Measuring subjective health perceptions:

Insights from psychological theory and social research

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Part Four: Final discussion and conclusions

Overview of findings

The studies in this thesis aimed to investigate response process for a standardised health status measure using a range of techniques, and samples with different health experiences. The research was informed by psychological theory, and research techniques drawn from qualitative, cognitive, survey and psychometric research methodologies. Although it is considered that these disparate approaches can be combined, there are tensions in doing so. In drawing a conclusion from this research, this section will reconsider some of the major issues involved in the measurement of subjective health perceptions, in relation to the literature and key findings from the studies carried out. Finally, the conclusion will address the implications of this thesis and suggestions for future research.

Issues in the measurement of health status

Chapter One showed that a consensus on the theory and definition of health status and quality of life is largely absent or limited (Bullinger, 2002; Carr et al, 2001). Indeed, it has been said that health is a "contested concept" (Mallinson, 2002). The debate surrounding the use of structured health status measures seems largely to have polarised between those who develop and encourage the use of these measures as a way of quantifying subjective perceptions of health for a range of purposes, and those who criticise such measures, often on a theoretical level, generally using the findings of qualitative research as supporting evidence. Those from a more quantitative tradition refer to considerable evidence for robust underlying concepts, such as physical and mental health (Cella et al, 2005; Ware et al, 2004). Nevertheless, the processes leading

to response have been the subject of debate, highlighting a significant role for contextual factors. Phenomenological research, investigating the diversity of experienced phenomena, such as health problems, has identified qualitatively different ways of experiencing illness among people with chronic illnesses (Hendry and McVittie, 2004; Scherman et al, 2002). However, a phenomenological approach will never provide the type of data required by those who seek to quantitatively evaluate health status (Cella and Tulsky, 1993). Therefore, acknowledging the diversity of research approaches to health status, this thesis has adopted multiple methods in order investigate health status more comprehensively than can be accomplished with any single approach.

The four key research questions identified in this thesis relate to context and health status measurement, implicitly or explicitly, through the inclusion and comparison of samples with different health experiences, and the measurement of a range of possible contextual and response process variables. Whether investigated qualitatively or quantitatively, this view considers that a fuller picture of the respondent's background, along with the response processes adopted, provides a more informed understanding of the meaning of a health status score. An individual's unique frame of reference may vary according to a range of factors, including differences in understanding terms, experiences, expectations, internal standards, norms, social group, knowledge or information, personality, and cognitive processes (Heyink, 1993; Krause and Jay, 1994; Sadana et al, 2000). Therefore, any rating is a combination of many influences which relate to the way health and illness are considered (Schwartz and Rapkin, 2004).

A contextual analysis requires a theoretical model of the cognitive structure in which response is formulated. Health attitudes have already been referred to in the introduction in relation to self-schemata and strong attitudes (Markus, 1977, 1983; Petty and Krosnick, 1995; Sehulster, 1994). These health attitudes can be considered to form part of a broader self-concept or identity that demonstrates stability but will also *change* as a result of events (Demo, 1992).

Two "ideal type" approaches to responding to a quality of life item have been proposed: bottom-up and top-down (Diener, 1984). In bottom-up processing, events are considered to directly influence ratings, whereas top-down involve dispositional characteristics, such as personality and higher-level cognitive processes influencing the response. There is evidence in support of a contextual orientation, showing the simultaneous involvement of both top-down and bottom-up processes in response (Brief et al, 1993; Headey, et al, 1991). The findings outlined in the thesis indicate that the approach taken by a person with a chronic illness, such as HIV, may differ from a healthy respondent in terms of the relationship between a range of factors. The evidence from the qualitative and quantitative research substantiates the view that events directly influence ratings (bottom-up processing), but also for an influence of higher-level cognitive processes, such as personality (top-down processing). For example, poorer SF-12v2 health status scores were associated both with health events (reported health problems, access to health services and recollection of specific health experiences) *and* higher level processes (Neuroticism, thinking about health, and health concerns).

Furthermore, evidence from the path modelling reported in the thesis suggests potentially complex relationships between contextual factors and response, differing

between physical and mental health. Neuroticism can influence health perceptions, both through selective encoding and recall of health problems (Schroeder and Costa, 1984), and exaggerated symptom recall (Larson, 1992; Ruo et al, 2003; Watson and Pennebaker, 1989). In terms of the subjectivity of health perceptions, it has been argued that these results may not reflect bias, but rather underlying differences in cognitive style (Gustavsson et al, 1997), or the recall of somatopsychic disorders (Watson and Pennebaker, 1989). The direct pathway between Neuroticism and subjective mental health reported in the modelling carried out in the thesis may indicate the unmediated influence of personality on mental health, or simply reflect unmeasured mediators. The indirect pathways indicate that personality may also heighten sensitivity to health problems.

Response process

The influence of contextual factors involves the mediation of a response process (Brief et al, 1993). The research in the thesis was carried out within a cognitive framework that considers the response process to comprise multiple, identifiable stages: comprehension, retrieval, judgement and response (Tourangeau et al, 2000). Therefore some discussion of the relationship between health, response process and SF-12v2 response will be considered within response process stages, particularly where the findings from the qualitative and quantitative approaches could be compared.

Comprehension

The assumption, on which survey measurement is based, that people can give meaningful answers to questions, is queried by the qualitative (cognitive) findings that interpretation varies considerably between respondents. For the majority of the twelve

items, this study identified problems of item comprehension that have been reported in other studies of survey items, including health status questions: ambiguous or vague phrases, double meanings, unfamiliar terms, normative assumptions, and unanchored or vague reference periods (Forsyth et al, 1992; Jenkinson, 1995; Mallinson, 2002). In addition, despite the fact that most items had a reference period, these were often ignored or considered imprecisely, suggesting that people often felt more comfortable using a "typical" period or a series of events rather than trying to recall "the past four weeks" (Chang and Krosnick, 2003). Nevertheless, despite these idiosyncrasies, there was only limited evidence that differences in interpretation had a significant influence on results attained over the twelve items.

