quite a bit', 'extremely') The mean of the 18 items was calculated for each respondent. (Cushway, Tyer & Nolan, 1996) Scores range from 0 to 72.	Cushway, Tyrer & Nolan(1996)	depression

Table 4.3: Measures of mental ill health used in included studies

Mental Health measure	Measure description	Used by	Elements of mental ill health measured
SF-36 Health Survey (Ware and Sherbourne, 1992)	Consists of 36 questions that assess 8 health concepts of: (a) limitations in physical activities because of health problems, (b) limitations in social activities because of physical or emotional problems, (c) limitations in usual role activities because of physical health, (d) bodily pain, (e) general mental health, (f) psychological distress and well-being, (g) limitations in usual role activities because of emotional problems, (h) vitality (energy and fatigue), and (i) general health perceptions using Likert scale responses across 8 subscales. Final scores range from 0 to 100. 2 summary measures (physical health and mental health) are calculated by totaling the scores for their respective subscales.	Shen, Cheng, Tsai et al (2005);	general mental health
Taiwanese Depression Questionnaire (TDQ) (Lee, Yang, Lai, Chiu, & Chau, 2000)	Comprises 18 items, and is scored according to a 4-point Likert-type scale, defined from“never or seldom” (0) to “usually or always” (3), based on frequency. The score ranges from0 to 54with a cutoff score of 19. A mean score below 8 indicatesmood status is stable without depression; 9–14 indicates that mood status is fluctuating; 15–18 indicates that mood status has reached a borderline to depression; 19–28 indicates mood status has reached depression; 29 or above indicates that mood status is already in severe depression, suggesting that immediate treatment from psychiatric professional is needed (Tseng, 2004),	Wang et al(2015)	depression

Table 4.4: Summary of findings and rigour - mental health quantitative studies

Study	Method	Mental health measure	Study findings (directly quoted and summarised from the source)	Observations on rigour
Cushway, Tyrer & Nolan (1996)	scale devt/ cross sectional survey	SCL-90-R, GHQ28	Nurses had higher mean SCL-90-R and GHQ28 scores than psychologists; higher for women.	Focus is on scale validation, Response rate variable between groups (70% v. 53%), Cronbach's alphas reported for each scale, Mitigation for Type 1 errors n the analysis, BUT single site sample, limitations of the study not discussed, ethics not discussed.
Dudley, Langelduddecke & Tennant (1988)	cross sectional survey	CES-D	In a comparison of two groups of nurse trainees, general nurse trainees showed a small but significantly greater degree of psychopathology than psychiatric nurses. When confounding variables and social desirability response set was taken into account, general nurse trainees had significantly higher scores on neuroticism, trait and state anxiety and depression. The groups did not differ on psychoticism (antisocial traits), extraversion, hypochondriasis or, work or social impairment. In terms of use of illicit drugs, the psychiatric nurses used only more cannabis than general nurses which was accounted for by females alone.	Details of the measures used not given in detail and Cronbach's alphas for this study not given, Acknowledge that sociodemographic factors may confound the psychological variables, with more psychiatric nurses being male, limitations of the study not discussed, claims there to be no drop out rate hence 100% responses, ethics not discussed, no evidence of ethical approval being sought for this study wherein students in their first week of a course completed a survey - did they know what it was being used for? were they under duress to complete hence the 100% completion?
Edwards et al (2000, 2001)	cross sectional survey	GHQ12	The GHQ-12 measure indicated that 35% of CMHNs had crossed a threshold of psychiatric caseness. Measured against a normative sample of mental health workers, 51% of CMHNs were experiencing high levels of long-term emotional exhaustion. Twenty-four per cent were suffering from high levels of depersonalization burnout and were not relating well to clients, whilst 14% were experiencing severe long-term feelings of lack of personal accomplishment.	(from Edwards et al, 2000) Limitations of the study acknowledged, purposive sample but below 50% response rate, validated measures used but Cronbach's alphas not reported, ethical committee approval not sought, but ethical considerations described, limitations of the study acknowledged, t tests then Pearson's correlations then stepwise linear regression used.
Fagin et al (1995), Brown & Leary (1995), Leary & Brown (1995)	comparative cross sectional survey	GHQ28	Claybury - 41% of CPNs scored highly on the GHQ28. CPNs and WBPNs had high occupational burnout, especially emotional exhaustion, with WBPNs having higher emotional detachment and less personal fulfilment.	(From the Fagin et al, 1995) Regional study, validated measures used but Cronbach's alphas not reported, appropriate statistical tests used, ethics not discussed, limitations not discussed, response rate not discussed

Table 4.4: Summary of findings and rigour - mental health quantitative studies

Study	Method	Mental health measure	Study findings (directly quoted and summarised from the source)	Observations on rigour
Fagin et al (1996), Carson et al (1999)	comparison of findings of 3 cross sectional surveys	GHQ28	There were no significant differences between levels of psychological distress on GHQ Total Score, but there were differences in caseness rates. In Study 3, some 38% of nurses were found to score at or above the criterion for caseness. The main stressors for ward staff were to do with staff shortages, health service changes, poor morale and not being notified of changes before they occurred. Differences in coping skills were found across studies. The study group with the highest stress scores also had the lowest coping skills scores. This was also associated with significantly higher alcohol consumption and greater self reported sickness absence. Scores on the Maslach Burnout Inventory showed higher levels of burnout amongst nurses in Study 3.	(from Fagin et al, 1996) Sampling bias discussed due to potentially atypical sample, limitations of the study discussed, ethics not discussed, validated measures but Cronbach's alphas not given, response rates below 50%
Fielding & Weaver (1994)	cross sectional survey	GHQ12	There were no overall differences between the two groups in relation to psychological health, although the pattern of factors associated with emotional well-being differed. Finally, analyses of the Community data revealed that those nurses with 'flexitime' arrangements evaluated their work environments less positively and showed higher levels of psychological strain than did those working 'fixed-time' schedules.	Below 50% response rate in community side of study, no discussion of ethics or evidence of ethics committee approval, limitations of cross sectional design acknowledged, validated scales used but Cronbach's alphas not given, sample limited to single geographical area.
Johnson et al (2011, 2012), Wood et al (2011)	mixed methods study	GHQ12	Most NHS inpatient mental health staff report fairly good job satisfaction and a sense of achievement from their work. There were large variations between types of ward in both emotional exhaustion and GHQ score, a general measure of psychological distress. Generic acute ward staff showed most sign of stress: 49% met threshold for burnout on the emotional exhaustion scale and 29% met criteria for psychological distress on the GHQ. On rehabilitation wards, which had the most benign profile, 29% were burnt out on emotional exhaustion.	(from Johnson et al, 2011) 64% response rate overall, limitations acknowledged, ethics committee approval sought but ethical issues not discussed in detail, validated measures used and Cronbach's alphas given, broad range of statistical tests done, multisite national study enabling claims to generalisability although response rates between 22 and 100% for the different sites.

Table 4.4: Summary of findings and rigour - mental health quantitative studies

Study	Method	Mental health measure	Study findings (directly quoted and summarised from the source)	Observations on rigour
Jones et al (1987)	cross sectional survey	GHQ12 and anx/ dep scales	Special hospital nurses report relatively high levels of stress but not anxiety and depression. female nurses reported higher levels of stress and psychological distress than male colleagues. Job satisfaction was low compared to other employed samples with women reporting higher job satisfaction than men.	Single site sample, 49% response rate, some validated meaures and some study specific measures, Cronbach's alphas and Pearson's correlations not reported, t tests and one way analyses of variance the sole statistical measures, ethics not discussed, limitations not acknowledged.
Jones et al (2008)	repeated measures survey design with three time points.	GHQ12	Comparison of group mean scores at T1 and T2 indicated that no significant changes occurred in any of the outcome measures prior to the training intervention. By contrast, comparison of mean scores at T2 and T3 demonstrated that after completion of training, the team achieved a highly significant improvement in total knowledge of core psychological skills. The data also indicated that levels of perceived stress, self-esteem and psycho- logical distress within the team remained stable over the period of the training. However, the job satisfaction measure showed significant increases in intrinsic, extrinsic and total satisfaction, while the burnout inventory indicated a significant reduction in emotional exhaustion and significant increase in personal accomplishment.	Brief research report, single site study no comparator group, validated measures used but Cronbach's alphas not reported, mean scores only reported. This is a brief research report so limited information on the quality of the study, limitations not acknowledged, eitathcs not discussed.

Table 4.4: Summary of findings and rigour - mental health quantitative studies

Study	Method	Mental health measure	Study findings (directly quoted and summarised from the source)	Observations on rigour
Karanikola & Kaite (2013), Karanikola,& Papathanassoglou (2013)	cross sectional survey	HAS, BDI	Depressive symptoms were negatively correlated with satisfaction from: (i) autonomy (t= –0.311, P < 0.0001), (ii) organizational policies (t= 0.236, P < 0.0001), (iii) nurse-to-physician interaction (t= 0.145, P = 0.004), (iv) nurse-to-nurse interaction (t= 0.152, P = 0.003), and (v) professional status (t= 0.179, P < 0.0001) Statistically significant negative correlations were found between anxiety symptoms and satisfaction from: (i) autonomy (t= 0.276, P < 0.0001), (ii) organizational policies (t= 0.229, P < 0.0001), (iii) nurse-to-physician interaction (t= 0.195, P < 0.0001), (iv) nurse-to-nurse interaction (t= 0.156, P = 0.002), and (v) task require- ments (t= 0.167, P < 0.0001) The majority of Greek-Cypriot PMHNs exhibit no clinically significant symptomatology of burnout, anxiety or depression. One out of ten participants reported clinical symptoms of anxiety and depression.	(from Karanikola and Kaite, 2013) 76.8% response rate, large regional sample purposively approached, limitations acknowledged, ethics discussed and ethical approval sought, validated measures used and Cronbach's alphas reported, appropriate statistical tests used, demographic information on the sample was reported.
Kilfedder, Power & Wells (2001)	cross sectional survey	GHQ12	Psychiatric nurses had low scores on emotional exhaustion and depersonalisation sub scales of MBI compared with normative data, 2% had high burnout.	Random sample from one organisation, but final response rate less than 50% with implications for the power and generalisability of findings, limitations of the study acknowledged, appropriate statistical tests performed including hierarchical regression, validated measures used but Cronbach's alphas not reported, ethics to discussed.
Kipping (2000)	mixed methods - cross sectional survey and interviews	GHQ12	Many mental health nurses were experiencing high levels of stress and burnout. These were triggered by a complex array of processes which operated at intra- individual, interpersonal, organisational and wider societal levels. At best, nurses had only a partial awareness of these processes. As a consequence their coping strategies often exacerbated rather than reduced stress and instead of behaving in ways to improve the mental health nursing system nurses' actions recreated it.	Purposive sampling from a national sample, high response rate,validated measures and Cronbach's alphas reported, limitations acknowledged, ethics discussed, appropriate statistical tests used.

Table 4.4: Summary of findings and rigour - mental health quantitative studies

Study	Method	Mental health measure	Study findings (directly quoted and summarised from the source)	Observations on rigour
Lauvrud,Nonstad & Palmstierna (2009)	cross sectional survey	PCL-C	The prevalence of post traumatic stress symptoms was low. Low scores were found on compassion satisfaction. Length of psychiatric nursing experience and low scores on compassion satisfaction were correlated to increased post traumatic stress symptoms.	Single site full sample with 70% response rate, validated measures used but Cronbach's alphas not reported, ethics discussed, limitations not discussed, appropriate statistical tests used.
Lee et al(2015)	cross sectional survey	GHQ28	High rates of emotional exhaustion in psychiatric nurses were found to be predicted by young age, high psychological demands paired with low social support in the workplace, job strain (a proxy to occupational stress) and job strain paired with low social support. In addition, high rates of being tense/uptight were associated with high psychological job demand, low psychological job control, low social support in the workplace, high job strain and high job strain paired with low social support. The current study has found evidence of significant relationships between demographic factors and several work and organizational stressors and poor mental health among Japanese psychiatric nurses	Convenience sample, 65% response rate, limitations acknowledged, ethics discussed and ethical approval sought, validated measures used and Cronbach's alphas reported, appropriate statistical tests used, demographic information on the sample was reported.
Leka, Hassard,& Yanagida (2012)	cross sectional survey	GWBQ -	Depression scores were correlated with job stress and affective-oriented coping, but social support could work to reduce the effect of stress on depression among psychiatric nurses.	All nurses in 6 hospitals in one region approached, convenience sample, high response rate, limitations acknowledged, ethics discussed and ethical approval sought, validated measures used and Cronbach's alphas reported, appropriate statistical tests used, demographic information on the sample was reported.
Lin, Probst & Hsu (2010)	cross sectional survey	BDI-II Chinese version	Overall, results of this study indicate that the participants were experiencing high levels of emotional exhaustion and depersonalization when compared to a normative sample of mental health workers. Results also showed that leadership style and work role autonomy are likely to be environmental factors that protect against burnout in nurses. Finally, it was shown that the relationship between depressive symptoms and the burnout component of personal accomplishment may be influenced by nurses' perceptions of the leadership style in their work environment.	Single site convenience sample, high response rate, limitations acknowledged, ethics discussed and ethical approval sought, validated measures used and Cronbach's alphas reported, appropriate statistical tests used, demographic information on the sample was reported.

Table 4.4: Summary of findings and rigour - mental health quantitative studies

Study	Method	Mental health measure	Study findings (directly quoted and summarised from the source)	Observations on rigour
Madathil, Heck & Schuldberg (2014)	cross sectional survey	3 items from the BSI	Overall, results of this study indicate that the participants were experiencing high levels of emotional exhaustion and depersonalization when compared to a normative sample of mental health workers. Results also showed that leadership style and work role autonomy are likely to be environmental factors that protect against burnout in nurses. Finally, it was shown that the relationship between depressive symptoms and the burnout component of personal accomplishment may be influenced by nurses' perceptions of the leadership style in their work environment.	2 sites, small sample sizes, limits to generalisability, limitations acknowledged, ethics discussed and ethical approval sought, validated measures used and Cronbach's alphas reported, appropriate statistical tests used, demographic information on the sample was reported.
Munro, Rodwell & Harding (1998)	cross sectional survey	GHQ12	the full Job Strain Model can be used to signicantly predict job satisfaction and mental health in this sample of Australian psychiatric nurses[Furthermore\ social support was shown to be an important component of the Job Strain Model[	Single site convenience sample, limitations and ethics not discussed, validated measures with Cronbach's alphas reported, demographic information on the sample not given.
Prosser et al (1996, 1999)	longitudinal, comparative study	GHQ12	There was no significant change over time in the outcome measures, once confounding by job and demographic variables was examined. Being based in the community was associated with higher GHQ12 scores (P= 0.02) when compared to inpatient staff over three years.	(from Prosser et al, 1999) limitations discussed, ethics not discussed, validated measures used but Cronbach's alphas not reported, single site convenience sample. Main limitation is the drop out rate between measures with only 25 members of the time one survey completing at time 3.
Pryjmachuk & Richards (2007a, 2007b)	cross sectional survey	GHQ12	This study has demonstrated that self-report of pressure, whether or not respondents have children in the household (more specifically, whether these children are pre-school or school-age), the degree to which respondents have personal problems and the extent to which task- and emotion-oriented coping are employed are they key predictors of GHQ caseness in pre-registration student nurses	Single site convenience sample, high response rate, limitations acknowledged, ethics discussed and ethical approval sought, validated measures used but Cronbach's alphas notreported, appropriate statistical tests used but limited focus on one way analyses of variance and 'eyeballing' of confidence interval plots between nursing branch groups, demographic information on the sample was reported.

Table 4.4: Summary of findings and rigour - mental health quantitative studies

Study	Method	Mental health measure	Study findings (directly quoted and summarised from the source)	Observations on rigour
Reininghaus et al (2007)	cross sectional survey	GHQ12	Findings on social support from outside work suggested a mediating role of this variable. Furthermore, manager support could be identified as a specific SRR that moderated effects of physical assault on psychological distress: assaulted nurses having a supportive manager scored lower on psychological distress than non-assaulted nurses having an unsupportive manager. It	Low response rate, full population sample, ethics not discussed, validated measures used but Cronbach's alphas not reported, limitations acknowledged, appropriate statistical tests used.
Ryan & Quayle (1999)	cross sectional survey	GHQ60	The results of this study contradict popular belief by showing that the levels of stress in this sample were not as high as that reported in other stud- ies. The mean GHQ60 score for the sample was 4.7. This compares with mean scores of 4.8 on the GHQ28 for community nurses in the UK (Brown and Leary, 1995), and mean scores of 3.4 for ward-based psychiatric nurses (Leary and Brown 1995) The threshold score for the GHQ28 is 4/5 for levels of stress that are unlikely to remit without intervention. This level of stress is referred to as psychiatric caseness by Goldberg (1978	42% response rate, stratified random sample, validated measures used but Cronbach's alphas not reported, limitations acknowledged, appropriate statistical tests used, ethics not discussed.
Sahraian et al (2008)	cross sectional survey	GHQ28	Study results indicated that nurses of psychiatry wards showed significantly higher levels of emotional exhaustion and depersonalization in comparison with nurses working in other wards, and burn wards nurses showed significantly higher levels of personal accomplishment. Also, nurses who were single were more emotionally exhausted.	100% response rate, limitations discussed, ethics committee approval granted, validated measures used but Cronbach's alphas not reported,limited generalisability due to specificity of sample, appropriate statistical tests performed.
Shen, Cheng, Tsai et al (2005)	cross sectional survey	IQOLA SF-36	A lower mental health score was associated with low job control, high psychological demand, low workplace support, and perceived occupational stress.	Sampling and access method described, all nurses in 5 hospitals were approached, limitations discussed, ethical principles followed in reference to the Declaration of Helsinki, validated measures used but Cronbach's alphas not reported, appropriate statistical tests were used.

Table 4.4: Summary of findings and rigour - mental health quantitative studies

Study	Method	Mental health measure	Study findings (directly quoted and summarised from the source)	Observations on rigour
Snelgrove (1998)	cross sectional survey	GHQ12	The results showed that levels of stress were a function of occupation with significant variation between groups. Health visitors yielded the highest stress scores and lowest job satisfaction scores. Sources of stress correlated significantly and positively with GHQ scores. Factor analysis identified four main factors concerned with sources of stress: emotional involvement, unpredictable events at work, change and instability at work, work content. Job satisfaction scores correlated significantly and negatively with GHQ scores, indications were that all three groups were dissatisfied with supervisory relationships.	51.6% response rate,sample taken from single geographical area, reports that ethical approval not support because not researching on patients, validated measures used but Cronbach's alphas not reported,appropriate statistical tests used, limitations not discussed.
Tully(2004)	cross sectional survey	GHQ30	The levels of distress reported in this study were significantly high, with all respondents scoring above the conventional cut-off score of 5 on the GHQ. This suggests that those students are at least at risk of developing a physical or psychiatric illness. The consistently high GHQ scores across both years could be explained partly by the constant stress caused by the academic process and financial strain. Second year students were significantly more stressed than first year students and more stressed than the fourth year medical students in Firth (1986) study.	Single site study, no discussion of ethics, reports a full response rate however the access methods suggest that students may have been under duress to complete particularly as the named researcher was their course director, limitations not discussed, validated measures used but Cronbach's alphas not reported, appropriate statistical tests undertaken.

Table 4.4: Summary of findings and rigour - mental health quantitative studies

Study	Method	Mental health measure	Study findings (directly quoted and summarised from the source)	Observations on rigour
Van Daalen et al (2009)	cross sectional survey	4DSQ	For employees working in HPI jobs, women reported more mental health problems (P = ¡0.12, P < 0.01) than men. Employees working in HPI jobs who report low levels of social support from colleagues or experience high levels of emotional demands report more mental health problems than employees in HPI jobs who report high levels of social support or low levels of emotional demands. Family-to-work conflict was related to mental health problems of employees working in both job types (? = 0.22, P < 0.001 for HPI jobs and ? =0.29, P < 0.001 for LPI jobs), indicating that employees who experience family-to-work conflict report more mental health problems than those who do not experience family-to-work conflict. None of the interactions between family-to-work conflict and the job characteristics were significant.	Sampling approach and rationale not discussed, save that employees came from 10 organsiations, 67% response rate, ethics not discussed, limitations discussed, research funding source acknowledged, validated measures used with Cronbach's alphas reported, appropriate statistical tests used.
Van Humbeeck,Van Audenhove & Declercq (2004)	interviews and questionn auire	SCL 90	Little indication was found for an association between EE and working conditions as measured with the CFI. For the PCS, a significant relationship was found between the resident version of the PCS and burnout. The professionals who were perceived by the residents as being very critical were less depersonalised and less emotionally exhausted than those who were not so perceived	Purposive sample, response rate not reported, ethics not discussed, limitations discussed, validated measures used and appropriate statistical tests used.

Table 4.4: Summary of findings and rigour - mental health quantitative studies

Study	Method	Mental health measure	Study findings (directly quoted and summarised from the source)	Observations on rigour
Virtanen et al (2012)	cross sectional survey	Current or past diagnosed mental disorders	Psychiatric staff had higher odds of smoking [odds ratio (OR) 2.58, 95% confidence interval (95% CI) 2.14-3.12], high alcohol use (OR 1.55, 95% CI 1.21-1.99), physical inactivity (OR 1.30, 95% CI 1.11-1.53), chronic physical disease (OR 1.19, 95% CI 1.04-1.36), current or past mental disorders (OR 1.81, 95% CI 1.50-2.17), and co-occurring poor health indicators (OR 2.65,95% CI 2.08-3.37) as compared to those working in other specialties. They also had higher odds of sickness absence due to mental disorders (OR 1.40, 95% CI 1.02-1.92) and depression (OR 1.61, 95% CI 1.02-2.55) at follow-up after adjustment for baseline health and covariates. Personnel in surgery had the lowest probability of morbidity. No major differences between specialties were found in the use of psychotropic medication	Large scale national sample representing Finnish healthcare employees population, ethics committee approval, limitations discussed, 70% response rate, characteristics of sample explored in detail, rather than using validated mental health measures the study asked respondents to share information and compared with national registry information, appropriate statistical tests performed, with a focus on calculation of odds ratios.
Walsh et al (2002)	cross sectional survey	GHQ12	Multiple regression revealed that staff mental health was positively related to level of client need. This counter-intuitive result may be understood by the additional finding that level of client need was positively related to role clarity. Further, a higher proportion of clients with psychosis was associated with lower role clarity and higher demand. Staff mental health was also related to caseload size and client gender.	Limitations acknowledged, ethics not discussed and no evidence of ethics committee approval, response rate of 44%, sampling and access methods not discussed, validated measures used but Cronbach's alphas not reported, appropriate statistical tests performed.