Retrieval / judgement

Much of the focus of the research carried out for this thesis involved retrieval and judgement. Previous research has indicated that respondents use a mixture of memory strategies for retrieval, including general self-knowledge and behavioural episodes (Forsyth et al, 1992; Holtgraves, 2004). A similar pattern was identified in the current studies. A general strategy was more commonly used for vague items, such as general health, and among those with better self-rated health. There was also evidence that those with health problems adopted different approaches; in the HIV sample, the illness permeated respondents' lives, influencing response processes for physical and mental health questions. There is considerable evidence that people with chronic illnesses often report better health perceptions than would be expected by observers, the so-called 'disability paradox' (Albrecht and Devlieger, 1999). In the qualitative (cognitive) research several incidents were identified where those with HIV or chronic illness discounted a problem or described a situation in which they had shown adaptation to the

limitations of their health problems. However, despite evidence of adaptation and discounting effects, poorer health ratings were identified among the chronically ill, particularly in the HIV sample, suggesting that the specific focus of the health items in the SF-12v2 may have counter-acted some of these processes. A larger proportion of respondents from the HIV sample reported using strategies other than a general perception, and those who referred to the recollection of specific experiences were more likely report poorer health perceptions.

The rating of easiness was used in relation to the response process, to ascertain the degree of cognitive effort required to provide a response. In the qualitative (cognitive) study, items were considered easier to respond to when the participant did not have health problems, and considered themselves fit and well; when the participant considered that they had a good understanding of themselves; and when the item related clearly to recent experiences. Items were considered more difficult when they were seen as vague (such as the Role scales and mental health items); when the item required considerable thought to produce an answer; or when the topic was considered sensitive. The quantitative results could not go into such detail, but did show that apparent ease of response related to health status, particularly at the extremes of good and poor health status, with evidence for curvilinear associations at item level. Findings from both studies suggest that personal experience of either good or bad health, in relation to an item, was likely to lead it to be considered easier to answer.

Response

Two aspects of response identified in the literature were also identified in the qualitative (cognitive) study. First, that the response was influenced by vague quantifiers used in

the SF-12v2, whereby options other than at the extremes were commonly considered ambiguous, leading to the use of the positioning of options to guide response. In addition, the finding of a curvilinear relationship between easiness ratings and SF-12v2 response may reflect the perceived easiness of rating at the extremes of the response continuum in comparison with the other options. Second, some participants in the qualitative (cognitive) study reported social desirability considerations, particularly in relation to mental health items. Social desirability has been identified as a notable influence on survey response, although adopting a more contextual framework for response, this should not necessarily be viewed as a form of bias, since it may reflect the influence of underlying personality traits (Diener et al, 1991; Furnham, 1986, Schroeder and Costa, 1984).

Some findings related to multiple stages of the response process. First, there was evidence that those who took part in the qualitative (cognitive) study were actively trying to identify the structure of the questionnaire early on, looking for key elements of the questions in order to assist their progression through the questionnaire. However, it was also shown that not all participants went through the response stages optimally. Respondents sometimes misread or reinterpreted questions, and estimated answers rather than fully process responses (Krosnick et al, 1996).

Second, the identification of possible differential item functioning (DIF) could arise from issues of comprehension, such as understanding terms in a particular way, or the nature of the process carried out during retrieval/judgement, both of which may relate to norms or expectations of particular groups (Fleishman and Lawrence, 2003; Franks et al, 2003). Chronically ill people have been shown to be systematically different in their

valuation of a hypothetical health state than others, rating most more positively than those without health problems (Badia et al, 1998), and adaptation to illness or recalibration of values could have an influence on the patterns of scoring (Heyink, 1993; Sprangers and Schwartz, 1999). The DIF results indicated that pain was not rated as severely by HIV respondents as would be expected given the overall level of physical health reported. The evidence from the qualitative (cognitive) research indicated that the Bodily Pain item was understood in a complex way by the HIV participants, including consideration of a range of different forms of pain, and an understanding of chronic pain in relation to HIV. Long-standing pain may have led to adaptation over time, and a readjustment of values indicative of response shift, although it was not clear whether this had an impact on response differences.

Methodological conclusions

The utility of asking respondents to explain the meaning of questions, and the importance of questions for them have been understood for many years (Lazarsfeld, 1944). The current studies indicated that respondents were able to provide written and verbal information on questionnaire meaning and response processes.

Multiple approaches

These results have shown how the use of multiple methods and different samples can facilitate an understanding of the performance of a standard health status measure. The original report produced by the proponents of the Cognitive Aspects of Survey Methodology programme was entitled "Bridging The Gap" (Jabine et al, 1984), acknowledging the division between cognitive and survey researchers, even when investigating related phenomena. To this can be added the "gap" between psychometric

and qualitative researchers. However, there is evidence that insights can be gained by combining multiple perspectives (Bjorner et al, 2003). While larger surveys are required in order to quantify frequency, magnitude and impact, it would be difficult to investigate meaning of phenomena without a more intensive, qualitative approach. The use of the appropriate method in order to focus on a specific research topic has been also referred to as triangulation, which can be used to validate findings (for example convergent validation, Campbell and Fiske 1959), overcoming the weaknesses of any single method, but also deepening the understanding of the subject under investigation. To this end, this study included both qualitative (cognitive) and quantitative techniques in order to investigate the complexity of response to a health status measure. Within each approach, different methods were used to compensate for the possible weaknesses of another, but also to utilise the particular strengths of each technique to investigate aspects of response that would not have been identifiable otherwise.

In the qualitative (cognitive) study, open-ended self-completion questionnaires and cognitive interviews were used, both of which have been used to investigate cognitive processes in the past (Collins, 2003; Gordon and Holden, 1996; Schechter, 1993; Turner and Fiske, 1968). There are benefits and drawbacks to the use of either approach. Comparative research has indicated that both approaches can identify useful cognitive information, although interviews may provide more complete and detailed information (Davis et al, 1995). Within the cognitive interviewing, prospective think-aloud and retrospective probing were included. Previous research had indicated that, although it might be expected that prospective or retrospective probing would reveal different information, this is not necessarily the case (Redline et al, 1998). In the present qualitative (cognitive) study, it was discovered that the more complex findings were

revealed using retrospective probing, which was particularly useful for clarifying issues raised and for asking specific questions about response. However, the findings from think-aloud, probing and self-completion were not contradictory, providing evidence that they are complementary techniques with convergent validity.

The quantitative study was based on a survey questionnaire designed to investigate relationships between contextual factors, response process and SF-12v2 scores. These data could take further the findings from the qualitative (cognitive) study, allowing the quantification of differences between the HIV and university samples, and an examination of the statistical relationships between context, response process and response, and an estimation of the magnitude of differential item functioning between the two samples.

Context effects and demand characteristics

All the research studies included tasks in addition to the completion of the SF-12v2, raising some issues about potential contamination of results by extraneous factors. In order to reduce context effects, whereby earlier questions influence responses to later ones (Tourangeau et al, 2003), it is common practice to place general health questions before more specific items, such as health service use (Bowling et al, 1999; Fayers and Sprangers, 2002). This was the approach adopted in the current studies, although it is impossible to control the order of completion in a self-completion questionnaire, such as that included in the quantitative survey (Bowling et al, 1999).

Additional concerns relate to possible demand characteristics of the research tasks. In the adapted-PIQ and the survey, each item was presented singly, followed by items on

the response process; in the cognitive interview, items were also presented individually for both think-aloud and retrospective probing. In "real world" research, items would usually be presented in a battery without interference from additional tasks. Finally, the use of two qualitative techniques within the same cognitive interview may have influenced the data provided. However, other research has successfully included both think-aloud prospective completion and follow-up retrospective interviews to clarify issues raised (Korfage et al, 2003). The possible contamination of the task is a frequent criticism of cognitive interviewing (Drennan, 2003), although by its nature difficult to overcome, and possibly outweighed by the advantages of the information revealed by respondents which would otherwise be unavailable. More importantly, the identification of concordant findings across methods provides a validation of the methodological approach adopted.

Response processes and contextual and response strategy items

The issues discussed in relation to response process and the SF-12v2 would also be expected to apply to the other items included in the questionnaire, whereby satisficing and heuristic strategies might be called upon by the respondent when generating an answer. It has been argued that satisficing is likely when answering a range of types of questions, including those measuring attitudes and knowledge of past behaviour (Krosnick et al, 1996). For example, when answering questions about health service use over time, respondents might not expend cognitive effort to identify all contacts over time, but would rather produce an estimate or general impression (Tourangeau et al, 2000), which could lead to under- or over-reporting the true levels of use of services. When answering personality items, similar non-optimal processes might be involved, whereby respondents do not consider the item in relation to their life experiences, and,

in addition, these responses may be affected by social desirability biases (Krosnick, 1999), with respondents failing to provide answers that they believe would be considered less acceptable. The SF-12v2 response strategy item might also be subject to satisficing effects. It is notable that the most commonly selected strategy was "a general picture of yourself". It has been argued within the thesis that this was related to the health of respondents, with a general strategy more prevalent among those in better health. However, it is also possible that the selection of this option resulted from a primacy effect: since this strategy was the first provided on each of the twelve repetitions of the item, it was more likely to be selected than others. In addition, few respondents provided a strategy other than the fixed options provided. Both results could provide evidence for some degree of satisficing in response to the strategy item, although it is not possible to identify this from the data available, albeit that the association between strategy and SF-12v2 provided some evidence for a substantive relationship between strategy and response over and above any response effects.

To conclude this section, only demographic items for which the answers would be recalled automatically might not be expected to have been affected by various strategies that would limit the validity of response (Willis, 1999). Nevertheless, the problem of satisficing and heuristic processing pertains to any self-report research, although it is clearly more noteworthy in a study on the nature of response itself. If biases occurred equally for all items in the questionnaire, it would be expected that any effects would cancel each other out. However, the influences of non-optimal processing on the results for any group of explanatory items cannot be identified in the present research.

Samples

Along with multiple approaches, two participant groups were the focus of the separate studies; a nominally healthy, university sample and a health problem group (people with HIV). This enabled findings to be compared for similarities and differences in perceptions and response processes according to group. In this way, aspects of the response process that were particularly applicable to either group could be identified. HIV was selected as the health problem for reasons outlined earlier, including the frequent use of health status measures in this population to study the efficiency and effectiveness of treatment in clinical trials, together with the young age profile, availability of clinical markers, and lack of age-related comorbidities of patients found in many other chronic illnesses. The university sample was considered to be a healthy, working age population for comparison. The university sample diverged from a general population sample in representing a knowledgeable group of participants. In addition, the samples were not matched by sociodemographic variables, and therefore it is possible that variation between the samples were not derived from health or response process differences but instead resulted from other factors.

The sizes of the samples for all studies were small: any primary research is a compromise, balancing resources, time available and methodological rigour. The qualitative sample sizes were within the range used in other, similar studies (Forsyth et al, 1992) and the findings appeared stable for the different samples and methods. The survey sample sizes were calculated to have enough power to detect group differences statistically (Ware et al, 2004). Nevertheless, based on evidence from the literature and post hoc power calculations, it is likely that the samples may have been inadequate for a

number of the analyses undertaken, leading to the conclusion that results from the complex, multivariate analyses, in particular, should be considered indicative.