Table 4.4: Summary of findings and rigour - mental health quantitative studies

Study	Method	Mental health measure	Study findings (directly quoted and summarised from the source)	Observations on rigour
Wang et al (2014)	cross sectional survey	TDQ	Psychiatric nurses' work stress was found positively correlated with their depression level, and negatively related to resourcefulness.Work stress significantly predicted depression level. Depression level and work stress in the psychiatric nurses were significantly and positively related (r=.70, p b .001) The similar relationships in the same direction were found in all subscales of the Nurse Stress Checklist with depression level (Table 2) This was especially true for “personal responses” which had the highest correlation with depression level (r =.69, p b .001) In terms of the relationship between resourcefulness and depression in the psychiatric nurses, the results showed that the correlation be-tween total resourcefulness and depression levels approached significance (r = –.15, p = .05) However, personal resourcefulness was significantly and negatively correlated with depression level (r = –.17, p b .05)	Ethical concerns discussed and Institutional Review Board approval granted, limitations discussed, appropriate range of statistical tests used, validated measures used and Cronbach’s alphas reported, response rate of 81%, randomised selection of study sites.
Wykes, Stevens, & Everitt (1997)	cross sectional survey	GHQ28, BAI	30% scored above the threshold for "psychiatric caseness" (a score of 5 or more) This is similar to the scores for hospital-based nurses (27%) and for community psychiatric nurses (41%) (Brown and Leary 1995) and is the same as that found in the general population.. The mean score on the Beck Anxiety Inventory was 5.89 (SD = 6.39), but the range was 0-34, with 21% scoring 10 or more. This is not a high level of anxiety compared to non-clinical samples.	Non random sample of 61 staff from six CMHTs, 81% response rate, validated measures used but Cronbach’s alphas not reported, correlation measures, multiple regression and t tests used, limitations not discussed, ethics not discussed.

Table 4.5: Comparison of mental health scale scores

Author	Study population	n	Mental health measure	Mean mental health measures score (SD)	% Caseness/ Prevalence	Normative/ comparative scores or % prevalence
Coffey & Coleman (2001)	Forensic CPNs in England and Wales	80	GHQ12	-	31.2%	-
Cushway, Tyrer & Nolan (1996)	154 clinical psychologists, 111 mental health nurses from the West Midlands, UK				40%	30%
	psychologists	154	SCL-90-R, GHQ28	0.55(SD0.36) 0.74(SD0.36)		
	nurses	111	SCL-90-R, GHQ28	0.72(SD0.59) 0.80(SD0.50)		
Dudley, Langelduddecke & Tennant (1988)	212 psychiatric and 312 general nursing students		CES-D		-	-
	psychiatric students	212				
	state anxiety			34.8 (SD 6.5)		
	trait anxiety			35.9(SD 7.2)		
	depression			27.3 (SD 6.5)		
	psychoticism			3.9 (SD 2.3)		
	general students	312				
	state anxiety			37.3 (SD 8.2)		
	trait anxiety			38.4 (SD 8.4)		
	depression			31.0 (SD 8.4)		
	psychoticism			3.4 (SD 2.2)		
Edwards et al (2000, 2001)	Welsh Community mental health nurses	301	GHQ12	2.6 (SD 3.4)	35%	20-44%' using GHQ28* '23 and 28%'(McGrath et al,1989)
Fagin et al (1995); Brown & Leary (1995), Leary & Brown (1995)	250 CPNs and 323 ward-based psychiatric nurses (WBPNs) nurses		GHQ28			more than twice that of community samples (Carson and Brewerton, 1992)'
	CPNs	250		4.8 (SD 5.8)	41%	
	WBPNs	323		3.4 (SD 4.8)	27.9%	
Fagin et al (1996), Carson et al (1999)	ward based psychiatric nursing staff in three studies (combined n 648)	648	GHQ28	3.77 (SD 5.0)	31%	41% (Fagin et al, 1995)
	Study 1	315		3.41(SD4.75)	27%	
	Study 2	144		3.60(SD4.65)	32%	
	Study 3	182		4.54(SD5.62)	38%	
Fielding & Weaver (1994)	67 hospital and 55 community mh nurses		GHQ12		-	-
	community hospital	67		11.76		
		55		10.90		

Table 4.5: Comparison of mental health scale scores

Author	Study population	n	Mental health measure	Mean mental health measures score (SD)	% Caseness/ Prevalence	Normative/ comparative scores or % prevalence
Johnson et al (2011, 2012), Wood et al (2011)	UK mental health trust staff, of which 1054 (47%) were nurses.	2258	GHQ12	-	29%	similar to Prosser et al, 1996, Priebe et al, 2005, Billings et al, 2003
	CMHT staff	1054			39%	
Jones et al (1987)	349 psychiatric nurses	349	GHQ12 anxiety depression	10.24 4.80 1.16	-	8-9 4.42 0.72
Jones et al (2008)	Acute adult inpatient mental health team staff in the South of England T1 T2 T3	 18 13 12	GHQ12	not given	not given	-
Karanikola & Kaite (2013), Karanikola,& Papathanassoglou (2013)	Mental health nurses employed in the public sector in Cyprus, Greece.	225	BDI HAS	6.92 (SD 8.18) 5.32 (SD 7.0)	15.3% 11%	20% (WHO for general population)
Kilfedder, Power & Wells (2001)	Psychiatric nurses from a Scottish NHS trust.	510	GHQ12	not given	not given	-
Kipping (2000)	A national cohort of early career UK mental health nurses recruited through a longitudinal study.	338	GHQ12	2.82 (SD 3.2)	42%	35% (Edwards et al, 2000)
Lauvrud,Nonstad & Palmstierna (2009)	Nurses at a regional secure forensic unit for severely mentally disordered patients too difficult to manage in acute and long-term psychiatric settings	70	PCL-C	not given	95.7% exposure, but no full PTSD cases	-
Lee et al(2015)	Hospital based psychiatric nurses recruited across four sites in metropolitan Melbourne, Australia	196		not given		
	all nurses *mainstream services* *forensic services*		PCL		14-17 % 18% 17%	
	all nurses *mainstream services* *forensic services*		GHQ28	not given	36% 43% 28%	
Leka, Hassard,& Yanagida (2012)	Nurses from 6 psychiatric hospitals in Japan	378	GWBQ	16.03 7.46	not given	scores are above UK population scores

Table 4.5: Comparison of mental health scale scores

Author	Study population	n	Mental health measure	Mean mental health measures score (SD)	% Caseness/ Prevalence	Normative/ comparative scores or % prevalence
Lin, Probst & Hsu (2010)	Nurses from a psychiatric hospital in southern Taiwan.	141	BDI-II	12.13 (SD 9.94	27.7% (12.8 % mild 7.8% mod 7.8% seve)	20.5% in US female sample
Madathil, Heck & Schuldberg (2014)	Licensed staff nurses employed by hospitals in the New York State Office of Mental Health system and a state psychiatric hospital in Montana	89	Selected items from the BSI	not given	not given	-
Munro, Rodwell & Harding (1998)	mh nurses (rr 60%)	60	GHQ12	20.19 (SD6.01)	-	-
Prosser et al (1996, 1999)	Clinical mental health staff, of which 66%, 63% and 68% were nurses, in 3 adult mental health sectors in inner south London 1994 1996 1997	121	GHQ12	 11.8(SD 5.6) 12.9(SD 5.8) 11.8(SD 5.2)		-
Pryjmachuk & Richards (2007a,b)	Preregistration nursing students from one university department, including 151 psychiatric nursing. Psych nursing students	1005	GHQ12	11.7	33.7% 28.0%	Dudley (1988) Carson (1999), Ryan & Quayle (1999), Happell (2003), Hughes & Umeh (2005)
Reininghaus, U et al (2007)	Forensic mental health nurses from the 4 UK High Secure hospitals.	636	GHQ12	not given	not given	-
Ryan & Quayle (1999)	Psychiatric nurses working in the mental health services in 5 catchment areas in the South Eastern Health Board of the Republic of Ireland.	179	GHQ60	4.74 (SD 8.48)	7% high 7% mod	4.8 mean, 41% caseness - community, 3.4 mean, 28% caseness - ward (Brown & Leary, 1995, Leary & Brown, 1995)

Table 4.5: Comparison of mental health scale scores

Author	Study population	n	Mental health measure	Mean mental health measures score (SD)	% Caseness/ Prevalence	Normative/ comparative scores or % prevalence
Sahraian et al (2008)	Nurses working in all 5 public hospitals in Shiraz, Iran (five hospitals), including 45 nurses from 3 psychiatric wards.	180	GHQ28	3.1(SD 4.6)	70%	higher than gen pop in Vachon (1998)
Shen, Cheng, Tsai et al (2005)	Nurses from all public psychiatric institutions owned by the State of Taiwan.	408	SF36	not given	not given	-
Snelgrove (1998)	All the health visitors, district nurses and community psychiatric nurses (n 19) working for one district health authority in Wales	143	GHQ12	not given	not given	
Tully(2004)	Irish student mental health nurses	35	GHQ30	23.43	not given	higher than Jones &Johnston, (1997)
	first year	20		20.7(SD 9.27)		
	second year	15		27.07(SD 7.09)		
Van Daalen et al (2009)	Mental health employees, including nurses, from 10 Dutch mental health care organizations, divided into	1008	4DSQ	1.13 (SD 0.17)	not given	not comparable' as used an adapted measure
	high patient interaction (HPI) jobs	762		1.14 (SD 0.17)		
	and low patient interaction (LPI) jobs.	246		1.11 (SD 0.16)		
Van Humbeeck,Van Audenhove & Declercq (2004)	Mental health workers working in residential settings in flanders, Belgium, of which 42% nurses.	52	SCL-90	107.6(SD 15.0)	not given	-
Virtanen et al (2012)	Finnish hospital employees from 21 hospitals,		diagnostic info	n/a		-
	Total staff	8003				
	Nurses	5597				
	Psychiatric staff	1575			18%	
	psychiatric nurses	842			17%	
Walsh et al (2002)	UK community mental health team staff	79	GHQ12	3.2 (SD 3.4)	38%	40% 41% (Cushway & Tyler, 1996; Fagin et al., 1995)
Wang et al (2015)	Psychiatric nurses from 6 medical centers in Western Taiwan.	154	TDQ	10.73 (SD 8.55)	15.6%	-
Wykes, Stevens, & Everitt (1997)	Community mental health staff from 6 teams in the UK.	61	GHQ28 BAI	5.89(SD 6.39)	30% 21%	yes - health and other populations in the UK

Table 4.5: Comparison of mental health scale scores

Author	Study population	n	Mental health measure	Mean mental health measures score (SD)	% Caseness/ Prevalence	Normative/ comparative scores or % prevalence

Table 4.6: STROBE Quality Checklist for mental health papers

Methodological quality appraisal for MH cross sectional studies and cross sectional element of mixed methods (MM) studies (after Gärtner, 2012) STROBE criteria (Von Elm E, Altman DG, Egger M et al. The Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) statement: guidelines for reporting observational studies. J Clin Epidemiol 2008;61:344-9.)

	Cushway, Tyrer & Nolan (1996)	Dudley, Langeldudde cke & Tennant (1988)	Edwards et al (2000, 2001)	Fagin et al (1995); Brown & Leary (1995), Leary & Brown (1995)	Fagin et al (1996), Carson et al (1999) **(MM)**	Fielding & Weaver (1994)	Johnson et al (2011, 2012), Wood et al (2011) **(MM)**	Jones et al (1987)
Participants								
+ The source of participants* and the method of recruitment is reported.	y	y	y	y	y	y	y	y
Response rate								
+ The response rate is 50% or higher. -	y	y	no	?	no	no	y	no 49%
Descriptive data								
+ The main characteristics of the study population (occupation, age, gender) are reported, if applicable per occupational group that is studied.	y	y	y	y	y	y	y	y
Disorder or complaints variable								
Description								
+ The MHP variable is defined.	y	no	y	y	y	y	y	y
Assessment								
+ Details of MHP assessment method are presented and if applicable categories chosen are listed and explained***.**	y	no	y	y	y	y	y	y
Statistical methods								

Table 4.5: Comparison of mental health scale scores

Author	Study population			n	Mental health measure	Mean mental health measures score (SD)	% Caseness/ Prevalence	Normative/ comparative scores or % prevalence
+ The statistics used are described and seem appropriate to achieve the objective of our study.	y	y	y		y	y	y	limited
Ethics discussed	no	no	y		no	no	briefly	no
Limitations acknowledged?	no	no	y		no	y	y	no

* the group from which the study population was selected
**name and reference of assessment instrument used
*** number of categories and category boundaries when continuous variables were categorized e.g., cut-off points or median values

Table 4.6: STROBE Quality Checklist for mental health papers

Methodological quality appraisal for MH cross sectional studies and cross sectional element of mixed methods (MM) studies (after Gärtner, 2012) STROBE criteria (Von Elm E, Altman DG, Egger M et al. The Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) statement: guidelines for reporting observational studies. J Clin Epidemiol 2008;61:344-9.)											
	Karanikola & Kaite (2013),Karanikola,& Papathanassoglou(2013)	Kilfedder, Power & Wells (2001)	Kipping (2000) **(MM)**	Lauvrud,Nonstad & Palmstierna (2009)	Lee et al(2015)	Leka, Hassard,& Yanagida (2012)	Lin, Probst & Hsu (2010)	Madathil, Heck & Schuldberg (2014)	Munro, Rodwell & Harding (1998)	Pryjmachuk & Richards (2007a, 2007b)	Reininghaus et al (2007)
Participants											
+ The source of participants* and the method of recruitment is reported.	y	y	y	y	y	y	y	y	y	y	y
Response rate											
+ The response rate is 50% or higher. -	y	no 48.8 %	y	y	y	y	y	y	y	y	no 22%
Descriptive data											
+ The main characteristics of the study population (occupation, age, gender) are reported, if applicable per occupational group that is studied.	y	y	y	y	y	y	y	no	no	y	y
Disorder or complaints variable											
Description											
+ The MHP variable is defined.	y	y	y	y	y	y	y	y	y	y	y
Assessment											
+ Details of MHP assessment method are presented and if applicable categories chosen are listed and explained***.**	y	y	y	y	y	y	y	y	y	y	y
Statistical methods											

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Methodological quality appraisal for MH cross sectional studies and cross sectional element of mixed methods (MM) studies (after Gärtner, 2012) STROBE criteria (Von Elm E, Altman DG, Egger M et al. The Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) statement: guidelines for reporting observational studies. J Clin Epidemiol 2008;61:344-9.)

	Karanikola & Kaite (2013),Karanikola,& Papathanassoglou(2013)	Kilfedder, Power & Wells (2001)	Kipping (2000) **(MM)**	Lauvrud,Nonstad & Palmstierna (2009)	Lee et al(2015)	Leka, Hassard,& Yanagida (2012)	Lin, Probst & Hsu (2010)	Madathil, Heck & Schuldberg (2014)	Munro, Rodwell & Harding (1998)	Pryjmachuk & Richards (2007a, 2007b)	Reininghaus et al (2007)
+ The statistics used are described and seem appropriate to achieve the objective of our study.	y	y	y	y	y	y	y	y	y	y	y
Ethics discussed	y	no	y	y	y	y	y	no	no	y	no
Limitations acknowledged?	y	y	y	y	y	y	y	no	no	y	y

* the group from which the study population was selected
**name and reference of assessment instrument used
*** number of categories and category boundaries when continuous variables were categorized e.g., cut-off points or median values

Table 4.6: STROBE Quality Checklist for mental health papers

Methodological quality appraisal for MH cross sectional studies and cross sectional element of mixed methods (MM) studies (after Gärtner, 2012) STROBE criteria (Von Elm E, Altman DG, Egger M et al. The Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) statement: guidelines for reporting observational studies. J Clin Epidemiol 2008;61:344-9.)

	Ryan & Quayle (1999)	Sahrai an et al (2008)	Shen, Cheng, Tsai et al (2005)	Snelgrove (1998)	Tully(2004)	Van Daalen et al (2009)	Van Humbeeck,Van Audenhove & Declercq (2004) **(MM)**	Virtanen et al (2012)	Walsh et al (2002)	Wang et al (2015)	Wykes, Stevens, & Everitt (1997)
Participants											
+ The source of participants* and the method of recruitment is reported.	y	y	y	y	y	limited	y	y	not in detail	y	y
Response rate											
+ The response rate is 50% or higher. -	no 42%	y	y	y	y	y	y	y	no 44%	y	y
Descriptive data											
+ The main characteristics of the study population (occupation, age, gender) are reported, if applicable per occupational group that is studied.	y	y	y	y	y	y	y	y	y	y	y
Disorder or complaints variable											
Description											
+ The MHP variable is defined.	y	y	y	y	y	y	y	y	y	y	y
Assessment											
+ Details of MHP assessment method are presented and if applicable categories chosen are listed and explained***.**	y	y	y	y	y	y	y	y	y	y	y
Statistical methods											
+ The statistics used are described and seem appropriate to achieve the objective of our study.	y	y	y	y	y	y	y	y	y	y	y
Ethics discussed	no	y	y	no	no	no	no	y	no	y	no
Limitations acknowledged?	y	y	y	no	y	y	y	y	y	y	no

Table 4.6: STROBE Quality Checklist for mental health papers

Methodological quality appraisal for MH cross sectional studies and cross sectional element of mixed methods (MM) studies (after Gärtner, 2012) STROBE criteria (Von Elm E, Altman DG, Egger M et al. The Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) statement: guidelines for reporting observational studies. J Clin Epidemiol 2008;61:344-9.)

	Ryan & Quayle (1999)	Sahrai an et al (2008)	Shen, Cheng, Tsai et al (2005)	Snelgrove (1998)	Tully(2004)	Van Daalen et al (2009)	Van Humbeeck,Van Audenhove & Declercq (2004) **(MM)**	Virtanen et al (2012)	Walsh et al (2002)	Wang et al (2015)	Wykes, Stevens, & Everitt (1997)

* the group from which the study population was selected
**name and reference of assessment instrument used
*** number of categories and category boundaries when continuous variables were categorized e.g., cut-off points or median values

Table 4.7: Measuring intervention, trial and longitudinal mental health studies against SURE (2013) quality criteria

	Jones et al (2008)	Prosser et al (1996, 1999)
1. Does the study address a clearly focused question/hypothesis?	y	
2. Was the population randomised? If YES, were appropriate methods used?	n	n
3. Was allocation to intervention or comparator groups concealed?	n/a	n
4. Were participants/investigators blinded to group allocation? If NO, was assessment of outcomes blinded?	n/a	not in evidence
5. Were interventions (and comparisons) well described and appropriate?	y	n/a
6. Was ethical approval sought and received?	not described	y
7. Was a trial protocol published?	n	n
8. Were the groups similar at the start of the trial?	y	y
9. Was the sample size sufficient?	not discussed	not discussed
10. Were participants properly accounted for? Was follow-up ≥ 80%?	y	no - variable attrition rates
11. Data analysis - Are you confident with the authors' choice and use of statistical methods?	y	y
12. Results - Were outcome measures reliable (eg objective or subjective measures)?	y	y
13. Is any sponsorship/conflict of interest reported?	not discussed	n
14. Finally...consider: Did the authors identify any limitations?	n	y

Table 4.8: Summary of findings qualitative and mixed methods mental health studies

study	method	qualitative approach	study population	study objective	study findings
Gilbert & Stickley (2014)	qualitative survey	thematic analysis	mh nursing and social work students from one UK university	to focus on the role of lived-experience in mental health education and practice as perceived by undergraduate students.	There were no distinct categorical differences between the answers given by the mental health nurse students and the social work students. The core themes were: **Personal experience** of mental health problems; students expressed their belief that personal experiences enabled greater **understanding** of others' experiences; this increased **empathy**; whilst personal experience and self-disclosure may sometimes help with understanding others' problems, **professional boundaries had to be maintained**
Johnson et al (2011)	qual part of study - 12 group interviews, 24 staff interviews, 21 patient interviews with staff from 7 wards	'straightforward thematic analysis' identifying emergent themes	A purposive sample of 7 wards from the larger study of workers from 100 wards and 36 CMHTs in England	To describe in-patient staff morale, measured by a cluster of indicators, in a large representative sample of wards.To compare morale between ward and community mental health team (CMHT) and crisis resolution team (CRT) staff and investigate staff's reported reasons for leaving wards.	The most important positive influences on morale were **relationships with colleagues and interactions with patients**. Seeing patients recover was often described as an extremely rewarding part of work. **Insufficient staffing levels** emerged as the most important negative influence on morale; **relationships with manager**s and other leading figures were another important influence, with mixed experiences reported. Effective and inclusive **leadership** could boost morale, whilst under-involvement had a negative impact; Staff described feeling alienated from senior managers above ward and team level; A sense of **being listened to, valued and supported** was crucial for morale; Staff and managers stressed the importance of **role clarity** in building confidence, and the ward-level structural devices that help maintain it; **Supervision** was thought to be important for ensuring role clarity and provided staff with an outlet through which to voice their personal needs; There was discussion of the difficulties involved in being with patients, including the **challenges posed by particular client groups and the threat of violence**; **Training opportunities** varied and resource limitations were cited as a major impediment to accessing training; Staff described how the **physical environment** of the ward and working conditions could affect morale, both positively and negatively.
Joyce et al (2007, 2009)	semi structured interviews -	discourse analysis and critical ethnography - textual and contextual analysis	29 Australian nurses with subjective experience of mental illness	to explore the workplace experiences of nurses who have a mental illness.	Three themes were identified from the data generated in the conversations/transcripts: **Theme 1 – 'Crossing the boundary** – from nurse to patient'; **Theme 2 – 'Being a nurse**'; and **Theme 3 – 'Support and trust'**. The theme 'Crossing the boundary – from nurse to patient'. encompassed three sub-themes: '**Developing a mental illness',** '**Hospital admission**', and '**Being managed**'. The superordinate theme of 'Support and trust' encompassed four subelements: **declaring mental illnesses, collegial support, managerial support, and enhancing support**

Table 4.8: Summary of findings qualitative and mixed methods mental health studies

study	method	qualitative approach	study population	study objective	study findings
Kidd (2008, 2010)	content analysis-interpretation of motifs-analysis of narrative accounts	autoethnography, after Ellis (2004)	18 nurses from a range of specialities with subjective experience of mental illness	to explore experience of nurses with mental illness	The Nursing motif revealed a hyphen between the **notion of the nurses as selfless and tireless carers, and the mastery requirements of professionalism**. The nurses' hope for caring, belonging, expertise and 'goodness' were also features of the nursing motif. The Tangata Whaiora (Maori for 'people seeking wellness') motif revealed the hyphen between **being a compliant patient and a self-determined person seeking wellness**, and also foreshadowed the notion that the nursing identity does not 'permit' the **dual identities of nurse and tangata whaiora.**
Kipping (2000)	28 interviews and 9 focus groups as part of a mixed methods study including - cross sectional survey	thematic analysis - although not described as such	UK mental health nurses who qualified in 1993/1994	to identify factors contributing to MHNs' experiences of stress assess the effects of stress on MHNs and to explore the ways in which MHNs cope with stress	The interviews revealed the **limitations of conventional stress models**. They do not take account of the meaning situations have for individuals, they conceptualise individuals in isolation from their wider socio- cultural context and they do not consider **hidden processes and unacknowledged conditions** which influence nurses' experiences. The focus groups explored the **unrealistic expectations** and **contradictions** which underpin mental health nursing practices. Factors beyond nurses' immediate work environment (the focus of most research into nurses' stress) made a significant contribution to their experiences of stress: the **organisational culture;** their **home lives**; practices in nurse education; and **beliefs and attitudes held within society**. Secondly, nurses' own expectations and attitudes were shaped by **wider contextual influences**. For example, the stereotypical images of nurses held within society played a part in determining nurses' own views about nursing.
Moll (2010), Moll et al (2013)	in depth interviews	institutional ethnography	20 mental health workers with mh histories and 12 stakeholders in a large Canadian mental health organisation	to explore the experiences of mental health care workers with mental health issues and to account for how the social relations of work shaped their experiences	A disjuncture between the public mandate of advocacy, open dialogue, and support regarding mental health issues, and the private experience of workers which was characterized by silence, secrecy and inaction. Practices of silence were adopted by workers and workplace stakeholders across the organization, and were shaped by discursive forces related to stigma, staff-client boundaries, and responsibility to act. The silence had both positive and negative implications for the mental health of workers, as well as for relationships and productivity in the workplace.