All samples were of convenience rather than the more desirable simple random samples. This is common in research about inaccessible groups for both pragmatic and methodological reasons. In terms of the HIV sample, the population of people identified as HIV positive in the UK in 2004 was 58300, a third of whom were unaware of their HIV status (UK Collaborative Group for HIV and STI Surveillance, 2005). However, of those who are aware of their status, the great majority receives care and treatment from NHS hospital outpatient clinics. Therefore, a sampling frame comprising those from the NHS outpatient population is likely to be representative of the HIV positive population at large (Elford et al, 2004). Ideally, recruitment for this research would have been undertaken solely from the outpatient population. However, due to practical issues, including the complexity of NHS ethical procedures, it was not possible to do this. Developing an alternative sampling frame and using a probability sample for recruitment in such circumstances would be prohibitively time-consuming and expensive (McGarrigle et al, 2002), and therefore the eventual convenience sample comprised respondents recruited using alternative approaches, including mail-out and face-to-face recruitment.

On methodological grounds, it would be unusual to expect large random samples in qualitative studies, since their aim is to identify themes through the intensive analysis of small samples rather than making population inferences from representative samples. However, recruitment itself was pragmatic, drawing participants from available sources. The HIV sample comprised only members of the Chelsea and Westminster Hospital

HIV/GUM Directorate patient volunteer service, and included no female participants, representatives of ethnic minorities, or anyone under the age of 35 years. Although more varied, the university sample comprised predominantly female higher degree participants with experience of social research methods. Ideally, participants should have been selected according to specific characteristics of interest, and since this was not the case, samples represented a limited range of characteristics: those interested in supporting research and likely to be well able to answer questionnaires and carry out the research tasks. As a consequence, it seems likely that fewer problems would be identified by these participants than among more varied samples. Nevertheless, the results indicated that different patterns of response could be identified with the samples recruited. However, future research would benefit from more directed recruitment of participants with a range of characteristics.

For quantitative analyses, most statistical techniques are robust and frequently used in research using non-probability samples. Respondents in both the university and HIV quantitative research were drawn only from those who were interested in taking part in a survey. It is noteworthy that the comparative evidence from both samples indicated that a better response could be achieved when respondents were recruited using a face-to-face approach. It is accepted that both recruitment from a variety of sources and differential response according to method of recruitment could lead to bias, and interpretation of the results obtained need therefore to be considered in these circumstances.

It is acknowledged that using small, convenience samples makes generalisability difficult. In addition, the research was cross-sectional and non-experimental, preventing

any conclusions about causality. The use of multiple approaches, which identified several similar findings between and across samples, indicates that it is possible to make some general conclusions from the results obtained. Findings about the use of strategies and the relationship between strategy and health status appear robust, having been identified in both studies. They should be repeated in other samples and with other health problem groups before it can be claimed that differences relate to chronic illness generally, rather than HIV, in particular, in relation to the university samples recruited.

Conclusions and future directions

Taken together, these findings support the view that response processes and health status vary according to contextual factors. Some have argued that for this reason it is impossible to use standard measures to assess perceptions of health (for example, Mallinson, 2002). Others have claimed that measurement is possible if it takes into account relevance or importance of the domains being assessed (for example, May and Warren, 2001). Nevertheless, the current research indicates that different health status levels can be identified; and that the effects of HIV are pervasive and can be measured across twelve items: despite evidence of adaptation to illness, responses were generally consistent with the presence of health problems that could limit physical and mental functioning. Similarly, healthy respondents also have particular contextual influences on response processes that can similarly be identified, such as reporting a general perception when having no health problems. However, these findings do not mean that the SF-12v2 captures the full complexity of health perceptions. Rather, at the level of sample analyses, the SF-12v2 can identify those with poorer perceived health, despite variation in response strategy and a range of contextual factors, and, in addition, it is

considered to measure important aspects of health by those with the poorest subjective health scores.

This research has extended standard psychometric validation using multiple approaches with a single measure. By doing so, it has also provided insights into response processes for a health status measure. It has, in addition, provided information about self-reported health status among people with HIV. The qualitative study has allowed different techniques of cognitive research to be examined alongside one another, showing that each can provide insights into response. The quantitative study has identified relationships between contextual factors, response processes and health status, including the testing of a simple model of the response process. An innovative statistical approach (DIF) has also been applied to examine item invariance within the SF-12v2, an important aspect of measurement theory.

A similar, multiple method and sample approach could be adopted in new research to extent the validation of standardised measures and to further develop an understanding of response process among those who are healthy and those with diverse illnesses, with qualitative (cognitive) and quantitative techniques giving complementary insights into the nature of relationships between contextual influences, response processes and response. This could involve a longitudinal component in order to investigate temporal health status change in context, particularly in relation to changes in reported response process. In addition, the use of a wider range of contextual influences could be considered, including psychosocial indicators such as social support (Bullinger, 2002).

More specifically, future research could be carried out with larger samples. For the qualitative (cognitive) research, this could ensure that findings are stable across method and sample. For quantitative research, a larger sample would be better suited for multivariate analyses, allowing more robust path modelling to be carried out for different health groups, and the continued development of differential item functioning methodology.

Finally, in relation to path modelling, the current model, linking all aspects of the research, from context to process and response, requires considerable development in order to explain more variance in the mental and, in particular, physical health outcomes, and to disentangle more fully the interrelationships between contextual and response process factors in the two samples.

Nonetheless, this research has provided important insights into the response processes involved in reporting subjective health perceptions using a range of qualitative and quantitative techniques. Analyses have included an investigation of response processes from the respondent's own perspective, the classical psychometric properties of the SF-12v2, the influence of DIF on health status, and an exploration of the pathways linking individual contextual factors and the response process. This has proved a fruitful approach for the investigation of health status and response process that will be developed more fully in future work.

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List of Appendices

APPENDIX 1: PhD steering group

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APPENDIX 2: Interview schedule

Health Perceptions Study

Interview Schedule

Health questionnaires are widely used to assess people's health from their own point of view. This study aims to investigate how people interpret and answer questions about their health.

I will present you with twelve questions from a health questionnaire. These ask for your views about your health, including how you feel and how well you are able to do your usual activities.

I will present you with one question at a time. I would like you to read the instructions and answer each question. Please say *everything* you think and feel while you are doing this – for example, what the question makes you think of, how you go about answering the question, how you understand words and phrases.

Let me stress, this is not a test; there are no right or wrong answers. It may seem very strange to be asked to describe in detail how you went about answering a question – as this is something we all do everyday without really thinking about it. However, this is the process I am interested in.

The session will take around 45 minutes. Is that ok?

First, it helps to have some practice at doing this. So, here are some tasks for you to practice thinking aloud.

Let's say I was asked a question about "how many windows are there in the place where I live". If I was thinking out loud, I might say "...well, there's one window in the kitchen... and then in the main room there are two windows... etc"

Now let me ask you the same question:

1. Try to visualise the place where you live, and think about how many windows there are in that place. As you count up the windows, tell me what you are seeing and thinking about. Please say *everything* you think and feel...

Good. Now, here are some other practice problems before we move onto the main task. I will give you the questions on separate sheets of paper. I want you to think aloud as before as you think about and answer the question...

2. Type of accommodation *[present example – separate sheet]*
3. Living in household *[present example – separate sheet]*

Thank you. That was the practice session. Now, we move on to the health questionnaire. I didn't write these questions, so don't worry about hurting my feelings if you criticise them or mention any problems or concerns you have about them.

You will be presented with a single question at a time. I would like you to say what you are thinking and feeling as you read the instructions and go about answering each question. Please say *everything* you think and feel ...

I am going to tape record the interview as it provides a more accurate record of what you have to say, and it means I can listen to what you are telling me rather than trying to write down every word you say.

Anything you tell me will be treated in strict confidence.

[Present SF-12 questions to participant, one at a time. Use prompts as necessary]

Thank you. Now, I would like to go over the questions again briefly, just to clarify a few points.

[present questions again - choose appropriate prompts for each question]

Finally, I would like you to complete a questionnaire about yourself...

[provide "about yourself" questionnaire]

What type of accommodation do you currently live in?	
Detached house or bungalow	○
Semi-detached house / end of terrace house or bungalow	○
Terraced house or bungalow	○
Flat or maisonette	○
Bedsit	○
Other	○

- **PROMPT: Tell me what you are thinking.**
- How did you go about answering this question? What sorts of things were you thinking of while you were answering?
- Was it easy or difficult to answer? Why?

How many people live in your household, including all adults and children (include yourself)?

1	○
2	○
3	○
4	○
5	○
6	○
7	○
8	○
9	○
10 and over	○

- **PROMPT: Tell me what you are thinking.**
- How did you go about answering this question? What sorts of things were you thinking of while you were answering?
- Was it easy or difficult to answer? Why?

This survey asks for your views about your health, including how you feel and how well you are able to do your usual activities. For each of the following questions, please tick the one circle that best describes your answer.

Health Question 1				
In general, would you say your health is:				
Excellent ○	Very Good ○	Good ○	Fair ○	Poor ○

- **PROMPT: Tell me what you are thinking.**
- What do you think this question is getting at?
- How did you go about answering this question? What sorts of things were you thinking of while you were answering?
- Was it easy or difficult to answer? Why?
- What does "general health" mean to you?
- What time period were you thinking about when you answered this question? (from *when* to *when*?)
- When answering the question, did you think about your future health in any way?
- You described your health as *[response]*. How is that different from *[lower response category]*. And *[higher response category]*?
- Was there a time in your life when you would have described your health as *[lower response categories]*. And *[higher response categories]*? What happened that has changed how you feel about your health?
- Do you have any current medical condition that is affecting your health? Have you had any recently?
- After talking about it, would you still describe your health as *[response]*?

Health Question 2 (1 of 2)			
The following questions are about activities you might do during a typical day. Does <u>your health now limit you</u> in these activities? If so, how much?			
	Yes, limited a lot	Yes, limited a little	No, not limited at all
2A. <u>Moderate activities</u>, such as moving a table, pushing a vacuum cleaner, bowling, or playing golf...	○	○	○

- **PROMPT: Tell me what you are thinking.**
- What do you think this question is getting at?
- How did you go about answering this question? What sorts of things were you thinking of while you were answering?
- Was it easy or difficult to answer? Why?
- What does "typical day" mean to you? And "moderate activities"?
- You gave the answer *[response]*. How is that different from *[lower response category]*. And *[higher response category]*?
- Can you tell me what you think the difference is between "limited a little" and "limited a lot"?

Health Question 2 (2 of 2)			
The following questions are about activities you might do during a typical day. Does <u>your health now limit you</u> in these activities? If so, how much?			
	Yes, limited a lot	Yes, limited a little	No, not limited at all
2B. Climbing <u>several</u> flights of stairs...	○	○	○

- **PROMPT: Tell me what you are thinking.**
- What do you think this question is getting at?
- How did you go about answering this question? What sorts of things were you thinking of while you were answering?
- Was it easy or difficult to answer? Why?
- What does "climbing <u>several</u> flights of stairs" mean to you?
- You gave the answer *[response]*. How is that different from *[lower response category]*. And *[higher response category]*?

Health Question 3 (1 of 2)

During the past 4 weeks, how much of the time have you had any of the following problems with your work or other regular daily activities as a result of your physical health?

	All of the time	Most of the time	Some of the time	A little of the time	None of the time
3A. Accomplished less than you would like…	○	○	○	○	○

- **PROMPT: Tell me what you are thinking.**
- What do you think this question is getting at?
- How did you go about answering this question? What sorts of things were you thinking of while you were answering?
- Was it easy or difficult to answer? Why?
- How did you work out "the past 4 weeks"?
- What does "work or other regular daily activities" mean to you? And "physical health"? And "accomplished less than you would like"?
- You gave the answer *[response]*. How is that different from *[lower response category]*. And *[higher response category]*?

Health Question 3 (2 of 2)

During the past 4 weeks, how much of the time have you had any of the following problems with your work or other regular daily activities as a result of your physical health?