Table 4.8: Summary of findings qualitative and mixed methods mental health studies

study	method	qualitative approach	study population	study objective	study findings
Moll (2014)	mixed methods - qualitative case study - online survey and interviews	interpretive description - identification of themes	83 healthcare workers surveyed, 12 stakeholders interviewed from a large multisite care organisation in Canada	to explore the key forces that shape early intervention and support for healthcare workers who are struggling with mental health issues, and to identify barriers and opportunities for change.	There were many reports of silence and inaction in response to employee mental health issues. Uncertainty in identifying mental health problems, stigma regarding mental ill health, a discourse of professional , social tensions, workload pressures, confidentiality expectations and lack of timely access to mental health supports were key forces in preventing employees from getting the help that they needed. Although there were a few exceptions, the overall study findings point to many barriers to supporting employees with mental health issues.

Table 4.9: Measuring the quality of qualitative and mixed methods mental health studies against CASP criteria

CASP criteria	Gilbert & Stickley (2014)	Johnson et al (2011) (MM)	Joyce et al (2007, 2009)	Kidd (2008, 2010)	Kipping (2000) (MM)	Moll(2010) Moll et al (2013)	Moll (2014)
1. Clear statement of aims?	√	√	√	√	√	√	√
2. Appropriate methodology ?	no - authors acknowledge this	√	√	√	√	√	√
3. Design matches aims?	no	√	√	√	√	√	√
4. Recruitment strategy	√	√	√	√	√	√	√
5. Data collection method?	5 question survey	√	√	√	√	√	√
6. Relationships and bias are discussed?	not discussed - despite teacher-student relationship to participants	not discussed	not discussed	√	√	√	√
7. Ethical issues considered?	not in evidence	not discussed in detail	√	√	√	√	√
8. Rigorous data analysis?	summarised briefly	not discussed in detail	summarised but not described in detail	√	√	√	not described in detail
9. Clear statement of findings?	√	√	√	√	√	√	√
10. Contribution of the research?	√	√	√	√	√	√	√
Acknowledged limitations	√	√	√	√	√	√	√

Chapter 5 Research design and methods

5.1 Introduction

This chapter presents the research design, research methods and the methodological rationale for the study approach. The limitations of the study are discussed. Ethical considerations and reflexivity are also addressed.

5.2 Overall design and methods

This study has used an explanatory sequential mixed methods design, comprising a quantitative followed by a qualitative phase (Cresswell and Plano Clark, 2011). In phase 1 a representative sample of UK mental health nurses was asked to complete an online questionnaire about their work, their subjective experience of mental health problems and their subjective wellbeing (SWB) using validated SWB measures. In phase 2 semi structured interviews were conducted with a purposive sample of phase 1 survey participants. The interview topic guide revisited the themes from the survey of subjective wellbeing and subjective experience of mental health problems. The interviews were analysed according to a thematic approach. Both phases of the study were piloted. The design and conduct of both phases of the study, including the survey questions and interview topic guide were approved by the School of Health Sciences Research Ethics Committee of City University London.

5.2.1 From review findings to research questions

As discussed in Chapter 1, this research project began with a dual concern with mental health nurses' 'expertise by experience' of mental health problems and with mental health nurses' SWB beyond of the dominant discourse of stress and burnout. This led to the development of the research aim, which in turn led to two reviews of the literature (Chapters 3 and 4) which addressed how UK mental health nurses' SWB and mental health have been measured and explored. They found that there was a lack of research on the mental health and SWB of UK mental health nurses as a specific group. There was also a lack of research on UK mental health nurses with high SWB and on nurses' experience

of mental illness, how they look after their own mental health and wellbeing and used their experiences in their mental health work. There was a lack of longitudinal or intervention research. The lack of contemporary baseline data meant that cross sectional survey and interview research was warranted as a starting point for further study. From the reviews six research questions were formulated:

1. What is the state of mental health of UK mental health nurses, in terms of experience of mental health problems and degree of SWB?
2. How do experience of mental health problems, SWB and demographic and work place factors interact for mental health nurses?
3. Is there a subgroup of mental health nurses with experience of mental health problems who also have high SWB?
4. How do mental health nurses with subjective experience of mental health problems and high SWB look after their own mental health?
5. How have mental health nurses with personal experience of mental health problems experienced mental health care and treatment?
6. Does personal experience of mental health problems inform mental health work and vice versa? In what ways?

Questions one to three were more suited to quantitative approach, such as a survey. Questions four to six were more suited to a qualitative approaches, such as interviews. However, the close link between the questions, and the reliance on questions one to three to identify suitable candidates for interviews to answer questions three to six suggested a mixed methods study as most appropriate, specifically a sequential explanatory design, using the participant selection variant (Cresswell and Plano-Clark, 2011).

5.3 Mixed methods research

> ‘Mixed methods potentially offers depth of qualitative understanding within reach of quantitative techniques.’ (Fielding, 2012, p124)

This study has used an explanatory mixed methods design. Mixed methods is a relatively young approach to social research, although its popularity is growing exponentially and its theoretical and methodological foundations are well rehearsed (Cresswell and Plano Clark, 2011; Burke Johnson et al, 2007; 2009; Denzin, 2010). It should be seen as a distinctive methodology, not just a joining up of the disparate qualitative and qualitative traditions (Greene, 2008) although some writers from within the mixed methods field have raised concern at the procedural rather than philosophical focus of mixed methods (Denzin, 2008). Some have argued that mixed methods research can be used to transform and empower social actors (Cresswell and Plano Clark, 2011; Mertens, 2003), whilst others have discussed its potential for post-modern interpretation, both of the world being studied and of the mixed methods research text itself (Freshwater, 2007). Mixed methods is not an approach aligned with one particular set of epistemological assumptions. It is not, however, a way of researching for which these considerations are not present or relevant.

Brannen (2005) suggests three rationales for the choice of mixed methods: paradigms, pragmatics and politics. In terms of paradigms, the mixed methods researcher is choosing not to take the positivist stance of the quantitative researcher, or the interpretivist stance of the qualitative researcher. The mixed methods researcher is letting the research questions drive methodological decisions, rather than starting from one of the two opposing philosophical viewpoints and determining questions from there. Secondly, regarding pragmatics, Brannen (2005) says that research practice is driven as much by practical, technical issues as it is by philosophical assumptions. The potential uses of the research and the resources available impact on the feasability of modes of responding to particular research questions. Finally, regarding politics, Brannen says that the use of quantitative methods in conjunction with representing the in depth perspectives of individuals is a powerful combination when the aim of research is to influence policy makers, particularly for hard to reach or under represented groups.

The use of mixed methods in this study has been determined primarily by the nature of the research questions. Pragmatism is the worldview most often associated with mixed methods (Cresswell and Plano Clark, 2011; Burke

Johnson et al, 2007). Cresswell and Plano Clark (2011) associate a pragmatic approach with being problem centred and real world focused. In terms of the present study, this is about using methods that serve the research question first and foremost. Pragmatism has played a part in determining methods here. This study had no dedicated budget and was undertaken on a part time basis. As such, its scope had to be limited to what could be done by one research student with limited available resources. The exploratory nature of the question meant that a localised study would have had limited generaliseability and may have had very limited response. The use of online methods allowed for subjects drawn from a national cohort, and has gathered novel qualitative and quantitative data. A mixed methods approach has therefore been a pragmatic use of resources. The political motive for the use of mixed methods is relevant here also in that the interview subjects were a potentially hard to reach group, access to whom was made possible by the broader reach of the online survey.

5.3.1 Mixed methods epistemology

Bryman (2012) offers a summary of the main epistemological assumptions that influence the choice of social research methods. Broadly he defines the distinction between qualitative and quantitative methods as a distinction between a deductive versus an inductive approach to the relationship between theory and research, and between an objectivist versus a constructionist orientation. The benefits of a mixed methods approach may be identified through a consideration of what a simple qualitative or quantitative approach would mean. A deductive approach would require a hypothesis to be tested through empirical research. An inductive approach would mean that there were theories to be derived from empirical research. The research question:

> How do UK mental health nurses negotiate for, use and manage their own mental health and wellbeing?

is one about which there are some hypotheses to be tested and some aspects that warrant exploration in order to develop theory. It was hypothesized that there is a relationship between SWB and mental health nurses' own mental health history. It was also hypothesized that mental health nurses draw on these

experiences in their work. The survey data tests those hypotheses. The study did not, however, have a working hypothesis as to how nurses with high SWB and personal mental health histories negotiate the relationship between their history and their sense of self and work. This broader question was best explored through analysis of semi structured interview data.

Bryman (2012) describes the two main research approaches as stemming from objectivist or constructivist viewpoints. Brannen (2005) contrasts them as positivist versus interpretivist. For this study's research question an objectivist or positivist approach would be one that did not consider the relationships between mental health, SWB and work to be at least in part consciously constructed by the research subjects. A study seeking to find an answer to the research question from an objective stance risked missing out on the insight into perceptions, lived experiences and reflections that a qualitative study can give. The credibility of this study depends on the pairing of a qualitative approach (that deems the subjects to have some agency in constructing their reality) with a quantitative one.

Bryman (2012) discusses two main arguments against using mixed methods research: that methods are embedded in epistemology, and so the researcher cannot really hold two world views, and that the two research methods represent two opposing paradigms so 'the integration is only at a superficial level and within a single paradigm'. The impetus for this study comes from a concern about whether different world views can interact, exist alongside or negate each other ('we need to attract 'experts by experience' into mental health work because life experience is lacking in our mental health workers' versus 'our mental health workers are vulnerable to mental ill health, which is associated with the stress of the job'). This study asks how the two closely related, but not identical, concepts of SWB and mental health align with each other. Given that the impetus for the study comes from curiosity and questioning about how different perspectives on a particular phenomenon (mental illness) may sit together, it is fitting to consider the research question from a mixed methods perspective, reflecting adjoining not opposing points of view.

On Bryman's second point, about the inevitable superficiality of mixed methods approaches, there is also a counter argument. For this study it could be said that the qualitative aspect was subordinate to the quantitative because it was secondary, and dependent on the first set of data for its direction and development. It could also be argued that the quantitative aspect was the subordinate one, because it served to provide a broad canvas for the more detailed work, and has mainly been used as a means of getting a hard to reach sample for the qualitative aspect. In the design stage there was an equal respect for both methods. This was a sequential study and the purpose of using mixed methods was exploration not triangulation. The aim was not to repeat or revise findings based on a comparison of two sets of data, but rather to accumulate knowledge, gathered from addressing a central research question through linked research questions. Mixed methods here 'followed a thread' of ideas (Moran-Ellis et al, 2006; O'Cathain et al, 2010). Such a stance may mark the study out as qualitative at heart because it advocates multiple viewpoints and the importance of gathering rich data from multiple sources, but is perhaps preferable to see this as the mixed methods research viewpoint.

5.3.2 Mixed methods research design

'Sequential explanatory mixed methods design' is the term used for a study in which the qualitative elements of a study are dependent on the quantitative results and are used to add depth and understanding of quantitative findings (Cresswell and Plano Clark, 2011). The strengths of this design, according to Cresswell and Plano Clark, are that it is straightforward to implement, given the two phase structure, and that the design allows for some elements of the study to be emergent rather than fixed. In the present study, the qualitative aspect was fixed but the sample and the interview format and schedule for the second phase emerged based on findings from the quantitative phase. Cresswell and Plano Clark (2011) consider that the challenge of this particular design is that it is time consuming and that it can be difficult to secure ethical approval for the whole study because so many elements of the second phase are contingent on first phase results. Regarding time, this study has lent itself well to part time PhD study, because it had a six year gestation rather than the typical three year one. Regarding the second concern, this was addressed by gaining ethical

approval in stages. The study gained ethics committee approval overall in principle and for phase 1 and subsequently gained ethics approval for phase 2 once data collection and initial analysis of phase 1 was complete.

The study used the 'participant selection variant' of explanatory sequential design (Cresswell and Plano Clark, 2009) wherein quantitative results were used to identify participants for the qualitative phase. The literature review had identified gaps in the knowledge regarding the state of nurses' SWB and mental health that would best be answered by a purposive sample of mental health nurses with high SWB and with subjective experience of mental health problems. Brannen (2005) described a similar use of survey then interview in her 1994 work, 'Young people's health and family life '(Brannen et al, 1994). She talked about the two parts of her study having complementary aims, with the survey providing contextual and descriptive data and the later interview data offering detail on the processes of young people negotiating responsibility for health with their parents. In the present study the survey offered background and baseline information, whilst the interviews offered insight into how subjects negotiated experiences of mental health and SWB. The same model was used by Graham and Shier (2010) in their study of the SWB of Canadian social workers.

One key question in mixed methods studies is when and how to mix data - at collection, analysis or interpretation (Cresswell, 2009; Burke Johnson et al, 2007; Fielding, 2012, Brannen 2005). A strength of the present study is that the mixed methods ethos has been retained through analysis and discussion. The two phases of the study were discrete in terms of data collection, save for the impact that phase 1 findings had on phase 2 design. As will be seen in Chapters 8, 9 and 10, the findings are presented and discussed sequentially but according to themes.

The analysis of mixed methods data may take various forms. Some researchers define it as triangulation and validation (Cresswell, 2009; Bryman, 2012), although Brannen (2005, p12) has described triangulation as a 'misleading' term in relation to mixed methods analysis, because putting data together that has been gathered from different methods does not equal creating truth.

Fielding (2012) talks about data integration in mixed methods being about illustration and analytic density, as well as validation. Brannen (2005) talked about analysis of mixed methods data in terms of elaboration and complementarity. These seem apt here, in particular when considering the audience for the research. Outside of the academic purpose of the study, its potential impact to the field of mental health nursing is increased when the detail of mental health nurses' views and perceptions has been married with statistical information about that population.

5.4 Phase 1: Survey methods

In phase one an online self administered survey was conducted, following Bryman's (2012) steps in conducting a social survey: the research questions lead onto decisions about population and sampling then administration methods then questions. The survey was administered on line during January to September 2013 to mental health nurse members of the RCN and members of Unite the Union's Mental Health Nurses' Association. It consisted of 76 questions, on demographics, work, subjective wellbeing and personal or family experience of mental illness.

5.4.1 Why conduct a survey?

Surveys allow for a large number of respondents to participate in a study. The literature review identified that there was a lack of studies measuring nurses' SWB using SWB specific measures and also a lack of studies asking nurses about their experience of mental health problems. Using a survey as a means of gathering information about a group of social actors holds particular challenges and limitations. Surveys are quick, cheap and easy to administer, compared to other research methods, such as experimental or observational designs, or interviews. They also afford some distance between the researcher and the subject, which should reduce researcher effect, variability and bias (Bryman, 2012). The limitations of surveys include the lack of opportunity to probe or direct subjects, the risk of low response rates and lack of full information about respondents (Bryman, 2012). A survey approach had much to offer the research question of this particular study. First, a survey of a sample of mental health

nurses can give baseline information about a subject as yet unresearched in the population: SWB and subjective experience of mental health problems in mental health nurses. Use of a questionnaire means that personal information can be gathered in a way that required minimal input from the subject. The self-administration aspect meant that it can be completed at the subject's convenience.

Previous research on nurses' SWB and mental health has mainly been one off cross sectional surveys (see Chapters 3 and 4). There was therefore a precedent set for the use of surveys with this population. In the reviewed studies, nurses as research subjects have tended to be accessed via their employer and tended to be via postal survey or in person rather than online. Of the studies reviewed in Chapters 3 and 4 only Nemcek (2007) accessed her nurses via a US national nursing organisation weblink and Moll (2014) sent an online survey to a snowball sample of employees of a healthcare provider organisation. All other surveys were administered either in the workplace or by post. The reviewed studies have tended to be localised to one hospital, one health care provider or one geographical area. Only the Johnson et al (2011, 2012) morale study has had a wider reach, thanks to a large National Institutes of Health grant and the all-Wales study (Hannigan et al, 2000), for which national coverage was negotiated via the General Nursing Council in Wales

5.4.2 Why conduct an online survey?

The advantages of online surveys are multiple. They are low cost, low input from the researcher once set in motion and low impact on the respondent, who can complete at leisure. The disadvantages of the online survey are the impact the method has on sampling and response rates (University of Surrey Department of Sociology/ ESRC, 2007). On line surveys are advantageous in terms of cost, fast rate of return, ease of access, and the anonymity afforded to respondents when gathering information on sensitive subjects (Chizawsky et al, 2011; Hunter, 2012; Russell et al, 2010). Online survey data collection also expedites the analysis process because data can be inputted directly into statistical software (Hunter, 2012; Russell et al, 2010). The risk of processing

error can also be reduced given that there are fewer steps between data creation and inputting into analysis software (Touvier et al, 2010).

Hunter (2012, p14) says:

> ‘We are moving towards a situation where online respondents could be more representative of the target population than a sample that uses pencil and paper.’

Concern has in the past been raised about the generalisability and reliability of online administered questionnaires because only those who are computer literate, younger people and those in higher social classes will access or use them (Hunter, 2012). This is now an outmoded notion and would certainly not be the case with the study population of nurses. All of the members of the target population should be used to communicating via email and accessing materials online because computer literacy is a requisite in today’s healthcare environment. Recent data from the Office of National Statistics (2013) shows that use of the Internet for work and social activities is increasing exponentially:

> ‘In 2013, 36 million adults (73%) in Great Britain accessed the Internet every day, 20 million more than in 2006, when directly comparable records began.’

Dillman et al (2010) talk about improving survey uptake by making the survey mode fit the subjects’ normal lives rather than trying to fit them to a research method that suits the researcher. The use of email invitations and web surveys in the present study met this criteria because emails and online material should be commonplace for the population accessed. A postal survey and a request to post a response by land mail would be more intrusive and demand more from the respondents.

5.4.3 Population, sampling and recruitment

Key decisions regarding sampling are determining a representative sample and an appropriate sample size (Fox et al, 2007). Both of these enable the researcher to claim that their study findings are generalisable and thus have external validity. The process, rationales and outcomes of sampling decisions are discussed here.

5.4.3.1 Sampling frame

Prospective participants were drawn from the mental health nurse membership of the Royal College of Nursing (RCN) and Unite the Union's Mental Health Nurses Association (MHNA). The Royal College permitted email access to its mental health nursing database. This comprised 16,955 members (personal email from Dave O'Carroll, RCN Information and communications Manager, 20/07/12). The Mental Health Nursing Association of Unite the Union permitted access to its database of around 2000 members (personal email from Jane Beach, Unite the Union Professional Officer Regulation, 25/06/13). The Centre for Workforce Intelligence (2012) estimated the UK mental health nurse headcount for 2010 at 48,234 in the NHS and approximately 26,251 not working in the NHS (giving a total population of approximately 74,485) This means that accessing mental health nurses via the RCN and MHNA may reflect at a maximum around 23% of the whole mental health nurse population[1]. The MHNA offered access to 3% of the total population.

In order to get a truly random sample of the total population of all mental health nurses the study would need to have accessed all mental health nurses. The NMC, which holds the register of all UK nurses does not give access to its database to student researchers. The next best option was to approach the two main national professional organisations. As the RCN and the MHNA are also

[1] It became apparent through the survey analysis that the RCN mental health forum members include some student nurses and non registered health care workers. Non registered MHNs were removed from the final survey sample, but the 12 student MHNs were included. The total MHN population coverage offered by the RCN is therefore less than 23%.

unions, Unison, the other main union representing nurses was also approached but did not respond.

Accessing mental health nurses via their employers would have been both unfeasible and may have skewed the sample. It was unfeasible because it would have required contacting all employers of UK mental health nurses, comprising approximately 60 NHS trusts[2] and numerous smaller non NHS providers (and gaining local ethics approval for each site of access). That this study did not have research funding attached and has been conducted by a sole researcher made such an approach unfeasible. The decision not to access via employers related to the sensitivity of the topic whereby nurses with mental health problems who are in mental health work may not have respond if contacted via their employer or else that the responses or respondents may not have reflected the wider mental health nurse population. Such responses could not be confidently viewed as representative.