	All of the time	Most of the time	Some of the time	A little of the time	None of the time
3B. Were limited in the kind of work or other activities....	○	○	○	○	○

- **PROMPT: Tell me what you are thinking.**
- What do you think this question is getting at?
- How did you go about answering this question? What sorts of things were you thinking of while you were answering?
- Was it easy or difficult to answer? Why?
- What does "kind of work or other activities" mean to you?
- You gave the answer *[response]*. How is that different from *[lower response category]*. And *[higher response category]*?

Health Question 4 (1 of 2)

During the past 4 weeks, how much of the time have you had any of the following problems with your work or other regular daily activities as a result of any emotional problems (such as feeling depressed or anxious)?

	All of the time	Most of the time	Some of the time	A little of the time	None of the time
4A. Accomplished less than you would like...	○	○	○	○	○

- **PROMPT: Tell me what you are thinking.**
- What do you think this question is getting at?
- How did you go about answering this question? What sorts of things were you thinking of while you were answering?
- Was it easy or difficult to answer? Why?
- What does "emotional problems" mean to you? And "feeling depressed or anxious"?
- You gave the answer *[response]*. How is that different from *[lower response category]*. And *[higher response category]*?

Health Question 4 (2 of 2)

During the past 4 weeks, how much of the time have you had any of the following problems with your work or other regular daily activities as a result of any emotional problems (such as feeling depressed or anxious)?

	All of the time	Most of the time	Some of the time	A little of the time	None of the time
4B. Did work or other activities less carefully than usual....	○	○	○	○	○

- **PROMPT: Tell me what you are thinking.**
- What do you think this question is getting at?
- How did you go about answering this question? What sorts of things were you thinking of while you were answering?
- Was it easy or difficult to answer? Why?
- What does "less carefully than usual" mean to you?
- You gave the answer *[response]*. How is that different from *[lower response category]*. And *[higher response category]*?

Health Question 5

During the past 4 weeks, how much did pain interfere with your normal work (including both work outside the home and housework)?

Not at all	A little bit	Moderately	Quite a bit	Extremely
○	○	○	○	○

- **PROMPT: Tell me what you are thinking.**
- What do you think this question is getting at?
- How did you go about answering this question? What sorts of things were you thinking of while you were answering?
- Was it easy or difficult to answer? Why?
- What does "pain" mean to you? And "interfere"? And "normal work"?
- You gave the answer *[response]*. How is that different from *[lower response category]*. And *[higher response category]*?

Health Question 6 (1 of 3)

These questions are about how you feel and how things have been with you <u>during the past 4 weeks</u>. For each question, please give the one answer that comes closest to the way you have been feeling. How much of the time during the <u>past 4 weeks</u>...

	All of the time	Most of the time	Some of the time	A little of the time	None of the time
6A. Have you felt calm and peaceful?	○	○	○	○	○

- **PROMPT: Tell me what you are thinking.**
- What do you think this question is getting at?
- How did you go about answering this question? What sorts of things were you thinking of while you were answering?
- Was it easy or difficult to answer? Why?
- What does "calm and peaceful" mean to you?
- You gave the answer *[response]*. How is that different from *[lower response category]*. And *[higher response category]*?

Health Question 6 (2 of 3)

These questions are about how you feel and how things have been with you during the past 4 weeks. For each question, please give the one answer that comes closest to the way you have been feeling. How much of the time during the past 4 weeks...

	All of the time	Most of the time	Some of the time	A little of the time	None of the time
6B. Did you have a lot of energy?	○	○	○	○	○

- **PROMPT: Tell me what you are thinking.**
- What do you think this question is getting at?
- How did you go about answering this question? What sorts of things were you thinking of while you were answering?
- Was it easy or difficult to answer? Why?
- What does "have a lot of energy" mean to you?
- You gave the answer *[response]*. How is that different from *[lower response category]*. And *[higher response category]*?

Health Question 6 (3 of 3)

These questions are about how you feel and how things have been with you <u>during the past 4 weeks</u>. For each question, please give the one answer that comes closest to the way you have been feeling. How much of the time during the <u>past 4 weeks</u>...

	All of the time	Most of the time	Some of the time	A little of the time	None of the time
6C. Have you felt downhearted and depressed?	○	○	○	○	○

- **PROMPT: Tell me what you are thinking.**
- What do you think this question is getting at?
- How did you go about answering this question? What sorts of things were you thinking of while you were answering?
- Was it easy or difficult to answer? Why?
- What does "downhearted and depressed" mean to you?
- You gave the answer *[response]*. How is that different from *[lower response category]*. And *[higher response category]*?

Health Question 7

During the <u>past 4 weeks</u>, how much of the time has your <u>physical health or emotional problems</u> interfered with your social activities (like visiting friends, relatives, etc.)?

All of the time	Most of the time	Some of the time	A little of the time	None of the time
○	○	○	○	○

- **PROMPT: Tell me what you are thinking.**
- What do you think this question is getting at?
- How did you go about answering this question? What sorts of things were you thinking of while you were answering?
- Was it easy or difficult to answer? Why?
- IF HESITATED, I noticed you hesitated before you answered – what were you thinking about?
- IF ANSWERED QUICKLY, You answered very quickly. How were you able to do that?
- What does "social activities" mean to you?" And "visiting friends, relatives, etc."?
- You gave the answer *[response]*. How is that different from *[lower response category]*. And *[higher response category]*?

Health Question 1

In general, would you say your health is:

Excellent	Very Good	Good	Fair	Poor
○	○	○	○	○

a. State briefly how you decided to answer the question in the way you did. That is, as best you can, say what you thought during the period between first seeing the question and selecting your answer *(Please write below)*

.....

.....

b. Did you focus on any word(s) or phrase(s) in the question? If so, which one(s)? And why did you focus on the word(s) or phrase(s)? *(Please write below)*

.....

.....

c. Did you find it *very easy, fairly easy, fairly hard,* or *very hard* to make the decision about your answer? *(Please select one of the choices presented)*

Very easy	○
Fairly easy	○
Fairly hard	○
Very hard	○

Can you say why this was? *(Please write below)*

.....