Bryman (2012) advises researchers to ask whether the sample represents the population. He asks researchers to consider the sampling bias inherent in the methods of access chosen. The decision to access the population via their professional associations was made based on this being the only feasible way of accessing a geographically dispersed and demographically diverse sample. There is a precedent set for this form of access in non UK studies on aspects of nurses' workplace wellbeing (Bourbonnais et al, 2005; Sveinsdóttir and Gunnarsdóttir, 2008) and in a recent occupational health survey of UK nurses via the RCN(Mark and Smith, 2012).

An advantage to accessing the sample via membership databases meant that there was no researcher bias when accessing respondents because they were approached via a third party. Within any member group there are going to be shared characteristics that differentiate them from non-members. It may be that there is a bias towards certain types of nurses in using professional associations, as they may differ from the group as a whole. As there was no prior research on this topic, there was no evidence either way as to whether the

[2] according to http://www.nhs.uk/ServiceDirectories/Pages/MentalHealthTrustListing.aspx accessed 20 December 2015

sample characteristics - in terms of their rate and type of mental health problem and SWB - do or do not map against characteristics of the population as a whole. There is no obvious reason why RCN or MHNA members may by more likely to have high SWB or subjective history of mental illness than non-members although such a question could be answered via future research using a different sampling strategy.

5.4.3.2 Sampling strategy

One aim of the study was to gather baseline information on the mental health history and SWB of mental health nurses. The population therefore should have been one from which generalisations could be made. In the first instance, the third party (the RCN) conducted a systematic probability sampling activity, by picking a random number between 1 and 16 and then approaching every 16th member on their mental health nurse member list. This has meant that the survey was sent to c.1000 members. The decision to post an email to 1000 members was based on Bryman's counsel against the use of sample sizes over 1000, saying that:

> 'after a certain point, often in the region of 1000, the sharp increases in precision become less pronounced...' (2009, p180).

This approach had an advantage over purposive or convenience sampling in that it offered more chance of generalisability. It was preferable to quota sampling in that it did not preclude any members from taking part as there was no researcher bias.

The random sample of 1000 mental health nurse members of the RCN were contacted by email inviting them to take part. The response rate for this was 8.3%. Given the low response rate a secondary approach was taken, whereby links to the survey were then sent out to all RCN Mental Health Nursing Forum RCN via newsletters, and in the RCN research newsletter. Calls for response were also sent out to members of the Mental Health Nurses Association (part of Unite the Union), which has a membership of around 2000. Some mental health nurses may be members of both organisations (for example, the author). It

cannot be guaranteed that all members saw the link to the survey, as they may not have read professional body emails, magazine articles, or webpages. One major disadvantage and flaw in the survey access methodology was that the final response rate was not measurable, so an accurate response rate could not be gauged as it was not feasible for the researcher to identify who had opened and read the communications which included the link to the survey.

5.4.3.3 Sample size and power

In Fox et al's (2007) guidance on sample size calculation the researcher is reminded that quantitative research is usually concerned with either hypothesis testing or describing a phenomenon. To an extent one hypothesis being tested in this study is that mental health nurses will have equal if not more personal or familial experience of mental illness than the general population. An appropriate sample size for this study was calculated using one element of the survey (in this case experience of mental health problems). Prevalence of mental health problems in the UK general population is often cited as 'one in four' (23% according to the Adult Psychiatric Morbidity in England 2007, McManus et al, 2009), so it would be expected that the number of people in the survey to present with mental health histories would also be 1 in 4 or 25%, if it reflects the same prevalence as the general population. Fox et al (2007) say that sample size for descriptive studies based on expected proportions should be based on desired confidence interval (CI) and likely response rate, determined using the formula of:

$$\frac{N = P(100\% - P)}{(SE)\,squared}$$

The calculation is shown in Figure 5.1 giving an appropriate sample size of 289 respondents in order to achieve the 1 in 4 quota of mental health nurses with mental health problems. In the final study, 237 responses were analysed.

This means the survey sample size was 18% (52 respondents) below requirement and somewhat underpowered. The impact of this under powering may be quantified as increasing the margin of error in the findings (Bartlett et al,

Figure 5.1: sample size calculation

$$\frac{N = P(100\% - P)}{(SE)squared}$$

So - for this study a CI of +/ - 5% regarding the number of respondents reporting mental health histories
the Standard Error is calculated by dividing the CI by 1,96% if there is a 95% level of significance (p< 0.05).

This gives an SE of 5/1.96 = 2.55%

$$\frac{25(100\% - 25)}{(2.55\%)^2} = \frac{25(75)}{(2.55\%)^2} = \frac{1875}{6.5025}$$

$$= 288.35$$

2001; Fielding, 1996). The margins of error of the actual versus the ideal sample size were compared using an online sample size calculator[3] . The ideal sample size of 289 would give a margin of error of 4.99%. With the actual sample size of 237, representing the sampling frame of c.19,000 (UK mental health nurse members of the RCN and Unite the Union) is 5.48%. The margin of error in relation to the whole time equivalent UK mental health nurse population (approx n. 74,485,) is 5.50%. The underpower of this study therefore reflects an increase of 0.5% in the margin of error. It is therefore still worth gathering and analysing the available data, with the caveat that the margin of error is larger than ideal.

5.4.3.4 Sampling and response rates for the online survey

The total number of responses to the survey was 271 with 237 useable responses for the final analysis. Because of the impossibility of knowing how many potential respondents saw the information about the survey and opened the emails describing the survey at total, it is not possible to enumerate the total response rate.

[3] http://www.select-statistics.co.uk/sample-size-calculator-proportion

What is known is that 8.3% (n83) of the 1000 people in the initial systematic probability sample responded to the survey. When the survey was publicised more widely, potentially up to 17,000 nurses were accessed (RCN mental health and MHNA membership combined), although again it is not known how many were actually aware of the study. An additional 188 responses were received giving a combined total of 271 responses of which 237 were useable.

If it is assumed that all potential respondents (n17000) saw the information about the survey then the response rate was 1.39% (237/17000). If it is assumed that all potential respondents who saw the information did access the survey (n = 271) but only 237 completed it then the response rate is 87.45% (237/271). All that can be confidently stated is that the response rate lies between 1.39% and 87.45%.

Response rates here should be compared with response rates from contemporaneous surveys of the same population. The RCN Employment Survey (RCN, 2011), an annual survey, was sent out to a stratified sample of members. It achieved a response rate of 14% (9,754). Of these respondents, 8.3% were mental health nurses (n778). In September 2012 the RCN sent out its online survey on health, wellbeing and stress (Beyond Breaking Point, RCN, 2013) to 28,000 members. It got 2008 responses, giving a response rate of 7.2%. This suggests that the response rate of 8.3% for the initial random sample was typical of response rates for this population. Previous studies of nurses contacted via their professional associations to take part in web surveys report low response rates (Villanueva et al, 2006; Bjornsdottir and Thorhallsdottir, 2003) but, as Chizawsky et al (2011) point out, this is a mode of data collection about which there has been limited published research.

Low response rates to web based surveys are a major concern to survey researchers (Fan and Yan, 2010). Fan and Yan's (2010) conceptual model of response says that content and presentation impact here. Content affects response, in terms of the sponsor, the topic and the length of the survey. A decision was made to approach nurses via their professional body due to an assumption that this body would be trusted and therefore positively impact on response. The subject of the survey may have been off putting, given that it is

about personal experience of a sensitive topic. The survey could have seemed lengthy to the person attempting to complete it; however, the length of the survey would not be apparent to potential responders, and so should not impact on the initial response. This may account for the 34 responders who did not complete the survey fully. Fan and Yan say that question wording, ordering and display may also impact on response rates. Again, these factors may account for non-completion but not for the initial low response rate. The Survey Monkey site presents one page of questions at a time, so potential responders would not have the chance to base non response on these factors.

Hunter (2012) suggests that respondents are more likely to take part if they are targeted directly, if a survey is directly relevant to them and a survey is sent out at the right time. The present survey addressed respondents as ‘Dear colleague’ and set out succinctly the relevance of the study for them and their work. It was initially sent out in early December 2012, with a reminder sent 2 weeks later and further reminders in early January and early February. The timing of the survey may also have been a factor in the low response rate. The fact that the survey was not addressed to them personally and the timing of the survey may have adversely impacted on completion. Hunter’s (2012) advice on improving response rates was taken into account. Subjects in the present study were contacted via a reputable third party, their professional body. They were emailed a link to the survey rather than being asked to download a document. They were provided with assurances of confidentiality.

Response rates of health professionals to surveys are often low according to a comparison of response rates in postal surveys of health professionals between 1996 and 2005 (Cook et al, 2009). In 350 studies, the mean response rate was 57.5% (95%CI). For the 36 studies they looked at surveying nurses, the response rate was 50%. On line survey response rates are usually around 10-25%, limiting their claims to validity and generalisability (Sauermann and Roach, 2012). Chizawsky et al (2011) argued that web based surveys are an effective mode of accessing this population. However, they used face to face and paper follow ups and reminders to encourage their final 84% response rate. Their methods would not have been possible in this case, given this was a national sample and so face to face encouragement to complete the survey

would not have been feasible. Similarly, Sauermann and Roach (2012) found that personalisation and offering incentives increased their online survey response rates by 48% and 30% respectively. On the other hand, Sanchez-Fernandez et al (2012) compare the impact of personalisation and incentives on response rates and found only personalisation to have a positive impact. The geographical scope of the present survey and the requirement to offer respondents anonymity, along with having no funds to offer incentives, has no doubt impacted on response rates of the present study

5.4.4 Survey design

The design of this survey had several elements incorporating several methodological decisions, all of which are traceable back to the research questions of the study. These decisions are considered here. A copy of the survey is reproduced at Appendix 4.[4]

5.4.4.1 Demographic questions

Survey respondents were asked about their gender, age, ethnicity, household size, work status (full or part time, unemployed or student), work setting, years in role and years since qualifying. The demographic and workplace questions were chosen based on their use in previous studies of UK mental health nurses (Edwards et al, 2000; Johnson et al, 2012; Fagin et al, 1996). The demographic questions were formulated according to standard variations of particular demographic characteristics used in previous studies, phrased from by the East Midlands Public Health Observatory (2011) Health, Work and Wellbeing: Employee Health Needs Assessment Methods and Tools March question bank.

5.4.4.2 Subjective wellbeing questions

Three measures of subjective wellbeing were used: the ONS4, which are the four wellbeing questions asked by the Office of National Statistics in its Annual Population Survey and reported in its annual report on national wellbeing (ONS,

[4] As with the interview study a number of survey questions have not been analysed as part of the thesis. These may be analysed in later publications.

2012); the Warwick Edinburgh Mental Wellbeing Scale(WEMWBS) (Stewart-Brown and Janmohamed, 2008); the Satisfaction with Life Scale (Diener et al, 1985). The characteristics of the three measures are summarised in Table 5.1.These measures are valid and reliable. Two of the scales have been validated for use with the UK adult population (Pavot and Diener, 2008, Tennant et al, 2007) whilst the ONS4 was at the experimental stage at the time of use in this study (McManus et al, 2012).It has been used in national surveys for the past three years (ONS, 2015).

5.4.4.2.1 The ONS4 wellbeing questions

The ONS4(ONS, 2012) comprises four subjective wellbeing questions, drawing on the three main theoretical approaches: the 'evaluative' - question 1, the ‘hedonic’ or 'experience' - questions 2 and 3, and the ‘eudemonic' - question 4. Responses are reported for each question separately. The purpose of using the ONS4 was to enable comparison between the mental health nurse population and the UK general population.

5.4.4.2.2 Satisfaction with Life Scale (SWLS)

The Satisfaction with Life Scale (SWLS) (Diener et al, 1985) is a 5-item scale designed to measure a person’s global cognitive judgments about their life satisfaction, using the person's own criteria. One of the purposes of the SWB scale in the survey was to identify prospective interviewees for phase 2 (as done by Graham and Shier, 2010). As shown in Chapter 3, the SWLS was the most commonly used SWB measure in international studies of nurses, affording potential comparators for the present study.

5.4.4.2.3 Warwick Edinburgh Mental Wellbeing Scale (WEMWBS)

The Warwick Edinburgh Mental Wellbeing Scale (WEMWBS) (Stewart-Brown and Janmohamed, 2008) is a 14 item scale developed by the Universities of Warwick and Edinburgh to measure wellbeing in the Scottish population (Braunholtz et al, 2007; Tennant et al, 2006). All of the items are positively phrased and rated according to ‘none’, ‘rarely’, ‘some’, ’often’ and ‘all of the

time' for the past 2 weeks. The scale measures hedonic and eudaimonic attributes of mental wellbeing. It has been used in a study of veterinary professionals in a postal questionnaire (Bartram et al, 2009). There was therefore a precedent for its use with UK health professionals and in a survey administered by a Royal Society (this time the Royal Society of Veterinary Surgeons).

Table 5.1: Characteristics of subjective wellbeing measures

Wellbeing measure	Questions	Likert responses	Scoring
ONS4	**4 questions**, reported separately: 1. Overall, how satisfied are you with your life nowadays? 2. Overall, how happy did you feel yesterday? 3. Overall, how anxious did you feel yesterday? 4. Overall, to what extent do you feel the things you do in your life are worthwhile?	0 to 10 (11 point) Likert style response scale with 0 - not at all 10 - completely	Very low (0-4) Low (5-6) Medium (7-8) High (9-10)
SWLS	**5 questions** to make up 1 measure: 1. In most ways my life is close to my ideal 2. The conditions of my life are excellent 3. I am satisfied with my life 4. So far I have gotten the important things I want in life 5. If I could live my life over, I would change almost nothing	7-point Likert style response scale (ranging from 1 strongly disagree to 7 strongly agree)	31 - 35 Extremely satisfied 26 - 30 Satisfied 21 - 25 Slightly satisfied 20 Neutral 15 - 19 Slightly dissatisfied 10 - 14 Dissatisfied 5 - 9 Extremely dissatisfied
WEMWBS	**14 questions** to make up 1 measure: 1. I've been feeling optimistic about the future 2. I've been feeling useful 3. I've been feeling relaxed 4. I've been feeling interested in other people 5. I've had energy to spare 6. I've been dealing with problems well 7. I've been thinking clearly 8. I've been feeling good about myself 9. I've been feeling close to other people 10. I've been feeling confident 11. I've been able to make up my own mind about things 12. I've been feeling loved 13. I've been interested in new things 14. I've been feeling cheerful	5-point Likert style response scale 1 - None of the time 2 - Rarely 3 - Some of the time 4 - Often 5 - All of the time	Minimum score of 14, maximum score 70. No gradation of SWB assigned to scores within the range.

In the pilot study the GHQ12 was used rather than the WEMWBS. Feedback from the pilots suggested that SWB should be measured using SWB specific measures rather than proxy measures. The complexities of using the GHQ are discussed in Chapters 3 and 4. Whilst the GHQ has history of use as a measure of mental health the WEMWBS has the advantage over the GHQ of offering a much more nuanced account of SWB.The WEMWBS creators argue that where scales primarily designed to identify presence or absence of mental illness are reverse scored to identify those with wellbeing (as described in Hu et al, 2007 with the GHQ) there are 'floor' and 'ceiling' effects, that mean the full range of SWB is not captured (Stewart-Brown and Janmohamed, 2008).

5.4.4.2.4 Internal reliability of subjective wellbeing measures

In the present study the internal consistency of the three scales was high (Cronbach's Alphas of 0.813 for the ONS4, 0.907 for the Diener SWLS, 0.928 for the WEMWBS) and compared favourably with that of other UK studies for the WEMWBS (0.91 and 0.89 in Stewart-Brown and Janmohamed, 2008; 0.94 in Bartram et al, 2009) and the SWLS (0.82 in Linley et al, 2009).

5.4.4.3 Mental health experience and history questions

The final set of questions were about participants' own personal and familial mental health history. Respondents were asked about their own personal experience of mental health problems in four sections: themselves now; themselves in the past; people they live with now and people they had lived with in the past. A step logic design was used, with affirmative responses opening up more questions and negative responses taking the on to the next starter question. Answering yes to having, having had or living with, or having lived with someone with mental health problems led on to further questions about care and treatment, diagnosis and medication. They were also asked about the positive and negative impact of these experiences on work with colleagues, work with clients and on workload. The final questions in these sections asked about whether the respondent disclosed information about their experiences to clients, colleagues or their managers.

The questions used here were derived from the research questions and were unique to this study. They were refined through the piloting process, which incorporated feedback from 29 mental health workers who took part in the pilot version of the survey, as well as feedback from a mental health service user reference group and a local research group. The review of the literature found a lack of studies on past or familial experience of mental health problems and a reliance on reports of recent symptoms. There was some qualitative research on disclosure and impact of mental health problems in mental health nursing but there were no surveys asking mental health nurses about disclosure of perceived impact. The questions used in this section of the survey were novel and aimed to yield original findings.

5.4.5 Data analysis

Survey responses were transferred from Survey Monkey to Excel. Data were cleaned and initially coded then transferred to SPSS 21.

Survey data were analysed using a three phase approach. The analyses undertaken for each research question are summarised in Table 5.2. First, descriptive statistics in the form of means, standard deviations, and frequency counts were calculated in order to understand the characteristics of the study sample. Second, hypothesised associations between SWB, subjective experience of mental health problems and demographic and workplace factors were tested using inferential statistics. Specifically, independent sample t tests, one and two way analyses of variance were used to understand the strength and direction of relationship between the continuous variables of the SWB scale results and the categorical demographic and workplace variables. Standard multiple regression was used to measure the combined effect of demographic and workplace factors on the outcomes of the SWB measures. The results of these tests are reported in Chapter 8.

Table 5.2 Statistical tests employed to answer the research questions during Phase I

Research question	Variables	Analsyes	Findings presented in
What is the state of UK MHNs subjective wellbeing?	WEMWBS, ONS4, SWLS scores	Descriptive statistics	Chapter 8
What is the state of UK MHNs mental health?	Mental health experience and history questions	Descriptive statistics	Chapter 9
How does SWB and demographic and work place factors interact for MHNs?	WEMWBS, ONS4, SWLS scores	Inferential statistics: One way Analysis of Variance, Two way Analysis of Variance; Standard multiple regression	Chapter 8
How do experience of mental health problems, SWB and demographic and work place factors interact for MHNs?	Mental health experience and history questions	Inferential statistics:Independent sample t tests, Chi square tests for independence; Direct logistic regression	Chapter 9
Does personal experience of mental health problems inform mental health work and vice versa? In what ways?	Mental health experience and history questions	Descriptive statistics	Chapter 10

Independent sample t tests were used to measure the strength and direction of the relationship between the categorical dichotomous variable of subjective experience of mental health problems and the continuous SWB variables. The minimal clinically meaningful difference (MCMD) was measured using a distribution based approach, focusing on effect size, and an anchor based approach, comparing the results to population norms and grading parameters (this is described further at 9.2.1) (Hays and Wooley, 2000). Chi square test for independence were used to understand the strength and direction of relationship between the categorical variables of subjective experience of mental health problems and the categorical workplace and demographic variables. Direct logistic regression was used to measure the combined association between demographic and workplace variables and subjective experience of mental health problems. Chapter 10 presents an analysis of

survey questions on the impact of experience of mental health problems on mental health nursing work. These results are presented purely as a discussion of descriptive statistics due to the small number of cases in the data set (n 142) and the exploratory nature of the questions.

Before descriptive statistics, inferential statistics and regression analyses were performed the data were tested for compliance with the assumptions of multivariate analysis (Pallant, 2010; Tabachnick and Fidell, 2005) (see 8.2.2). Reliable and valid measures were used and appropriate statistical tests were undertaken. The reliability of the validated SWB measures was assured through the determining of their Cronbach's alphas (see 8.2.1). There was strong correlation between the three measures.

Findings of note are reported in the body of thesis in Chapter 8,9 and 10. Supporting analyses are provided in Appendices 8.1 and 9.1.

5.4.5.1 Missing data

Missing data are 'a fact of life in multivariate analysis' (Hair et al, 2010). Missing data analysis of dependent variables (the SWB measures) was undertaken following guidelines from Hair et al, 2010, Tabachnick and Fidell, 2007 and Graham, 2012. Frequency and patterns of missing data were tabulated for the 7 demographic and workplace (independent) variables and the three SWB measures (dependent variables). Of the 7 independent SWB variables (the 4ONS, the SWLS and the WEMWBS), 9.87% (n24) cases had some missing data. 13.92% (n33) cases had some missing values. 204 cases (86.08%) had complete data. For each individual variable the % of missing data was less than 10%. The pattern of missing data suggested a slight drop off in responses as the survey progressed, but below 10%. Little's MCAR test indicated that data was possibly missing completely at random (MCAR; Chi-Square = 34.473, df 26, p 0.124).

A decision to retain all cases with a majority of responses in the data set and to exclude cases pairwise for each analysis was made based on a comparison of mean scores if cases were excluded listwise or if mean substitution was used.

Mean substitution was not used because, according to Graham (2012, p51) it is 'the worst of all possible strategies…(because it)…reduces variance on the variable and plays havoc with covariances and correlations.' As is shown in Table 5.2, mean substitution had the effect of slight reduction in SD (at around 0.01 decimal points) and a slight alteration in the mean, at less than 0.01 decimal points. Where cases were excluded listwise, using a data set of 204 cases, life satisfaction, happiness, SWLS scores increased slightly, anxiety and WEMWBS scores reduced and there was no discernible difference in life worthwhile scores.

Table 5.3: Comparison of means to aid decision making about missing data and outliers

	mean (SD) all	mean (SD) exclude cases listwise n204	mean substitution (SD) n237	5% trimmed mean
ONS life satisfaction	6.13(2.295) n 224	6.16(2.304)	6.13(2.234)	6.26
ONS happiness	5.82(2.627) n 224	5.90(2.630)	5.83(2.558)	5.98
ONS anxiety	3.47(2.796) n 224	3.46(2.806)	3.46(2.723)	3.37
ONS worthwhile	7.19(2.240) n 224	7.19(2.256)	7.19(2.178)	7.35
SWLS	21.62(7.418)n 218	21.75(7.379) n204	21.62(7.113)	21.91
WEMWBS	47.48(8.372) n214	47.27(8.423) n204	47.48(7.954)	47.31

5.4.5.2 Decisions on weighting, standardisation and comparisons.

> 'The observed ("crude") rate is in fact a weighted average of subgroup-"specific" rates, weighted by the size of the subgroups.' (Schoenbach, 1999, p143)

The data reported in this study have not been weighted or standardised. They are reported as crude statistics. Where national data sets have been weighted to adjust for demographic differences (ONS, 2012; ONS, 2015; Chanfreau et al, 2013; Tennant et al, 2015), these have not.

5.4.5.2.1 Using crude SWB measures

Adjusting this study sample to reflect general population age, gender, household size or ethnicity would impinge on the extent to which this sample reflects the population from which it is drawn. As has been described in 7.2.1, the demographic and workplace characteristics of the population surveyed here resemble those of the mental health nurse population as a whole (more women than men, mainly White British ethnicity, mostly aged between 40 and 49). Age and ethnicity - wise this is reflective of the UK population as a whole, according to the 2011 census (which recorded 87.17% of the population over 16 as White British and the median age of the over 16 population being 40, with most people being in the 40-49 age bracket). However, the demographic similarity between the present sample and that of the mental health nurse population as a whole was incidental rather than by design.

For the WEMWBS mean and median scores for gender, age, employment status are available (WEMWBS users guide 2012; 2015) as well as for the ONS4 (Office for National Statistics, 2012; 2015). The ONS (Vizand and Rusgys, 2015) has a 'non-proxy well-being person weight (np142R14)' that it applies to its data. This is of course important for reducing potential bias in their data which aims to reflect the national population. Pavot and Diener(1993) give normative data on a number of populations for the SWLS (means and standard deviations), with no discussion of adjustment or standardisation according to population demographics. Whilst examples of weighting in the analysis of SWLS scores are available (van Beuningen, 2012), weighting is not described in the studies reviewed in Chapter 3. The guidance on using the WEMWBS and the SWLS does not include instructions on weighting or standardisation. From this it may be assumed that comparison of crude scores against population norms is acceptable.

The OECD (2013, p195) Guidelines on measuring SWB say:

> 'A number of factors can make comparisons of basic descriptive statistics challenging to interpret: for example, differences in sample sizes, or the variability of the data, can make simple comparisons between summary

> statistics misleading. Thus, both the sample size and standard errors (i.e. the standard deviation of the sampling distribution of a statistic) should be considered when comparing two or more different observations – whether over time or between groups. Robust estimates of standard errors require large and representative samples: when sample sizes are small, standard errors can be larger and the risks of false inferences greater. One approach is to ensure that whenever group means are reported, both the group sample size and the standard deviations are reported alongside.'

The presentation of data on SWB in this study (at 8.2.3, 8.2.4.8.2.5)has followed this guidance and includes sample sizes and standard deviations, as well as means and confidence intervals.

5.4.2.2.2 Comparing mental health data

The method used in this study for identifying survey participants with subjective experience of mental health problems has not been used in previous studies of mental health nurses. Any comparison of the findings of these questions with 'caseness' findings from previous studies can only be made in discursive terms, rather than making direct comparisons, whether crude or weighted. It would not be comparing like with like.

5.5 Phase 2: Interview methods

27 semi structured interviews took place between July 2013 and February 2014. They were transcribed and analysed between February and December 2014. This phase of the study followed Bryman's (2012) steps for qualitative research with reference to the COREQ criteria for measuring quality in qualitative studies (Tong, Sainsbury and Craig, 2007). The research questions led onto decisions about research subjects, methods and approach.

5.5.1 Why conduct interviews?

Interviews are a central means of data collection in qualitative research (Bryman, 2012,, Deakin and Wakefield, 2013, Holloway and Wheeler, 2013). There is a precedent for using interviews as a means of finding out about the mental health of health and care workers as a secondary aspect of a mixed methods study (Drury et al, 2013; Hegney et al, 2014). Graham and Shier (2010, 2011) report in a series of papers on their findings from interviews with social workers about their SWB. The acute inpatient morale study (Johnson et al, 2011) used interview and focus group data as part of its battery of data collection methods. Caan et al(2001) conducted follow up interviews after questionnaire research with depressed social workers (Caan et al, 2001; Caan et al, 2006).

5.5.2 Why conduct Skype and face-to-face interviews?

The decision to undertake Skype as well as face to face interviews was due to a desire to access as many suitable interviewees as possible within the time and budgetary constraints of the study. Skype interviewing was also in keeping with the use of the internet in phase one. There was also a reasonable assumption to be made that potential interviewees may be willing to use Skype, as they had already responded to internet mediated research in phase one. Offering interviewees the choice of face to face or Skype was also in keeping with a collaborative, collegiate approach (Oates, 2015b; Hanna, 2012). Deakin and Wakefield (2013) identify that Skype interviews afford the researcher a degree of safety when interviewing strangers, compared to meeting them in person. For Hanna (2012) Skype allows both parties to stay ‘safe’ and not invade each others’ personal space. Irvine et al (2013) and Carr and Worth (2001) found the key differences between face to face and telephone interviews tend to be length, more requests for clarification from the researcher and interviewee checks for adequacy for their responses in telephone interviews.

In order to facilitate a good rapport and interview environment I let the interviewees determine the time and place for the interviews. For some this was at work or in a public place. For others it was via Skype. At the start of the interview the interviewees were told that the format would be more conversational than interrogatory, with a topic guide rather than a set of

particular questions. They were told that the interviewer would be steering the conversation to ensure that topics were covered. They were given an approximate length for the interview (one hour) and invited to take breaks or decline to respond to certain questions as they saw fit. These constraints were set in order to offer the encounter sufficient structure as to retain focus and to differentiate it from other, non-research, conversations. This approach acknowledged the impact that 'place and space' can have on the dynamic of research interviews (Gagnon et al, 2015).

5.5.3 Population, sampling and recruitment

Interviewees were drawn as a purposive sample from respondents to the online survey, initially drawn from the sampling frame of RCN and Unite the Union members. This fits with advice from Walker (2013) that online recruitment through a charity or society can help with a study's credibility and can enable a reasonable estimate of the sampling frame to be drawn. A precedent for purposive sampling according to questionnaire scores came from Graham and Shier's (2010, 2011) work on social worker SWB, where they too select interviewees using the SWLS. The number of interviews undertaken was not determined by quota sampling or by data saturation, rather by the number of survey respondents who met the sample criteria (history of mental health problems and high subjective wellbeing) and who were willing to take part in an interview. Of the 38 mental health nurses with high SWB and subjective experience of mental health problems who were approached, 29 were interviewed and 27 interviews have been included for analysis.

Interviews spanned the length and breadth of the UK, with face to face interviews taking place from Plymouth to Glasgow and Skype interviewees from the Scottish Islands to Belfast to Essex. Such a spread of locations could not have been reached through all interviews being face to face, not least due to the cost of travel. Using Skype for interviews with people accessed via national bodies meant that were drawn from a range of employers and professional backgrounds. It became apparent from discussions with interviewees that research culture is variable in trusts across the UK, with nurses from some trusts saying they had taken part in research studies previously, whereas others

said this was their first contact with research. The study was therefore able to reach out to nurses who might not be approached in other studies, wherein they would depend in their employer opting to take part in research programmes.

5.5.4 Interview design - topic guide and use of self

The interviews were semi structured, following a topic guide (see Appendix 5) rather than a set of fixed questions. Topic guides are a marker of quality in qualitative research (Tong et al, 2007). The topic guide was informed by the research questions and by a preliminary analysis of the survey responses, serving to steer rather than prescribe the content of the discussion (Ritchie et al, 2013). It was piloted prior to use. The interview aimed to verify and explore s' responses to the survey, but also to cover aspects of mental health nursing, SWB and subjective experience of mental health problems. The structure and length of the interviews was dictated by the lines of enquiry opened up by the interviewees' responses, and the amount of detail into which they wanted to go about certain aspects of their opinions and experiences. The interviews were between 36 and 82 minutes in length. As advocated by Holloway and Wheeler (2013) the order of the topics discussed in the interview was determined by how the conversation progressed, rather than following a set structure. The interview continued until all of the topics in the guide had been explored. This approach enhanced the collaborative aspect of the study, in that it gave the interviewee some control over the encounter (Holloway and Wheeler, 2013; Hanna, 2013). The interviews were presented to the subjects as collaborative, peer to peer enterprises, where they could speak to a fellow mental health nurse about their experience.

The quality of qualitative interview data may be affected by several factors. Hutchinson and Wilson (1992) summarise these as being irrelevant questioning, inappropriate timing, poor interviewer technique (not following response cues or being sensitive to themes and, in nurses, falling into educating and caring responses to the interviewees disclosures), problematic behaviours from interviewees (such as making overtures, expressing hostility and outbursts of emotion, making jokes and shifting the focus onto the interviewer), as well as there being potential difficulties with recording. Poor interview technique is

further discussed by Jack (2008), who says that nurses can be comfortable, well-practised interviewers because of their (expected) expertise in establishing rapport and discussing sensitive matters in an interview situation. These qualities may be used as assets so long as, according to Jack, the nurse-researcher is aware of and clear about the boundaries of their role in this particular encounter. Holloway, in Holloway and Biley (2013, p971), reflecting on her decades of qualitative research, says that

> 'The self is always present in fieldwork.'

She says that if the researcher has experience of the topic and phenomenon then there can be a shared language with participants. In the case of this study, that shared understanding of the field of mental health and of the experience of being a mental health nurse were vital to the success of the interview.

5.5.4.1 Reflexivity and relationships

Foster et al (2005), writing on auto ethnography in mental health nursing research, argue for the use of reflection in the management of a tension 'between objective detachment and subjective immersion'. There are a number of aspects of this study that have warranted particular self-awareness for the researcher and reflexivity about my status during the research process. The focus of this research study was a sensitive topic: subjective experience of mental ill health and work. The subjects of the study were mental health nurses. On the one hand, it may be assumed that this group of people were more comfortable than most at talking about a sensitive topic such as mental health and wellbeing, as that is their job (Holloway and Freshwater, 2007). On the other, there may be added sensitivity in nurses being asked to reflect on their own practice and disclose their own experiences. There is a power dynamic at play during an interview situation, particularly where sensitive information is being asked for and imparted (Holloway and Freshwater, 2007). There is a risk that the interviewer can take advantage of interviewee vulnerability and can press for more information than is required. The interviewer must establish rapport and create a social environment in which the interviewee feels able to talk and also able to decline to answer certain questions.

I am also a mental health nurse, giving me a bond with the research participants. Certainly this offered me the opportunity in the interviews to find points of connection and 'ways in' that a non mental health nurse would not have had. This was not the case for the survey, as my nursing status was not a feature of the survey or its associated information. My research could be described as 'insider' research (Corbin et al, 2009; Adler and Adler, 1987), in that I was a member of the subjects' professional group, although I may also be described as 'a peripheral member' of the researched group (Adler and Adler, 1987). I would not identify myself as having a mental illness, although I have family experience of mental health problems. I probably do not have high SWB, using the measures used here, so would not describe myself as a complete insider for that reason also. The research methods, the survey and interviews, were not ethnographic or autoethnographic, so I do not consider this really to be research from the inside to the extent that Kidd's (2008) thesis on nurses with mental illness was. Nor is it from the outside. Corbin et al (2009) argue that there is not always a clear dichotomy between insider and outsider researchers. This observation holds true for the present study.

My points of similarity with participants in terms of experience, knowledge and (potentially) nursing values and beliefs have meant that I have maintained a vigilance regarding their impact on my research practice. However, unlike Kidd (2008), for example, in her ethnography of nurses with mental illness that incorporated auto ethnography, I kept my own story out of my discussions with interviewees and my approach to analysis. I did in the course of some interviews disclose some information about myself (being a nurse, having worked in similar settings, knowing some of the context for the person's work, reasons for undertaking the study) as a means of establishing rapport and eliciting detailed responses from interviewees. This degree of disclosure (made according to relevance to the topic at hand) seemed to be called for in both face to face and Skype interviews, in order to establish my credibility. Rapport building is essential to getting good quality data from semi structured interviews (Whiting, 2008, DiCicco-Bloom and Crabtree, 2006). It is also an essential skill for mental health nursing. In the research interview situation I was reminded of the numerous assessment interviews I had undertaken in my nursing career,

and conscious that the fellow nurse interviewees would be used to sitting on the interviewer side of the fence too. My self consciousness as an interviewer gave me an undoubted insight and point of contact between me and my interviewees.

5.5.4.2 Interview schedule

Interviews were conducted between July 2013 and February 2014. Potential interview participants were identified from the respondents to the survey. Of the 237 respondents to the survey, 157 (66.2%) said they would be willing to take part in an interview and gave a contact email address. Of these, 143 respondents (60.3%) identified themselves as having a mental health history in at least one of the four categories covered in the survey (current mental health problems, past mental health problems, currently living with someone with mental health problems, previously living with someone with mental health problems). 81 respondents (31%) both agreed to interview and had a mental health history. 38 respondents were approached for interview, 29 of whom were interviewed. Of these, 27 interviews were included for analysis in the final study, because of technical difficulties with the recording of two of the interviews.

Face to face interviews were undertaken with 12 nurses whilst 15 interviews were undertake using Skype. The Skype interviews were undertaken in the researcher's home using a laptop and wireless internet connection. Research ethics committee approval stipulated that the interviews must be face to face and could not be just audio, so visual contact was made with all interviewees. Interviews took place at the convenience of the subjects, so some were taken in the evenings and at weekends. All interviewees took part in the Skype interviews in their own homes. The face to face interviews were taken variously at the subject's place of work (four interviews) or in public places convenient to the interviewees.

Skype interviews were recorded as MP3s using Callnote recording software. Face to face interviews were recorded on a portable MP3 recorder. All recordings were transcribed verbatim. Transcriptions of the interviews were analysed and coded using a thematic approach. NVivo software was used to aid in the analysis of the texts.

5.5.5 Interview data analysis

The data were analysed thematically. Interview studies looking at mental health and wellbeing in mental health workers have used various analytical approaches, namely grounded theory, narrative approaches, interpretative phenomenology and thematic analysis, for example, Telepak (2010) interviewed 8 therapists identified as 'wounded healers', analysing the data using Interpretive Phenomenological Analysis. Hinshaw (2008) and Rippere and Williams (1994) present narrative accounts of the experiences of mental health workers with personal or familial mental health history. Edward (2005) used semi structured interviews to explore resilience in 6 crisis care mental health workers. She used a phenomenological approach for analysis and coded the data thematically. Graham and Shier also used constant comparative methods as their analytic approach.

Thematic analysis of semi structured interview data was used in a number of studies reviewed in Chapters 3 on nurses' SWB (Ward, 2011; Watkins et al, 2011; Zwink et al, 2013; Rose and Glass, 2009, 2010; Mackintosh, 2007; Drury et al, 2013) whereas ethnographic approaches were favoured in the qualitative studies of nurses' experience of mental health problems. This reflected a focus on nurses' experience of having mental health problems within the cultural setting of work (Moll, 2010; Joyce et al, 2007) and a connection between the researcher's personal stories with their cultural environment (Kidd, 2008; Foster, 2010; Liggins et al, 2012). Whereas there is a case for replicating the ethnographic works undertaken with Canadian, Australian and New Zealand mental health nurses, such an approach as ethnography, with the weight of tradition (Hammersley and Atkinson,1995) behind it would not be in keeping with the mixed methods design that was chosen here. Thematic analysis allows for an identification of patterns and meanings but it 'is not tied to any particular discipline or set of theoretical constructs' (Spencer et al, 2013).

5.5.5.1 Thematic analysis method

The thematic analysis approach advocated by Braun and Clarke (2006) was used because it gives the validity of being derived in structured way, moving analysis from the descriptive to the abstract systematically. Whereas this is not a ‘grounded theory’ approach, both Braun and Clarke (2006) and Ritchie et al (2013) write about being ‘grounded’ in the data but going beyond the surface. The approach involves first, data management (familiarisation, labelling and sorting), with a ‘systematic and comprehensive coverage’ of each unit of analysis. From this, and from data summary and display (meaning an ordering an summarising of the data) comes analysis, which begins with devising ‘a more analytic set of building blocks’ in terms of deriving themes from the data. Braun and Clarke (2006) differentiate between passive and active thematic analysis, with passive analysis being when themes ‘emerge’ or ‘are discovered’ from the data. Rather, an active analysis acknowledges the researcher’s role in identifying patterns, selecting those of interest and choosing how to report them. In this instance the analysis has been active as well as ‘grounded’ in what has emerged from the data. It has been driven by the research questions, seeking answers to those questions in what was said, rather than letting themes be purely emergent. Given the relatively unstructured interviews, which were given scope to go where the interviewee and interview wanted to go, there was some content that was of interest, and may be of interest in a further analysis, but was not directly related to the research question. All content was labelled and sorted as a means of identifying those themes relating to the research question.

5.5.5.1.1 Phase 1: familiarising with the data.

This phase of analysis occurs during the data collection stage, in that the researcher starts to develop some ideas about themes during the data collection process, including transcription of verbal data (Braun and Clarke, 2006, p17). In this case, I undertook all of the interviews myself and made notes regarding the interview contents during and immediately after the interviews. Further familiarisation occurred through the transcription process, in that seven of the interviews were transcribed by me whilst 20 were transcribed by an

external agency. On receipt of the transcribed texts, the contents were checked against the audio recordings. This enabled a thorough familiarisation with the data set. For this initial coding phase all transcripts were reviewed whilst listening to the interview audio tapes. This helped me to immerse myself in the interviews and to detect the meaning of certain phrases through intonation and verbal delivery. It also grounded the analysis in my memory of a real social encounter, rather than just as text.

Having designed the interview topic guide, based on the initial research questions and a review of the literature, I had an awareness of the common topics (for example, personal experience of mental illness, managing mental health at work, ways to maintain wellbeing). Having undertaken all of the interviews and having transcribed seven of the interviews, I already had some ideas about possible emergent themes (for example, motivation, boundaries and use of self). The reliability and validity of the coding was assured through an exercise in comparative coding between myself and one of my supervisors for two of the 27 interview transcripts (Shenton, 2004).

5.5.5.1.2 Phase 2: generating initial codes

In the second phase the interview transcripts and audio files were analysed using NVivo software. All 27 interviews were coded in full, using descriptive codes for all lines within the transcript (as recommended by Charmaz, 2004), attaching all text to at least one node. This was exhaustive, as recommended by Braun and Clarke (2006), in that it was a systematic process of working through each text in full, coding the texts one by one. This led to what Bryman (2012) calls ‘a proliferation of codes’, with some repetition or similarity between nodes - for example ‘support from my team’ and ‘work colleagues’ support’.

The nodes titles were derived from the data rather than being derived from the literature, in order to ‘ground’ the approach in the words of the interviewees, as advocated by Ritchie et al (2013). Some in vivo codes were created from particularly salient phrases, such as:

‘...your experiences were your tools’ (Fiona)

or

'...you're your professional self...' (Jackie)

Use of in vivo codes further grounded the analysis in the world view of the interviewees, in that they were derived from 'the natural language' of the people being studied (Bryman, 2012, p547).

5.5.5.1.3 Phase 3: searching for themes

For Braun and Clarke (2006, p19) the third phase begins 'when all data has been initially coded and collated, and you have a long list of different codes you have identified across your data set.' It consists of sorting codes into relevant themes. The comprehensive list of nodes was reviewed in order to identify higher order codes and to create a more tree-like node structure. This was all part of what Ritchie et al (2013) call the 'indexing and sorting' phase. In order to facilitate this a pen portrait of each interviewee was written, summarising the key aspects of their interview. This helped to maintain each person's identity and an integrity to their case throughout the analysis, despite the interview texts being chopped up according to coding at nodes. It was akin to what Ritchie et al (2013) term 'data summary and display', where a precis for each person or sub theme is written. It aided the identification of broad similarities and differences within the group, for example those interviewees with experience of post-natal depression and those with experience of parental mental illness, as well as those with similar job roles and similar wellbeing strategies.

All of the nodes were listed and then grouped together diagrammatically in order to create two thematic diagrams containing six descriptive root nodes and six interpretative root nodes (see Figures 5.2 and 5.3). These amounted to what Ritchie et al call '*an initial thematic framework*'. The descriptive nodes encompassed the topic covered in the interviews and the interpretative nodes encompassed the emergent themes from the interviews. This enabled a reorganisation of all of the coded text under 13 thematic node headings (the six descriptive and six interpretative, plus a further heading -'peripheral' - which encompassed data coded as preamble, post amble, off topic conversation and also points where I the interviewer had talked about myself to establish some

sort of connection or link to an aspect of the interviewee's comments. Node categories from the initial analysis were mapped against the 13 headings.

5.5.5.1.4 Phase 4: reviewing themes

For Braun and Clarke this phase is about the refinement of themes so that they are coherent and meaningful, first in terms of whether the extracts follow a coherent pattern and second whether they accurately map the data set. The 27 transcripts were reviewed in full again, using the 12 root nodes, and their main branches as coding categories. At the same time as this enabled a reordering of text within the framework, this enabled some 'refinement' of the codes. NVivo memos were used to comment on nodes that needed revising - for example, *1.1.5 wellbeing outside work* (22/38) was memo-ed as '- *managing wellbeing through separation from work - need to link clinical supervision in here, and boundaries*'.

Braun and Clarke (2006) argue that a key theme should be something that offers an important insight in relation to the research question, rather than its prevalence. In the present study the major themes did represent prevalent preoccupations within the data items. Not every data item may have content for every theme, but most or many did. The descriptive codes linked closely to the topic guides of the interviews, and were therefore predictable and deductive themes, however they were also the most 'emic' themes, in that they presented information in the participants' own words. The interpretative themes were developed inductively, in that they emerged through a close reading of the data set, and were not overlaid on the data in response to existing research. They were more 'etic' in that they were my concepts, my interpretations of what was being described (Maxwell, 2009).