.....

d. When answering the question, did you feel that you had a *particular situation or instance* in mind, *several situations or instances,* or did you think of the answer as reflecting a *general picture* of yourself? *(Please select one of the choices presented)*

A particular situation or instance	○
Several situations or instances	○
A general picture	○

e. Write one sentence in your own words explaining what the question meant to you. *(Please write below)*

.....

.....

Health Question 2 (1 of 2)

The following questions are about activities you might do during a typical day. Does <u>your health now limit you</u> in these activities? If so, how much?

	Yes, limited a lot	Yes, limited a little	No, not limited at all
2A. <u>Moderate activities</u>, such as moving a table, pushing a vacuum cleaner, bowling, or playing golf...	○	○	○

a. State briefly how you decided to answer the question in the way you did. That is, as best you can, say what you thought during the period between first seeing the question and selecting your answer *(Please write below)*

.....

.....

b. Did you focus on any word(s) or phrase(s) in the question? If so, which one(s)? And why did you focus on the word(s) or phrase(s)? *(Please write below)*

.....

.....

c. Did you find it *very easy, fairly easy, fairly hard,* or *very hard* to make the decision about your answer? *(Please select one of the choices presented)*

- Very easy ○
- Fairly easy ○
- Fairly hard ○
- Very hard ○

Can you say why this was? *(Please write below)*

.....

.....

d. When answering the question, did you feel that you had a *particular situation or instance* in mind, *several situations or instances*, or did you think of the answer as reflecting a *general picture* of yourself? *(Please select one of the choices presented)*

- A particular situation or instance ○
- Several situations or instances ○
- A general picture ○

e. Write one sentence in your own words explaining what the question meant to you. *(Please write below)*

.....

.....

Health Question 2 (2 of 2)

The following questions are about activities you might do during a typical day. Does <u>your health now limit you</u> in these activities? If so, how much?

	Yes, limited a lot	Yes, limited a little	No, not limited at all
2B. Climbing <u>several</u> flights of stairs…	○	○	○

a. State briefly how you decided to answer the question in the way you did. That is, as best you can, say what you thought during the period between first seeing the question and selecting your answer *(Please write below)*

……

……

b. Did you focus on any word(s) or phrase(s) in the question? If so, which one(s)? And why did you focus on the word(s) or phrase(s)? *(Please write below)*

……

……

c. Did you find it *very easy, fairly easy, fairly hard,* or *very hard* to make the decision about your answer? *(Please select one of the choices presented)*

- Very easy ○
- Fairly easy ○
- Fairly hard ○
- Very hard ○

Can you say why this was? *(Please write below)*

……

……

d. When answering the question, did you feel that you had a *particular situation or instance* in mind, *several situations or instances,* or did you think of the answer as reflecting a *general picture* of yourself? *(Please select one of the choices presented)*

- A particular situation or instance ○
- Several situations or instances ○
- A general picture ○

e. Write one sentence in your own words explaining what the question meant to you. *(Please write below)*

……

……

Health Question 3 (1 of 2)

During the past 4 weeks, how much of the time have you had any of the following problems with your work or other regular daily activities as a result of your physical health?

	All of the time	Most of the time	Some of the time	A little of the time	None of the time
3A. Accomplished less than you would like...	○	○	○	○	○

a. State briefly how you decided to answer the question in the way you did. That is, as best you can, say what you thought during the period between first seeing the question and selecting your answer *(Please write below)*

.....

.....

b. Did you focus on any word(s) or phrase(s) in the question? If so, which one(s)? And why did you focus on the word(s) or phrase(s)?
(Please write below)

.....

.....

c. Did you find it *very easy, fairly easy, fairly hard,* or *very hard* to make the decision about your answer?
(Please select one of the choices presented)

- Very easy ○
- Fairly easy ○
- Fairly hard ○
- Very hard ○

Can you say why this was? *(Please write below)*

.....

.....

d. When answering the question, did you feel that you had a *particular situation or instance* in mind, *several situations or instances*, or did you think of the answer as reflecting a *general picture* of yourself? *(Please select one of the choices presented)*

- A particular situation or instance ○
- Several situations or instances ○
- A general picture ○

e. Write one sentence in your own words explaining what the question meant to you. *(Please write below)*

.....

.....

Health Question 3 (2 of 2)

During the past 4 weeks, how much of the time have you had any of the following problems with your work or other regular daily activities as a result of your physical health?

	All of the time	Most of the time	Some of the time	A little of the time	None of the time
3B. Were limited in the kind of work or other activities....	○	○	○	○	○

a. State briefly how you decided to answer the question in the way you did. That is, as best you can, say what you thought during the period between first seeing the question and selecting your answer *(Please write below)*

.....

.....

b. Did you focus on any word(s) or phrase(s) in the question? If so, which one(s)? And why did you focus on the word(s) or phrase(s)?
(Please write below)

.....

.....

c. Did you find it *very easy*, *fairly easy*, *fairly hard*, or *very hard* to make the decision about your answer?
(Please select one of the choices presented)

- Very easy ○
- Fairly easy ○
- Fairly hard ○
- Very hard ○

Can you say why this was? *(Please write below)*

.....

.....

d. When answering the question, did you feel that you had a *particular situation or instance* in mind, *several situations or instances*, or did you think of the answer as reflecting a *general picture* of yourself? *(Please select one of the choices presented)*

- A particular situation or instance ○
- Several situations or instances ○
- A general picture ○

e. Write one sentence in your own words explaining what the question meant to you. *(Please write below)*

.....

.....

Health Question 4 (1 of 2)

During the past 4 weeks, how much of the time have you had any of the following problems with your work or other regular daily activities as a result of any emotional problems (such as feeling depressed or anxious)?