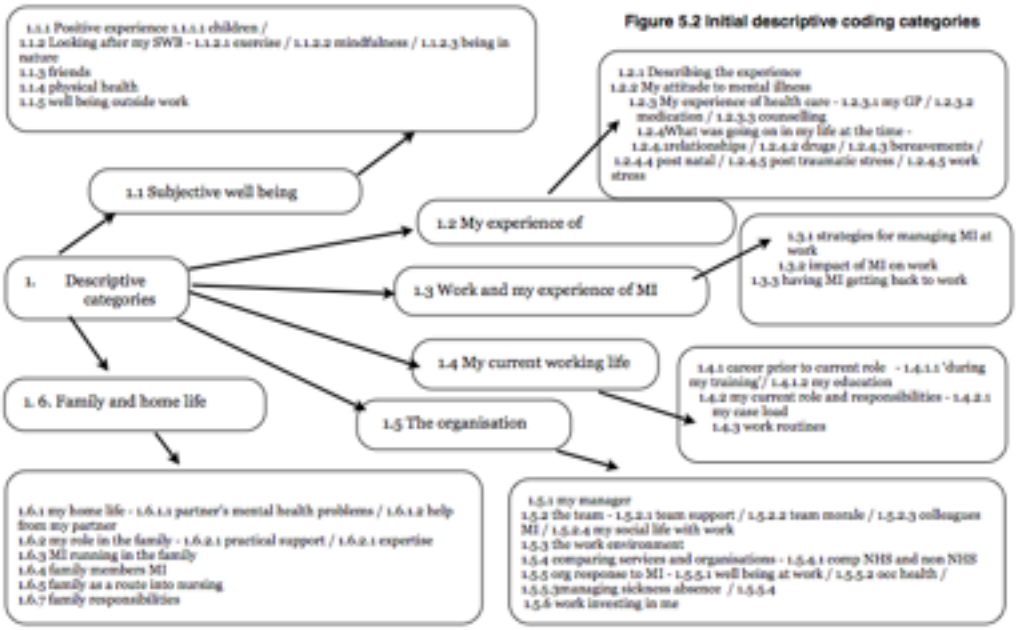


Figure 5.2 Initial descriptive coding categories

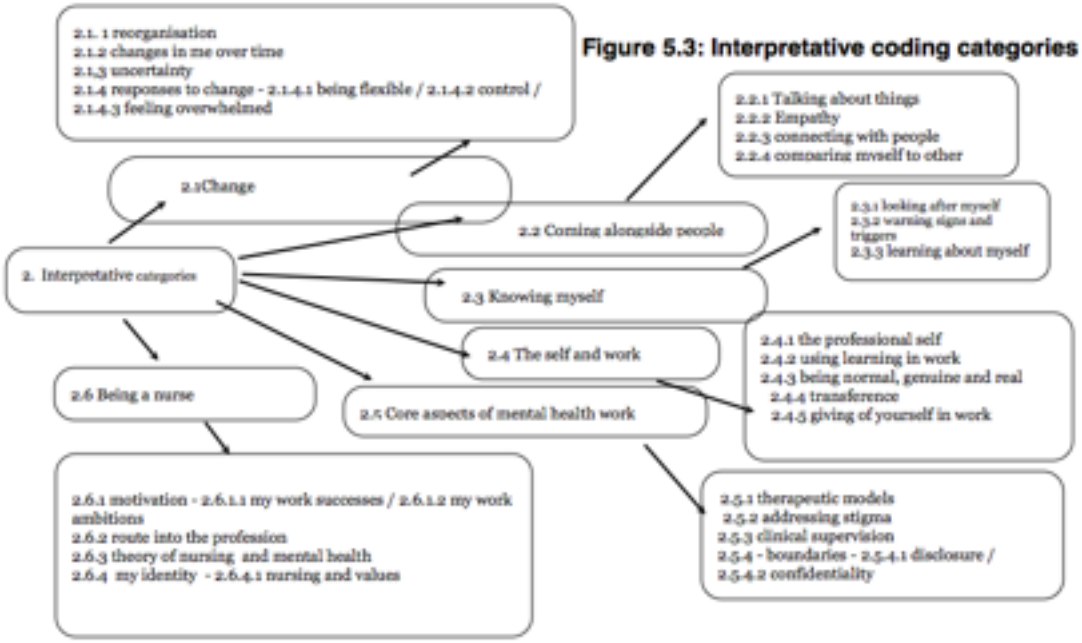


Figure 5.3: Interpretative coding categories

Figure 5.4: How do experiences of mental ill health and current subjective wellbeing interact in mental health nurses?

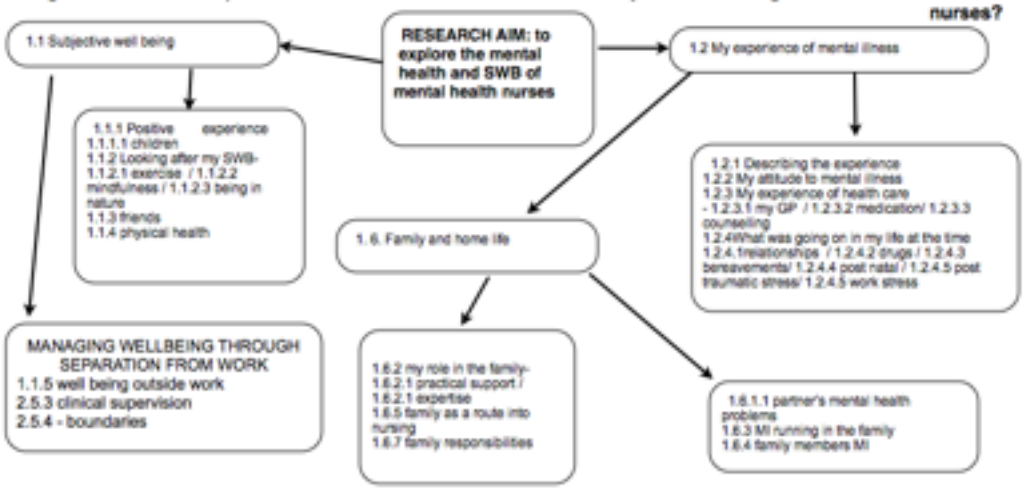
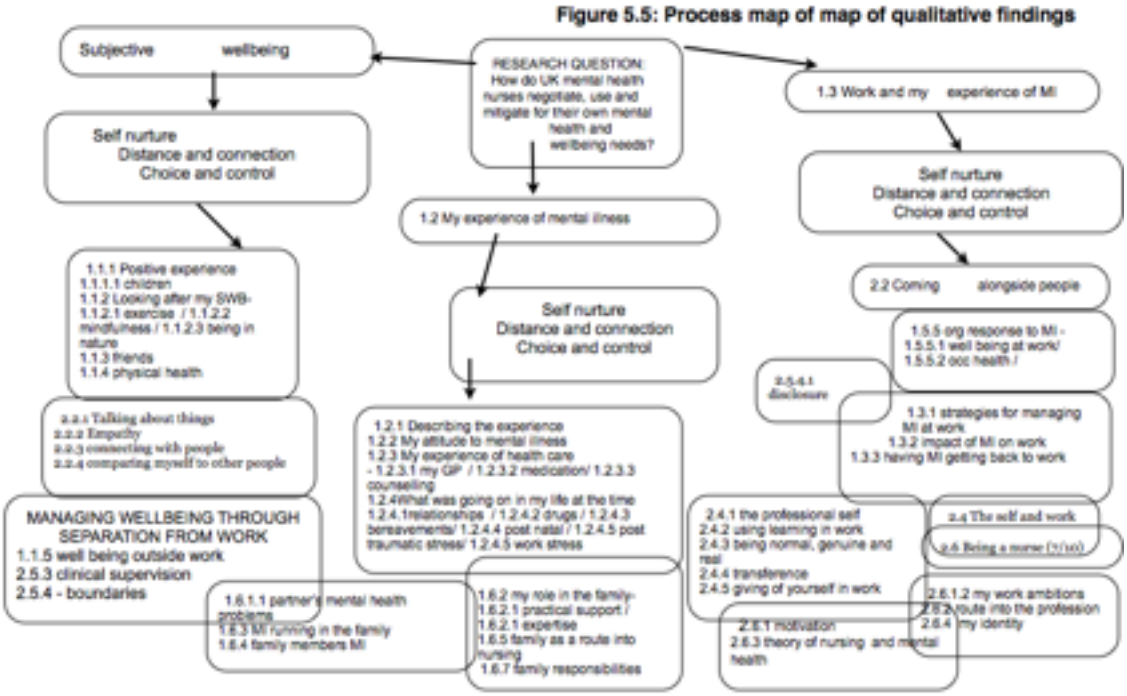


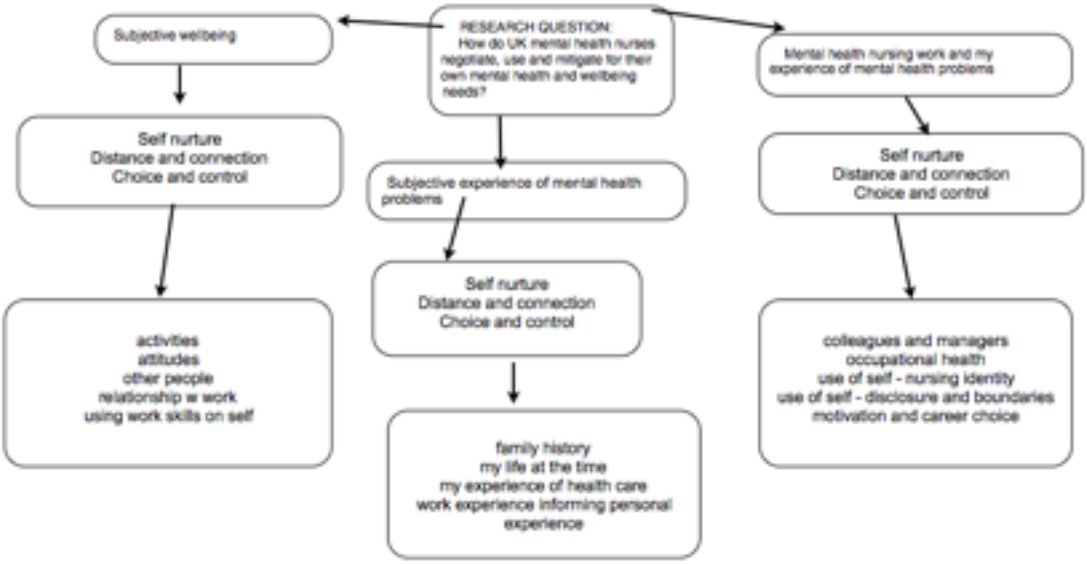
Figure 5.5: Process map of map of qualitative findings



5.5.5.1.5 Phase 5: defining and naming themes

In this phase each theme was described in relation to the research questions and what it added in terms of elucidation of the research question. For Braun and Clarke this means being able to summarise them briefly but also relate them to the wider thesis. A full mapping of the data set according to the codes meant that the sections of the data most relevant to the research questions could be identified. The refined thematic maps is shown in Figure 5.4 with the nodes reordered according to relevance to the research aim. This meant that rather than dealing with the codes across the entire data corpus, a data set was created that related to the central theme of the thesis.

Figure 5.6: Map of qualitative findings



5.5.5.1.6 Phase 6: producing the report

When determining how to present the qualitative data in the final thesis I returned to the research questions and to what had been discovered through the quantitative phase. Data had to be sorted into an order to both match the research questions and to sit well alongside the quantitative findings. Whilst the structuring of the data at Figure 5.4 gave a comprehensive map to addressing the research question, there was still a dense amount of material to manage. Further refinement was needed to address the specific research questions and to enable a threading of the qualitative to the quantitative data. This is represented in Figures 5.5 and 5.6, showing how the nodes were brought together in line with the core research question, its three areas (subjective wellbeing, subjective experience of mental health problems and mental health nursing work). The thematically analysed data was reorganised (yet again) in order to create conceptual models for the major topic areas of: mental health nurses' SWB, experience of mental illness and how mental health nurses bring experiences to their work, as explored in chapters 8, 9 and 10.

Through writing about the findings I became aware of underlying (interpretative) themes which pervaded the data set: choice and control, self nurturance and distancing and connecting. During the writing phase, conceptual models were developed to describe the interaction between elements of SWB, work and mental health. This process is represented in Figures 5.5 and 5.6. Eventually I was able to draw a simple conceptual map of the way the elements worked together, and to incorporate a discussion of the underlying themes throughout the findings chapters and summarised in Chapter 11.

Not every scrap of data, and not every node has been discussed and described in the findings chapters. In order to present coherent findings, with a focus on the research questions of the study, the qualitative findings included in the final analysis were determined by the research questions and by how well they followed the thread of the quantitative findings (O'Cathain et al, 2010) What this process demonstrated was that there were potentially other uses or ways of looking at the interview data. Situating the qualitative data as part of a mixed

methods study, complementing and 'exploring' quantitative findings, allowed me to make informed choices about how to interpret and use what had been gathered. Following Braun and Clark's (2006) process gave the final conceptual models a clear lineage back to the original topic guide and the original interview transcripts.

5.6 Conducting a mixed methods study: reporting on mixed methods findings

There are a number of ways in which quantitative and qualitative data may be presented as part of a mixed methods study: triangulation, following a thread or in a matrix analysis (O'Cathain et al, 2010). The appropriate approach for the present study was undoubtedly to follow a thread, for example from nurses responding to Likert style questions in the survey on disclosure to the nurses in the interviews describing the circumstances in which they had disclosed about their mental ill health. This was always the intention of the design, which was sequential and which had the qualitative subjects embedded in the quantitative survey participant group, but which aimed to be a truly mixed methods study rather than be two separate studies joined in topic only.

The two phases of the study were not designed to triangulate through offering two sets of data to answer the same questions. A matrix analysis would be inappropriate because 'summarising and displaying' the survey and interview data for combined analysis would lose the richness of the interviewee's narratives. The qualitative and quantitative elements were designed to complement each other in sequence. As such, the findings have been presented in sequence, with the qualitative findings introducing the qualitative findings, according to thematic threads. What follows in chapters 8, 9 and 10 reflects a 'thread' based approach to the two sets of data which maintains the methodological integrity of each phase whilst reflecting their shared thematic concerns.

5.7 Methods versus the real world: study limitations

Social research must be generalisable, valid and reliable (Bryman, 2011). Mixed methods studies must meet standards of replicability, reliablility and validity for both the qualitative and quantitative aspects of the research (Brannen, 2005). As has been discussed above, the design and conduct of this study was logical and theoretically underpinned (Cresswell and Plano Clark, 2011; Bryman, 2012; Ritchie et al, 2013; Braun and Clarke, 2006). The research design was led by the research questions and constrained by the limitations of what could be done in a single PhD study. The limitations of the use of cross sectional design in studies of SWB have been acknowledged in previous studies, but a cross sectional approach was warranted here by the research questions. The extent to which the survey and interview findings may be deemed valid, reliable and generalisable is discussed below, with an acknowledgement that the quality of the design and the accuracy of interpretation of results may be tempered by the reality of gathering information on subjective experience from a disparate group of people.

5.7.1 Generaliseability, validity and reliability of the survey findings

The response rate and sample size of this survey limit claims to generalizeability because of the risk of a response bias in the sample and because of the low power studies are at risk of Type II error (Fox et al, 2009; Christley, 2010). Studies with low or uncalculable response rates suggest selection bias and limit claims of generalisability (Bryman, 2012). It must be taken into account though, that this study did achieve a sample size on a par with other studies of nurses mental health and SWB (see Tables 3.1 and 4.1) and is the first instance of a nationally gathered online survey of UK mental health nurses' subjective wellbeing. The representativeness of the sample must also be taken into account when considering generaliseability. The final sample was demographically representative of the UK mental health nurse population, as reported in other recent studies (RCN, 2013; Johnson et al, 2012) (see 7.2.2 for detailed discussion of this point). A lesson learned from this study is that attempting to access a widespread population via a third party with limited

access to follow up may yield data of less use than if a specific sample group had been engaged with more directly:

> ‘Many of the studies based on population census data achieve low response rates. Using an adequate sample along with high quality data collection efforts will result in more reliable, valid, and generalizable results’ (Bartlett et al, 2001, p49)

For example, it might have been possible to address the 2000 strong MHNA membership individually with personalised follow up and treated them as representative of mental health nurses as a whole,. This may be a mode of accessing a sample in a future study.

This study used three SWB scales that have been well validated for use with working age adults, although it must be noted that debate exists regarding the construct validity of the WEMWBS versus a shortened version (Stewart-Brown et al, 2009) and versus the GHQ12 (Böhnke and Croudace, 2015). There was good internal consistency for each scale (all had Cronbachs alphas of >0.8) and there was a strong correlation between the three scales, denoting good convergent validity (OECD, 2013). The internal consistency of the three scales compared favourably with that of other UK studies for the WEMWBS (Stewart-Brown and Janmohamed, 2008; Bartram et al, 2009) and the SWLS (Linley et al, 2009).

Subjective experience of mental health problems was measured using dichotomous single questions for four different types of subjective experience:

> Are you presently experiencing or being treated for mental health problems ?
> Yes/ No’;
> Have you experienced or been treated for mental health problems in the past? Yes / No;
> Do any of the people you currently live with experience or undergo treatment for mental health problems?
> N/a I live alone / Yes/ No;

Have you previously lived with anyone experiencing or undergoing treatment for mental health problems?

Yes / No

The phrasing of these questions and subsequent questions on impact on work and disclosure at work were developed and refined during the pilot and consultation process, with the assistance of a service user reference group and a research group. This study has not aimed to develop and validate a new measure of mental health nurses experience of mental health problems, however its findings may be useful for the development of future scales.

5.7.2 Validity, reliability and generalisability of the qualitative findings.

Notions of generalisability, validity and reliability are contested in qualitative research (Bryman, 2012; Golafshani, 2003; Maxwell, 1992) however assurances must be made as to the rigour and defensibility of the methods and findings used here. Reference to Bryman (2012), Cresswell (2009) and the COREQ criteria (Tong et al, 2007) was made in the design of this study, which has been faithful to one of Cresswell and Plano Clark's (2011) mixed methods designs. The steps taken in the analysis have been described in detail in order to demonstrate that Braun and Clarke's (2006) criteria for good thematic analysis (see Appendix 6) have been followed and that the role of the researcher has been accounted for. As will be discussed further in the findings chapters, whilst the results of the qualitative study do not serve to triangulate those of the quantitative element, they do follow thematic threads from phase 1 to phase 2.

The findings have descriptive validity because they have been grounded in the words of the participants and have been subject to a comparative coding process. The extent to which the findings have interpretive validity depends on the plausibility of the interpretations made. The extent to which the findings speak to existing research are discussed in Chapter 8, 9 and 10. The commonality adds plausibility and interpretive validity. Where there are some novel findings, the interpretive validity is less easy to assert (Maxwell, 1992).

Generalisability is a bold claim in qualitative studies (Ritchie et al, 2013; Bryman, 2012; Maxwell, 1992), although it may possible to make a claim of generalisability within a defined population here. The participants in this study had several common characteristics: all mental health nurses, all with subjective experience of mental illness and high subjective wellbeing. They were purposively sampled because of these commonalities, on the assumption that common views on nursing, wellbeing and mental health may be elicited, despite differences in demographics and work environments. It was possible to identify common themes and common threads within the interviews, and rather than there being 'deviant cases' within the group, there were continuums of description (for example, nurses' experience of management response to mental illness ranged across a number of themed continuums, see Figure 10.2). This reflects Ritchie et al's (2013, p361) comment, on deviant cases, that:

> 'In assessing the validity of qualitative research findings, it is also important to look for evidence of diversity- there is virtually no social or psychological phenomenon that exists about which a single perspective will be found.'

Whilst there was a diversity of views reflected in each theme, there was sufficient commonality, derived from a robust analysis that the representativeness of this group for other mental health nurses with their same defining characteristics may be argued for. The best way of testing this would be through a repeat study with a similar group. The participants were chosen because of a lack of prior research on nurses with these characteristics. The extent to which their views may reflect those of nurses with low SWB or no experience of mental health problems has not been gauged, and could only be done so through further study.

5.8 Ethics and reflexivity

Social researchers in health are expected to abide by ethical guidelines, as a means of demonstrating the ensuring that ethical principles are adhered to, such as those by the Economic and Social Research Council (ESRC, 010) and the Social Research Association(SRA, 2003). PhD research must also be agreed by the relevant ethics committees, whose role it is to ensure that research undertaken under the auspices of a higher education institution meets ethical standards. In the case of medical or healthcare research it should meet the standards set in the Declaration of Helsinki (1964, 2008), whereby benefit to subjects and absence of harm must be paramount. Different authors summarise the ethical considerations for researchers in different ways. Bryman (2012) considers the main ethical issues for researchers to be: harm to participants; informed consent; invasion of privacy; deception. Webster, Lewis and Brown (2013) describe there to be a ‘broad consensus’ that ethical research: is worthwhile; based on informed consent; has voluntary participants; avoids harm and maintains confidentiality and anonymity. They review the various ethical codes that inform UK social research but argue that consideration of ethics in research should not just rely on following the codes, because ethical dilemmas arise during the research process and different approaches arise at different stages of a research study. In this chapter ethical aspects of the study are considered in terms of planning, practice and reporting. This provides assurance that the study was ethically sound.

5.8.1 Ethical planning: research design

This research study followed the principles of mixed methods design (Cresswell and Plano-Clark, 2011). Within the sequential design the quantitative and qualitative elements followed methodological approaches typical of survey and interview studies (Bryman, 2012). As a mixed methods study, ethical aspects of each design were considered, as were the ethical aspects of the use of online methods of access. The study was approved by the relevant university research ethics committee, ensuring that it met relevant ethical codes and the Declaration of Helsinki. As well as scrutiny from university ethics committees, the research was being undertaken partly through the support of the Florence

Nightingale Foundation, the RCN and Unite the Union. The national standing of these bodies depends on the work they support being ethically sound and justifiable. In order to receive the Florence Nightingale scholarships I had to argue for the prospective benefits of the study for patients as well as fellow nurses, according to the foundation's strategic aims. The case for patient benefit that I put forward was based on the importance of the occupational mental health and wellbeing of nurses for good patient care. I also argued that nurses as patients of mental health and occupational health services could benefit from this research.

One benefit of online research is that research participants have some distance from the researcher and may be subject to less interpersonal duress to take part. Prospective survey participants were approached via their professional bodies via email. This was followed up with further emails and included links to the survey and a project web page, which also gave details of organisations that offer help and advice to nurses with mental health problems. The project web page gave details of the study and its aims. It also gave contact details for the researcher and the university ethics committee, in case anyone wanted to explore ethical aspects further. Interview participants were selected purposively from survey respondents who volunteered their contact details for the purpose of potentially taking part in an interview. They were approached online, with one follow up email if there was no further response. This light touch approach to access used in both cases demonstrates that participation did not take place under duress, however it may have also been a factor in the low and difficult to quantify response rates for the survey.

5.8.2 Ethical research practice: data collection and analysis

Details of the study and its aims were available on the project website, which was linked to both the emails and to the survey itself, ensuring informed consent. The survey asked respondents to confirm that they had read the information and that they gave consent to take part. Interview participants were sent information about the study prior to the interview. Each interview began with me asking the participant to confirm that they had read this information and confirmed their consent. This was in evidence on each audio recording.

Recorded verbal rather than written consent was deemed sufficient by the ethics committee, because some interviews took place over Skype. There was no deception in the way the project had been presented to participants, however, only those survey participants who were approached for interview were made aware of the purposive sampling choices (to approach mental health nurses who had high SWB and also personal experience of mental illness). They were also the only group who received information about their SWB scores.

Confidentiality and anonymity of participants was maintained through a number of means. The survey did not ask for names or contact details participants. The randomisation of the initial survey participant participants was undertaken by the RCN rather than myself. The email contact for subsequent participants was made via the RCN and the MHNA. Respondents completed the survey via Survey Monkey. Survey Monkey sent me the respondent data using respondents' IP addresses. This would have potentially been traceable but not with my limited knowledge of information systems. All responses were allocated a number and henceforth they were only referred to by their response number. I was the sole owner of the Survey Monkey information. All of my survey data was kept in password protected files in Excel form.

Survey respondents who volunteered to participate in the interviews gave their email addresses, via which I contacted the chosen interviewees. I had ongoing correspondence with these individuals in order to arrange the interviews and in order to provide them with personal updates on the progress of the study and held their personal contact details in password protected computer files. I used pseudonyms throughout my analysis and reporting. Some interviewees worked in highly specialised roles, in unique nursing environments. It has been necessary to ensure that no identifying details have been included in their pen portraits or quotes. The broad canvas for this study, in terms of its geography, has potentially aided confidentiality and anonymity. There are many nurses working in certain settings (for example, medium secure units) across the UK. If I had located my study in any one geographical area or employing organisation then it may have been possible for readers to identify colleagues or friends more easily.

The subject of these interviews was undoubtedly a sensitive one: experience of mental ill health and the interaction between wellbeing and work. Whilst there were no outbursts of strong emotion during the interviews, this had to be planned for. Skype interviews presented a potentially better environment for dealing with distress than the face to face interviews, in that they afforded greater privacy and it would have been easier for a break to be taken if needed. Jack's (2008) and Hutchinson and Wilson's (1992) comments on nurse's role conflict during interviews were less relevant here than they might have been in other nurse-led interviews. The interview was conducted from a peer to peer stance rather than nurse-patient one. Interviewees had been approached as fellow nurses first and foremost, with their mental health history as a secondary (albeit vital) characteristic. This, along with the choices given to interviewees about the mode, time and place of interview, gave some sense of the study being a collaborative enterprise, in which the interviewee held some power.

5.8.3 Ethical reporting: using and presenting the study

During the interview data collection and analysis phase of the study I became acutely aware of the duty I had to my research participants. They had disclosed personal stories to me in good faith that their stories would be put to good use. The researcher therefore has a duty to complete the study and disseminate the findings. The responsibility to participants has also been an influence on the conclusions and presentation of findings. I have used pseudonyms and kept personal details to a minimum, but have given pen portraits of the interview participants and have named all of the quotes used. The aim of this has been to demonstrate that the opinions, stories and experiences described here belong to real people, whose participation should be acknowledged.

5.9 Conclusion

The methods used in this study have been described in detail. The design and methods have been justified in terms of the research aims and questions. Sampling and analysis choices have been discussed, as have choices of

survey questions and interview topics. The limitations of the study have been considered, in terms of its generalisability, reliability and validity.

There is a precedent for using sequential explanatory mixed methods to study the health and wellbeing of health and care workers, although this is the first such study of UK mental health nurses. The research questions are original and the analytical approach of mixed methods 'following a thread' offers novel insights into the state of mental health nurses' health and wellbeing through the distinctive mixed methods approach (Greene, 2007).

This chapter also states how the study was conducted in an ethically sound way: the design, practice and reporting have sought to benefit participants and the wider mental health nursing community. Confidentiality, consent and anonymity have been addressed. I have reflected on my relationship with the participants and the influence that my experience and views may have on the conduct and outcomes of the study.

Chapter 6 Introduction to findings and discussion chapters

The following five chapters present and discuss the findings of this mixed methods study. In Chapter 7 the characteristics of the survey and interview participants are described. The thread of findings from quantitative to qualitative is then followed in each chapter according to the themes of: subjective wellbeing (Chapter 8), subjective experience of mental health problems (Chapter 9) and subjective experience of mental health problems and mental health nursing work (Chapter 10). Whilst each chapter contains a discussion of the discrete findings presented in relation to previous research, Chapter 11 discusses the thesis findings as whole, addressing the central research question of:

> How do UK mental health nurses negotiate, use and manage their own mental health and wellbeing?

and discusses underlying themes common the three aspects of the study covered in the preceding chapters.

An analysis of the gaps in the literature (Chapters 3 and 4) led to the development of six specific research questions, which this mixed methods study has been designed (Chapter 5) to address. These were:

1. What is the state of UK mental health nurses' mental health, in terms of experience of mental health problems and degree of subjective wellbeing?
2. How do experience of mental health problems, subjective wellbeing and demographic and work place factors interact for mental health nurses?
3. Is there a subgroup of mental health nurses with experience of mental health problems who also have high subjective wellbeing?
4. How do mental health nurses with subjective experience of mental health problems and high subjective wellbeing look after their own mental health?

5. How have mental health nurses with personal experience of mental health problems experienced mental health care and treatment?
6. Does personal experience of mental health problems inform mental health work and vice versa? In what ways?

Questions one to three were addressed by the online survey and questions three to six were addressed by the interviews. Each findings chapter addresses aspects of the research questions and demonstrates how the aims of the study have been fulfilled.

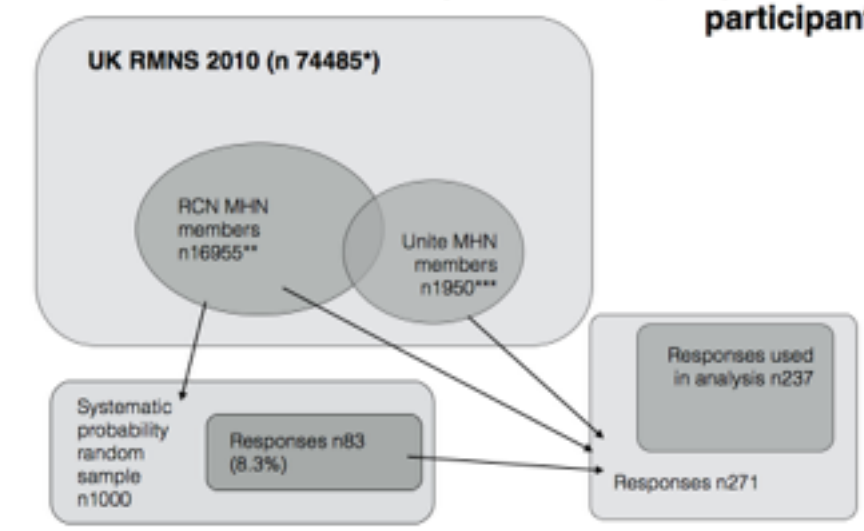
The findings are presented sequentially within each chapter, according to each chapter theme, with survey findings being presented first, then interview findings. The discussion sections also address the findings sequentially, but the thread from quantitative to qualitative data is followed. There is a precedent for this approach as a means of integrating mixed methods data (Moran-Ellis et al, 2006; O'Cathain et al, 2010) and it is in keeping with the sequential design (Cresswell and Plano-Clark, 2011). As Moran-Ellis et al (2006, p54) assert, taking a theme from one data set (in this case the survey) and following it across another (the interviews) generates 'a constellation of findings' which retains the value of exploratory inquiry (the qualitative) and the focus and specificity of the quantitative.

Chapter 7 About the participants

7.1 Introduction

This chapter describes the demographic characteristics of the research participants and considers the representativeness of the sample of the profession as a whole. Pen portraits of the interview participants are given in order to provide a context to their views and experiences that are discussed in the following chapters.

Figure 7.1: Sampling of survey participants



*CFWI (2012), **email from RCN research office, ***email from Unite MH professional officer

7.2 Survey participants

Survey responses from 237 UK mental health nurses were analysed as part of this thesis. Their provenance is described in Figure 7.1. Invitations to take part in the survey were sent via email to mental health nursing members of the RCN (n.16.955 mental health nurses approx.) and members of the Mental Health Nurses Association of Unite the Union (MHNA) (n.1950 approx.). These numbers reflect around 23% of the total UK mental health nursing population, the largest percentage of mental health nurses that could be contact directly via national bodies because the only complete register of registered nurses with mental health qualifications is held by the Nursing and Midwifery Council (NMC), who do not share their register contact details with researchers.

Table 7.1: Survey participant demographic and work characteristics

Variable		n (237)	%
Gender	Female	169	71.6%
	Male	67	28.4%
	missing	1	
Age	21-29	35	15%
	30-39	53	22.6%
	40-49	80	34.2%
	50-59	60	25.6%
	over 60	6	2.5%
	missing	3	
Ethnicity	White	203	85.7%
	Black Black African	8	
	White Irish	4	
	Any other white background	13	
	Mixed White British Caribbean	1	
	Any other Mixed British	3	
	Mixed White Asian	1	
	African Black African	3	
	Black Black Caribbean	0	
	Asian Asian British	0	
	Other	1	
Number in household	Living alone	38	16%
	Living with 1 other person	83	35%
	Living with 2 others	48	20.3%
	Living with 3 others	47	19.8%
	Living with 4 or more other people	21	8.9%
Work status	full time	174	75.7%
	part time	41	17.8%
	student	12	5.2%
	currently unemployed	3	1.3%
	missing data	7	
Supervising others in current role	yes	156	70.6%
	no	65	29.4%
	n/a (student nurse)	12	
	missing	3	

7.2.1 Participant characteristics

Demographic information about the study population (n 237) is summarised in Table 7.1. The majority of respondents (71.6%, n169) were female. Most respondents were in the 40-49 year age bracket (34.2%, n80). The majority of respondents (85.7%, n203) were White British. The majority of respondents worked full time (75.7%, n174). They were asked to say how long they had been a qualified nurse and how long they had been in their current nursing post. There were 12 student nurses who took part in the study. They were excluded from analysis for questions on time in the profession or in post yet. Respondents had been in post between less than 1 year and up to 35 years and in the profession between less than 1 year and up to 50 years. The mean number of years in the profession was 14.8 (SD 10.9) (n 223 not including 12 student nurses). The mean number of years in post was 5.6 (SD 6.3). 70.6% of respondents supervised others at work. 29.4% did not.

The demographic profile of the study participants was similar to that of other studies of UK mental health nurses. The recent morale survey of 2258 mental health staff (Johnson et al, 2012), 77% of whom were nurses, reported a gender split of 36% men and 64% women, a mean age of 40.7, an ethnic composition that was 75% white, a mean number of years in current post of 4.3 years (SD 4.6) and a mean number of years in mental health of 11.5 (SD 8.8). The all Wales study of CMHNs (Hannigan et al, 2000) had a mean population age of 40 (range 23-63), with 62% women, a mean length of career as a CMHN as 16 years (range 1 to 40 years), a mean length of time in current post as 6.5 years (range <1 to 25 years). The Claybury Study (Fagin et al, 1995) had the average age of CMHNs at 38.9 and ward nurses as 34.7 years, of whom 62% of CMHNS and 62.8% of ward based nurses were female, with ward based nurses having a mean 10.3 years' experience in the profession and CMHNs a mean 15.2 years' experience.

According to a Freedom of Information (FoI) Request response from the NMC to the author (dated February 19 2014), on 23 January 2014 there are currently 677,086 nurses and midwives on the register - 30,006 of whom are RN3: MHN, level 1; RNMH: MHN, level 1; RN4: MHN, level 2 - combined. The rest of the

RMNs on the register will be registered on older parts of the register, whom the NMC were not able to quantify. The group of mental health nurses for whom the NMC provided data are the most recently qualified only - on the most recent mental health parts of the register, with a mean length of years on the register as 4 years, so not necessarily representative of the whole mental health nurse population. The CfWI (2013) reported that the mental health nursing workforce in the NHS has stayed the same since 2006 even though the number of mental health nurses has increased by 20% overall in that period, indicating that around that percentage of mental health nurses must be working in the independent and third sectors. Within the NHS the mental health nurse headcount for England in 2010 was 48,234 (CfWI, 2012), and the whole time equivalent for the whole UK for 2010 was 51,299 (RCN, 2014).

7.2.2 Representativeness of the study population

Despite the low response rate for the survey, it can be argued that the survey population does speak for the wider mental health nurse population because its demographic make up is similar to what is known of the population as a whole. Gathering definitive information on the mental health nurse population was not straightforward for a number of reasons: the NMC does not routinely publish this information, and what is published is on the total nursing population rather than mental health nurses specifically; there is information on NHS nurses from the Health and Social Care Information Centre (HSCIC) but this does not account for mental health nurses in the independent sector (CfWI, 2012); the population is not static, with thousands of new registrants every year; the professional body membership includes student nurses and nurses not currently in practice.

7.2.2.1 Gender

The gender split for this survey's respondents was similar to that in other surveys of nurses. Respondents in the present survey were 71.2% female (n168), 28.8% male (n 68). From the NMC FoI request, the gender breakdown of mental health nurses was 74% female, 26% male. The RCN Employment Survey (RCN, 2013a) had 89% female respondents. Beyond Breaking Point

(RCN, 2013a) does not give the gender balance of respondents. The NMC has reported on diversity data for 2011 - gathered on 43% of registrants (286,190 out of 665,545 registrants) who answered diversity questions. Of these, 90% were female, 10% were male.

7.2.2.2 Age

The age demographics were broadly similar to nurses in other surveys. Centre for Workforce Intelligence (CfWI) (2012b) interpretations of HSCIC data show a similar age distribution within the overall nursing workforce, with the majority (69%) of nurses being aged between 35 and 54. The RCN Employment Survey (RCN, 2013b) had 22.8% respondents age 35-44 and 42.9% respondents between 45 and 54, with 10.2% between 26-34, 19.7% 55-64 and 1.6% age 65+. In At Breaking Point (RCN, 2013a) RCN members were similarly distributed, with 24.3% being between 35-44 and 42.4% (n 852) between 45-54. From the NMC Freedom of Information response on mental health nurses' age breakdown of this population was age 20 or younger 0.01% (n4), age 21-29 24%(n7228), age 30-39 34%(n10204), age 40-49 28%(n 8327), age 50-59 13% (n3915), age 60 and over 1% (n328). It must be noted that as this is the population of mental health nurses most recently on the register it is to be expected that the age skew would be slightly younger than in the present study. For the purpose of analysis the participants were divided into the age categories of under 40 (n 83), 40-49 (n 77) and 50 and over (n 64). Of all possible combinations of age categories, this combination yielded the most statistically significant results.

7.2.2.3 Ethnicity

The ethnic make up of survey respondents was similar to that of other surveys of UK mental health nurses and nurses as a whole. 85.7% (n 203) of respondents to the present survey identified themselves as White British. Very small numbers of respondents identified themselves with the other ethnic groups. The format of the ethnicity survey question was taken from the 2011 Census, as recommended by the East Midlands Public Health Observatory (EMPHO, 2011). The RCN (2013a) Employment Survey had 92.2% (n 7,603)

identifying themselves as White British. Beyond Breaking Point (RCN, 2013a) had 90.1% (n 1,752) White respondents. The data provided by the NMC via comes with the caveat that ethnicity data is given voluntarily by NMC members and so is not available for everyone. They gave data on 12,829 mental health nurses who had given ethnicity information, of whom 68% (n 8683) were White British. The ONS reports that 80.5% of the population in the 2011 census identified themselves as White British. The NMC reported that 72% of nurses who had responded to the ethnicity question identified themselves as White British.

Because of the imbalance in ethnicities of the sample, no further analyses have taken account of ethnicity as no comments on the relationship between ethnicity and UK mental health nurses' SWB and MHP could be confidently made.

7.2.2.4 Work characteristics (Years in the profession/ years in post and work status)

The survey population was similar in work status and years in role and profession to nurses in other surveys. In this survey 75.7% of mental health nurses worked full time, 17.8% part time. In the Beyond Breaking Point Survey (RCN, 2013a) 68 % worked full-time, 30 % worked part-time, with the remainder working occasional or various hours or not currently working. In the RCN 2013 Employment survey just over 67% of respondents said they currently worked full-time, 30% worked part time and 3% worked occasional hours. In the RCN Employment survey 24.7% had been in their current post for over 10 years and 16.5% had been in their current post for less than one year.

7.2.3 Comparisons with large scale studies of mental health nurses.

As with the other larger scale studies including mental health nurses (Johnson et al, 2012; Fagin et al, 1995; Hannigan et al, 2000) and with the demographics of nurses as a whole, the present study had a majority of female respondents. The age and ethnicity profile was similar to that of other studies as were the number of years in post and in the profession. The recent morale survey of 2258 mental health staff (Johnson et al, 2012) had 36% men and 64% women,

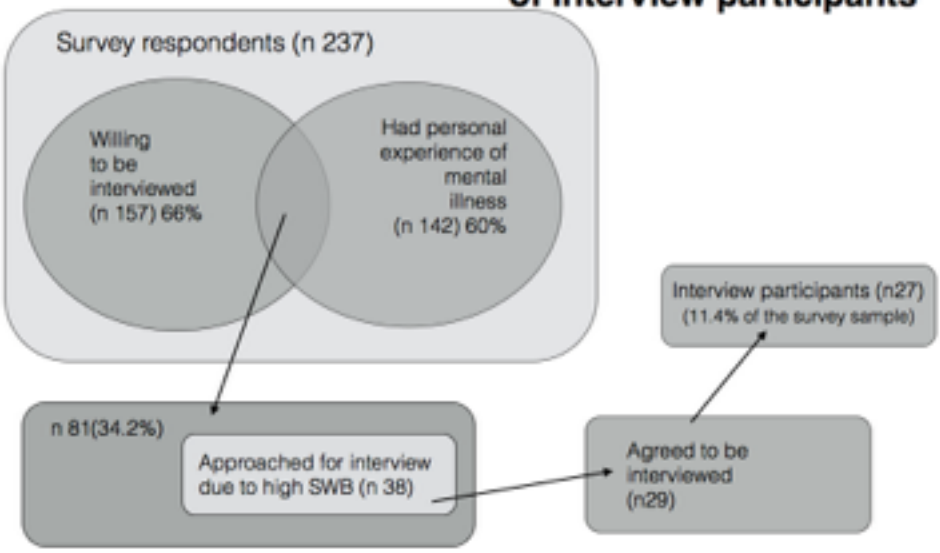
a mean age of 40.7, 75% white, mean number of years in current post as 4.3 years (SD 4.6), mean number of years in mental health as 11.5(SD 8.8). Of those surveyed in Johnson et al's study, 47% were nurses. The all Wales study of CMHNs (Hannigan et al, 2000) had a mean population age of 40 (range 23-63), 62% women, a mean length of career as a CMHN as 16 years (range 1 to 40 years), a mean length of time in current post as 6.5 years (range <1 to 25 years). The Claybury Study (Fagin et al, 1995) (n573, divided into 250 CMHNs and 323 ward based nurses) had the average age of CMHNs at 38.9 and ward nurses as 34.7 years, of whom 62% of CMHNS and 62.8% of ward based nurses were female, with ward based nurses having mean 10.3 years' experience in the profession and CMHNs mean 15.2 years' experience. This parity of demographic profile supports not only the representativeness of the study sample but also supports the comparison of this study's findings with those of other studies in the field.

7.3 Interview participants

27 interviews were included in this study. The interview participants all had high SWB and subjective experience of mental health problems. They comprised 11.4% of the survey sample. Interview participant demographic characteristics are summarised in Table 7.2.

Figure 7.2 shows the purposive sampling process for selecting the interview participants. Potential interview candidates were identified from the respondents to the survey. Of the 237 respondents to the survey, 157 (66.2%) said they would be willing to take part in an interview and gave a contact email address. 142 respondents (59.9%) identified themselves as having a mental health history in at least one of the four categories covered in the survey (current mental health problems, past mental health problems, currently living with someone with mental health problems, previously living with someone with mental health problems). 81 respondents (34.2%) both agreed to interview and had a mental health history. 38 respondents were approached for interview, being those ones who scored as having high SWB, 29 of whom were interviewed. 27 interviews were included for analysis in the final study, because of technical difficulties with the recording of two of the interviews. There were 12

Figure 7.2: Purposive sampling of interview participants



face to face interviews. 15 interviews were undertake using Skype. All interviewees took part in the Skype interviews in their own homes. The face to face interviews were taken variously at the subject's place of work (4 interviews) or in public places convenient to the interviewees.

There was no obvious difference in the demographics of the two groups of interviewees. 11 of the face to face interviewees were female, 1 male. 11 of the Skype interviewees were female, 4 were male. This reflected the gender balance of the survey and of the UK mental health nurse population as a whole (CfWI, 2013). Face to face interviewees had between 0 and 36 years in the profession, Skype interviewees had been in the profession ranging from 0.5 to 35 years. The recent ONS data on internet use shows more frequent use in younger age groups, including lesser use of the Internet to make calls as age increases. In this study the majority of Skype interviewees were aged over 40 (10 versus 5 under 40) whilst for the face to face interviewees 7 were under 40 and 5 were over. Again the age range of interviewees broadly reflected that of the survey and of the mental health nursing population as a whole (CfWI, 2013) This suggests that use of Skype did not skew the sample demographics.

7.3.1 Pen portraits

Pen portraits are presented in Table 7.3. Pen portraits add to the validity of qualitative reports, giving a rich and holistic picture of those involved (Howatson-Jones, 2011). The interview participants all had high subjective wellbeing according to their survey responses. They all had some personal experience of mental illness. The pen portraits show their range of experience of both mental health nursing and personal experience of mental illness. The nurses were at different points in their professional and personal lives. They had some common views and experiences but their portraits show how they represent the richness and variety of roles and perspectives that mental health nurses may have. As advised by Ritchie et al (2013) the detail of the pen portraits have been adapted to maintain anonymity, because some nurses worked in highly specialised services.

7.4 Conclusion

This chapter describes the participants in both the survey and interview components of the study. The case has been made for the representativeness of the survey sample of the UK mental health nurse population as a whole, despite the low response rate to the survey. Details are given of the social and work circumstances of the interviewees, alongside their SWB scale scores and views on mental health and SWB. These have been presented as pen portraits to reflect the qualitative approach used in phase two. The pen portraits demonstrate the richness and breadth of experience and insight provided by the interviewees.

Chapter 8 Mental health nurses' subjective wellbeing

8.1. Introduction

In this chapter the survey and interview findings on mental health nurses' subjective wellbeing (SWB) are presented and discussed. They address the following research questions:

> What is the state of mental health nurses' SWB?
> and
> How do mental health nurses maintain their own SWB?

The thread of SWB is followed from the online survey to the interviews, with selected survey respondents with high SWB describing how they maintained their high SWB. The relationships between the themes identified in this study and in other research on SWB in nurses and other working age adults are discussed.

8.2 Survey findings on SWB

8.2.1 Reliability and correlation of the SWB measures

There was good internal consistency for each of the three SWB scales in the study with all having a Cronbach's Alpha of above 0.7, the usual benchmark, denoting scale reliability (OECD, 2013; Pallant, 2010). For the ONS4 measures this was 0.813 for the 4 items. For the Diener SWLS it was 0.907 for the 5 items. For the WEMWBS it was 0.928 for the 14 items.

The ONS4 questions were not designed to be used as a single scale. The ONS (2012, in its initial report on the findings of the wellbeing survey questions) does, however, measure the association between scores on the four questions, using Pearson's pair wise correlations. Table 8.1 shows the Pearson's pairwise correlations for the ONS4 questions in the present survey. In brackets are the same statistics for the general population in the 2011 ONS (ONS, 2012) survey. This shows that there is a slightly stronger positive correlation between the ONS

scores for respondents in the present survey than in the ONS one, and a slightly less strong negative correlation between the anxiety question and the other questions compared with the ONS survey. This means that there was a stronger relationship between SWB, life satisfaction and feeling life was worthwhile for this survey's respondents than the ONS respondents although the relationship between low anxiety scores and the other three questions was less pronounced in this survey than the ONS one.

Table 8.1: Pearson's pairwise correlations for survey responses to the ONS4 questions

		satisfied	happy	anxious	worth while
how sat w life nowadays	Pearson's correlation N	1**(1)** 226			
how happy yesterday	Pearson's correlation N	0.664 **(0.55)** 226	1 226		
how anxious yesterday	Pearson's correlation N	-0.353 **(-0.26)** 225	-0.484 **(-0.39)** 225	1 225	
to what extend do you think life is worthwhile	Pearson's correlation N	0.696 **(0.66)** 225	0.556 **(0.51)** 225	-0.267 **(-0.22)** 224	1 225

Correlations between the ONS4 questions and the SWLS and WEMWBS was also measured using Pearson's product-moment correlation coefficient (see Table 8.2). There was a strong positive correlation between the SWLS and the WEMWBS (Pearson's r= 0.696, n = 207, p<0.001(two tailed)). Correlation of scores between the two scales using Pearson's correlation coefficient has previously been found at 0.72, n= 348, p<0.001, using a student sample (Stewart-Brown and Janmohamed, 2008).

Table 8.2: Correlations between the ONS questions and the SWLS and WEMWBS using Pearson's product-moment correlation coefficient

		how satisfied w life nowadays	how happy yesterday	how anxious yesterday	to what extend do you think life is worthwhile	SWLS	WEMWBS
SWLS	Pearson's correlation N	0.716 217	0.616 217	-0.317 216	0.638 216	1	
WEMWBS	Pearson's correlation N	0.673 213	0.642 213	-0.516 212	0.652 212	0.696 207	1

In summary, the scales used have been validated for use with UK working age adults. The internal validity of each scale met a high standard according to OECD benchmarks. There was strong correlation between scores across the three scales, meaning that when respondents scored as having a high or low SWB according to one scale they also did so on the other measures.

8.2.2 Tests of normality

Prior to analyses, assumptions underlying statistical tests were examined. Normality tests and Kolmogorov-Smirnov tests showed all SWB scales to have a non-normal distribution ($P < 0.05$) with modest negative skews. Transformation of scores is one option for addressing violation of the normality and skew assumptions underlying parametric tests. However, their distribution plots and histograms suggested normality (see Figures 8.1, 8.2, 8.3) and it is usual and expected for SWB measures to have a slight negative skew (Pallant, 2010; Stewart-Brown and Janmohamed, 2008) (not including the ONS anxiety question, which usually has a positive skew). Also t-tests and ANOVAs are robust to skewness and deviations from normality (Norman 2010) and for samples greater than 100, departures from normality are unlikely to have a significant impact on analyses and the visual appearance of distributions is more important for assessing normality (Tabachnick & Fiddell 1996). For these reasons it was decided to perform analyses on non-transformed data using parametric tests.

8.2.3 Subjective wellbeing according to the ONS4 wellbeing questions

Table 8.3: ONS4 wellbeing questions mean scores

	n	mean	95% CI	SD
Overall, how satisfied are you with your life nowadays?	226	6.13	5.81-6.42	2.295
Overall, how happy did you feel yesterday?	224	5.82	5.49-6.17	2.627
Overall, how anxious did you feel yesterday?	224	3.47	3.11-3.81	2.796
Overall, to what extent do you feel the things you do in your life are worthwhile?	224	7.19	6.89-7.47	2.240

Table 8.4: ONS4 wellbeing scores as percentages

	v low (0-4) %	low (5-6) %	medium (7-8) %	high (9-10) %	mean
Overall, how satisfied are you with your life nowadays?	21.0	28.6	37.1	13.4	**6.13**
Overall, how happy did you feel yesterday?	30.4	23.2	29.9	16.5	**5.83**
Overall, how anxious did you feel yesterday?	33.9	20.5	16.1	29.5	**3.46**
Overall, to what extent do you feel the things you do in your life are worthwhile?	11.6	19.2	38.4	30.8	**7.20**

Table 8.5 Comparison of ONS 2012 data with UK MHN data (ONS data in brackets)

	v low (0-4)	low (5-6)	medium(7-8)	high(9-10)	average (mean)
life satisfaction	20.8 (6.6)	28.8 (17.5)	36.7 (49.8)	13.3 (26.1)	6.13 (7.4)
happy yesterday	30.1 (10.9)	23.0(18.0)	29.6 (39.3)	16.4 (31.8)	5.83 (7.3)
anxious yesterday	34.2(21.8)	20.4 (18.1)	16.0 (23.5)	29.3(36.6)	3.46 (3.1)
worthwhile	11.6 (4.9)	19.1(15.1)	38.7(48.6)	30.2 (31.4)	7.20 (7.7)

Tables 8.3 and 8.4 summarise the results of the ONS4 wellbeing questions, giving the mean scores (Table 8.3) and the percentages meeting ONS criteria for very low, low, medium and high SWB. Mean scores (out of 10) for the questions were 6.13 (life satisfaction), 5.82 (happy yesterday), 3.47 (anxious yesterday) and 7.19 (life worthwhile). Tables 8.3 and 8.4 show that respondents had higher scores for the '...worthwhile' question compared to the other questions, both in terms of mean averages and percentages of respondents

above the threshold for medium or high wellbeing. This suggests that whilst mental health nurses may not have high hedonic SWB (as measured by the SWB and anxiety questions) or evaluative SWB (as measured by the life satisfaction question), their eudaemonic SWB (feeling life is worthwhile) is relatively good.

The mental health nurses' eudaemonic SWB was still lower than that found in weighted samples of the general population though. Table 8.5 shows the data from this survey compared with the ONS First Annual Well-being results (ONS, July 2012) scores in brackets, for comparison (n 165,000). The group surveyed in the present study had both lower average scores and lower scores across the distribution. In the present study a higher percentage of mental health nurses reported low life satisfaction, were less happy but also less anxious than the ONS general adult population. They had a lower sense of life being worthwhile (ONS, July 2012). The differences between the mean scores for the mental health nurses in this study and the ONS population were statistically significant (one sample t-test, p<0,005) for life satisfaction (one sample t-test: t(225) = -8.326, p = 0.000), happiness yesterday (one sample t-test: t(225) = -8.426, p= 0.000) and life worthwhile (one sample t-test: t(224) = -3.385, p = 0.001) but not anxiety yesterday (one sample t-test: t(224) = 1.944, p = 0.053).

8.2.4 Subjective wellbeing according to the Satisfaction with Life Scale (SWLS)

In total 218 respondents completed the five question SWLS. Scores for the SWLS are presented as a mean score for the population of interest with a standard deviation (Pavot and Diener, 2008) (see Table 8.6). The mean score for respondents here was 21.62 (SD 7.42) out of 35, representing 'slight satisfaction' with life. This is lower than the usual range of 23 to 28 out of 35, and lower than the normative score given for nurses of 23.6 (Pavot and Diener, 1993), meaning that the mental health nurse score was at the low end of 'slight satisfaction' significantly lower than the norm(one sample t-test t(217) = -3.942, p = 0.000). Percentages of respondents scoring across the scales are shown in Table 8.7. The table reflects the positive slant of respondents' answers to questions 1 to 4 but not 5. This is also reflected in Figure 8.1.

Table 8.6: Diener SWLS mean score

	n	range	mean score	95% CI	SD
	218	5-35	**21.62**	20.59-22.59	7.418

Table 8.7: Diener SWLS questions (percentage scores in each category)

	1 = strongly disagree	2= disagree	3 = slightly disagree	4= neither disagree or agree	5 = slightly agree	6 = agree	7 = strongly agree
In most ways my life is close to my ideal.	9.2	15.1	11.0	7.3	24.3	28.4	4.6
The conditions of my life are excellent.	3.7	16.1	17.0	11.0	22.0	23.4	6.9
I am satisfied with life.	3.2	10.6	12.8	9.2	24.3	31.2	8.7
So far I have gotten the important things I want in life.	1.8	11.0	12.8	9.6	20.6	33.0	11.0
If I could live my life over, I would change almost nothing.	16.1	20.2	19.3	9.2	11.9	16.5	6.9

8.2.5 Subjective wellbeing according to the Warwick Edinburgh Mental Wellbeing Scale (WEMWBS)

214 respondents completed the WEMWBS.

The expected pattern for WEMWBS scores is a ‘roughly normal distribution with a slight left-skew’ (Stewart-Brown and Janmohamed, 2008). The WEMWBS does not have ‘cut off’ scores for well/ not well as it is not designed as diagnostic tool for identifying people with mental illness. It was designed to measures the SWB of a population rather than of individuals. For this study population the mean score is 47.48 out of 70 (Standard Deviation 8.313). The range of scores was between 26 and 68.

The mean WEMWBS scores for the total sample of mental health nurses were significantly lower than the corresponding means for a representative Scottish general population sample (47.48 versus 50.7, one sample t-test t -5.6264, df 213, SE 0.572, p <0.000) (Stewart Brown and Janmohamed, 2008) and for a

representative English population sample (47.48 versus 51.3, one sample t test t-6.673, df 213 SE 0.572, p<0.000) (Taggart et al, 2015).

Table 8.8: WEMWBS mean scores

	n	range	mean	95% CI	SD
WEMWBS (214) Range: 26-68	214	26-68	**47.48**	46.39- 48.65	8.372

Table 8.9: MHNs' subjective wellbeing - a summary

	%	mean score	95% CI
MHNs say they are highly satisfied with their life nowadays.	13.3%	**6.13**	5.81-6.42
MHNs say they were very happy yesterday.	16.4%	**5.83**	5.49-6.17
MHNs had low anxiety yesterday.	34.2%	**3.46**	3.11-3.81
MHNs scored highly as to whether their life was worthwhile.	30.2%	**7.20**	6.89-7.47
The mean score for MHNs on the Diener SWLS		**21.62**	20.59-22.59
The mean score for MHNs on the WEMWB		**47.48**	46.39-48.65

In summary (see Table 8.9), across all three measures SWB was significantly lower in mental health nurses than in UK general population studies.

8.2.6 The relationship between demographic and workplace factors and SWB

The relationship between three demographic factors (gender, age and number in household) and three work related factors (work status, years in the profession, years in current role) and SWB scores was calculated. Table 8.10 shows the mean SWB scores (a dependent variable) across all of these independent variables, with significant results in **bold**. The significance in the difference between the mean scores was analysed using independent samples t tests and One Way ANOVA. Whilst differences in mean scores were found, only two differences were significant at a p value of 0.05:

Difference in age significantly corresponded to responses to the ONS 'life worthwhile' question, with those aged between 40 and 49 having a lower mean score ONS life worthwhile question: F (2,220)=3.809, p = 0.024, with a Cohen's d of 0.422, r 0.21[5] for the difference between those under 40 and those between 40 and 49.

Difference in gender significantly corresponded to responses to the ONS 'life worthwhile' question, with women having a higher mean score (7.43, SD 2.073) than men (6.60, SD 2.537): t (96.084) = 2.317, p0.023, with a Cohen's d of 0.44, r 0.22.[6]

No statistically significant correlation between the other demographic and workplace factors was identified, although those living alone had lower mean scores across the SWB measures, including having lower anxiety, as shown in Table 8.10.

8.2.6.1 The combined effect of demographic and workplace factors on mental health nurses' SWB

Two-way ANOVAs explored the combined impacts of the independent variables of gender, age, household size, years in the profession, years in post and working full or part time on the dependent variables of the ONS4, SWLS and the WEMWBS (conducted as separate analyses). No significant combined effects were found.

Standard multiple regression analyses determined the extent of the combined effect that the sum of the demographic and work related variables had on the SWB measures. For each SWB measure the regression models accounted for less than 3% of the variance. The only variable found to significantly contribute to a regression model was gender for the ONS life worthwhile question (p 0.018). The results of standard multiple regression analyses are presented for reference in Appendix 7.

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[5] calculated using http://www.uccs.edu/~lbecker/

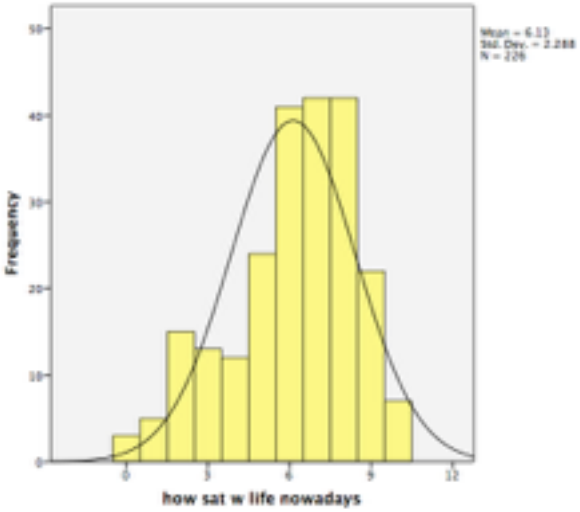
[6] calculated using http://www.uccs.edu/~lbecker/

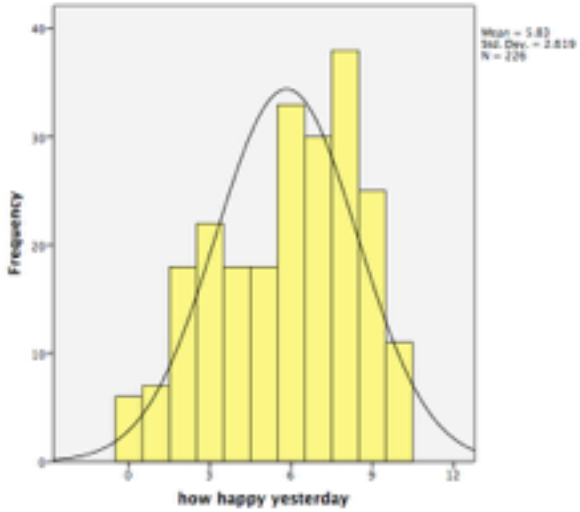
Table 8.10 Differences in subjective wellbeing between demographic and vocational groups

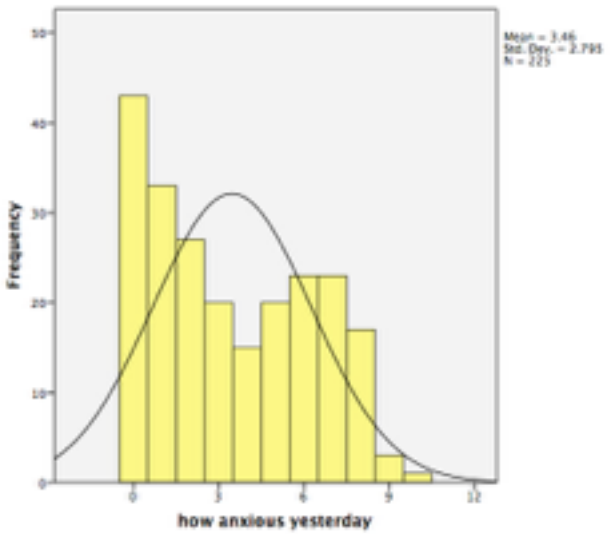
		Mean scores (SD†)					
		ONS‡ satisfaction	**ONS happy**	**ONS anxious**	**ONS worthwhile**	**SWLS§**	**WEMWBS¶**
	overall*	6.16(2.30)	5.90(2.63)	3.46(2.80)	7.19(2.26)	21.75(7.38)	47.27(8.42)
gender	men	5.68(2.46)	5.44(2.76)	3.17(2.72)	**6.60(2.54)***	20.35(7.61)*	48.92(8.68)
	women	6.31(2.21)	5.98(2.56)	3.59(2.83)	**7.43(2.07)**	22.15(7.31)	47.66(8.28)
age	under 40	6.25(1.82)	6.04(2.36)	3.61(2.74)	**7.59(1.55)***	23.03(6.09)*	48.18(8.01)
	40-49	5.84(2.62)	5.64(2.76)	3.45(2.90)	**6.65(2.75)**	20.14(8.21)	46.40(8.93)
	50 and over	6.33(2.44)	5.77(2.81)	3.34(2.81)	**7.35(2.24)**	21.63(7.77)	47.96(8.11)
household size	living alone	5.71(2.47)	5.90(2.71)	2.81(2.77)	5.71(2.47)	18.84(7.53)*	46.48(8.36)
	living w 1 person	6.52(2.11)	6.18(2.47)	3.65(2.91)	6.52(2.11)	22.76(6.72)	48.68(8.05)
	living w 2 or 3 others	6.06(2.29)	5.62(2.74)	3.59(2.76)	6.06(2.29)	22.28(7.49)	46.56(8.65)
	living w 4 or more others	6.21(2.78)	6.21(2.72)	3.53(2.72)	6.21(2.78)	21.68(7.59)	47.21(8.97)
work status	full time	6.27(2.18)	5.85(2.55)	3.55(2.81)	7.22(2.19)	21.75(7.37)	47.52(8.26)
	part time	5.80(2.83)	5.78(3.08)	3.12(2.65)	7.22(2.31)	22.23(8.19)	48.08(9.14)
years in profession	student nurse	5.91(2.63)	5.00(3.26)	3.27(3.17)	6.73(2.94)	23.27(7.46)	45.00(9.23)
	<2 years qualified	5.55(2.63)	5.41(2.99)	4.17(2.97)	7.17(2.21)	20.90(7.46)	48.04(8.15)
	3-5 years qualified	5.65(2.08)	5.30(2.46)	3.70(2.87)	6.57(1.95)	21.74(6.38)	48.23(8.25)
	6-10 years qualified	6.55(1.72)	6.27(2.84)	2.91(2.66)	7.52(1.91)	21.38(7.39)	46.55(7.89)
	11-20 years qualified	6.36(2.07)	6.20(2.23)	3.34(2.62)	7.25(2.30)	21.85(7.51)	48.18(8.49)
	>21 years qualified	6.18(2.57)	5.66(2.69)	3.49(2.79)	7.25(2.30)	21.83(7.87)	47.25(8.71)
years in current post	student nurse	5.91(2.63)	5.00(3.23)	3.27(3.17)	6.73(2.94)	23.27(7.46)	45.00(9.23)
	<2 years	6.09(2.53)	5.90(2.83)	3.45(2.94)	7.40(2.12)	21.62(7.75)	48.48(8.48)
	3-5 years	6.18(1.77)	5.91(2.26)	3.54(2.59)	6.93(2.24)	21.11(6.69)	46.39(7.64)
	6-10 years	6.11(2.28)	5.75(2.74)	3.78(2.79)	7.39(2.16)	22.15(7.66)	46.29(9.26)
	> 11 years	6.36(2.54)	5.32(2.36)	3.32(2.55)	7.00(2.49)	22.90(7.61)	48.83(7.79)
		6.33(2.06)	6.89(2.57)	2.67(2.91)	7.33(1.87)	20.75(7.63)	49.00(9.50)

†Standard Deviation, ‡Office for National Statistics (ONS, 2012), § Satisfaction with Life Scale (Diener et al, 1985), ¶ Warwick Edinburgh Mental wellbeing Scale (Tennant et al, 2006), (**BOLD** significant at p<0.05 when data not weighted) (* significant at p<0.05 when data weighted)
* overall scores here are list wise(n204) rather than case by case as in Tables 8.3 to 8.9

Figure 8.1 Histograms of the ONS4







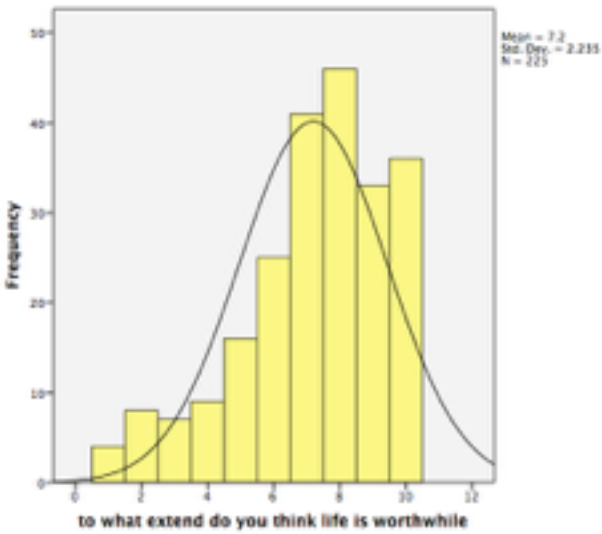


Figure 8.2 Histogram of Diener SWLS Scores

Figure 8.3 Histogram of WEMWBS Scores