	All of the time	Most of the time	Some of the time	A little of the time	None of the time
4A. Accomplished less than you would like...	○	○	○	○	○

a. State briefly how you decided to answer the question in the way you did. That is, as best you can, say what you thought during the period between first seeing the question and selecting your answer *(Please write below)*

.....

.....

b. Did you focus on any word(s) or phrase(s) in the question? If so, which one(s)? And why did you focus on the word(s) or phrase(s)? *(Please write below)*

.....

.....

c. Did you find it *very easy, fairly easy, fairly hard,* or *very hard* to make the decision about your answer? *(Please select one of the choices presented)*

- Very easy ○
- Fairly easy ○
- Fairly hard ○
- Very hard ○

Can you say why this was? *(Please write below)*

.....

.....

d. When answering the question, did you feel that you had a *particular situation or instance* in mind, *several situations or instances,* or did you think of the answer as reflecting a *general picture* of yourself? *(Please select one of the choices presented)*

- A particular situation or instance ○
- Several situations or instances ○
- A general picture ○

e. Write one sentence in your own words explaining what the question meant to you. *(Please write below)*

.....

.....

Health Question 4 (2 of 2)

During the <u>past 4 weeks</u>, how much of the time have you had any of the following problems with your work or other regular daily activities <u>as a result of any emotional problems</u> (such as feeling depressed or anxious)?

	All of the time	Most of the time	Some of the time	A little of the time	None of the time
4B. Did work or other activities <u>less carefully than usual</u>....	○	○	○	○	○

a. State briefly how you decided to answer the question in the way you did. That is, as best you can, say what you thought during the period between first seeing the question and selecting your answer *(Please write below)*

.....

.....

b. Did you focus on any word(s) or phrase(s) in the question? If so, which one(s)? And why did you focus on the word(s) or phrase(s)? *(Please write below)*

.....

.....

c. Did you find it *very easy, fairly easy, fairly hard,* or *very hard* to make the decision about your answer? *(Please select one of the choices presented)*

- Very easy ○
- Fairly easy ○
- Fairly hard ○
- Very hard ○

Can you say why this was? *(Please write below)*

.....

.....

d. When answering the question, did you feel that you had a *particular situation or instance* in mind, *several situations or instances*, or did you think of the answer as reflecting a *general picture* of yourself? *(Please select one of the choices presented)*

- A particular situation or instance ○
- Several situations or instances ○
- A general picture ○

e. Write one sentence in your own words explaining what the question meant to you. *(Please write below)*

.....

.....

Health Question 5

During the past 4 weeks, how much did pain interfere with your normal work (including both work outside the home and housework)?

Not at all	A little bit	Moderately	Quite a bit	Extremely
○	○	○	○	○

a. State briefly how you decided to answer the question in the way you did. That is, as best you can, say what you thought during the period between first seeing the question and selecting your answer *(Please write below)*

.....

.....

b. Did you focus on any word(s) or phrase(s) in the question? If so, which one(s)? And why did you focus on the word(s) or phrase(s)? *(Please write below)*

.....

.....

c. Did you find it *very easy, fairly easy, fairly hard,* or *very hard* to make the decision about your answer? *(Please select one of the choices presented)*

Very easy	○
Fairly easy	○
Fairly hard	○
Very hard	○

Can you say why this was? *(Please write below)*

.....

.....

d. When answering the question, did you feel that you had a *particular situation or instance* in mind, *several situations or instances,* or did you think of the answer as reflecting a *general picture* of yourself? *(Please select one of the choices presented)*

A particular situation or instance	○
Several situations or instances	○
A general picture	○

e. Write one sentence in your own words explaining what the question meant to you. *(Please write below)*

.....

.....

Health Question 6 (1 of 3)

These questions are about how you feel and how things have been with you during the past 4 weeks. For each question, please give the one answer that comes closest to the way you have been feeling. How much of the time during the past 4 weeks...

	All of the time	Most of the time	Some of the time	A little of the time	None of the time
6A. Have you felt calm and peaceful?	○	○	○	○	○

a. State briefly how you decided to answer the question in the way you did. That is, as best you can, say what you thought during the period between first seeing the question and selecting your answer *(Please write below)*

.....

.....

b. Did you focus on any word(s) or phrase(s) in the question? If so, which one(s)? And why did you focus on the word(s) or phrase(s)? *(Please write below)*

.....

.....

c. Did you find it *very easy, fairly easy, fairly hard,* or *very hard* to make the decision about your answer? *(Please select one of the choices presented)*

- Very easy ○
- Fairly easy ○
- Fairly hard ○
- Very hard ○

Can you say why this was? *(Please write below)*

.....

.....

d. When answering the question, did you feel that you had a *particular situation or instance* in mind, *several situations or instances*, or did you think of the answer as reflecting a *general picture* of yourself? *(Please select one of the choices presented)*

- A particular situation or instance ○
- Several situations or instances ○
- A general picture ○

e. Write one sentence in your own words explaining what the question meant to you. *(Please write below)*

.....

.....

Health Question 6 (2 of 3)

These questions are about how you feel and how things have been with you during the past 4 weeks. For each question, please give the one answer that comes closest to the way you have been feeling. How much of the time during the past 4 weeks...

	All of the time	Most of the time	Some of the time	A little of the time	None of the time
6B. Did you have a lot of energy?	○	○	○	○	○

a. State briefly how you decided to answer the question in the way you did. That is, as best you can, say what you thought during the period between first seeing the question and selecting your answer *(Please write below)*

.....

.....

b. Did you focus on any word(s) or phrase(s) in the question? If so, which one(s)? And why did you focus on the word(s) or phrase(s)? *(Please write below)*

.....

.....

c. Did you find it *very easy, fairly easy, fairly hard,* or *very hard* to make the decision about your answer? *(Please select one of the choices presented)*

- Very easy ○
- Fairly easy ○
- Fairly hard ○
- Very hard ○

Can you say why this was? *(Please write below)*

.....

.....

d. When answering the question, did you feel that you had a *particular situation or instance* in mind, *several situations or instances,* or did you think of the answer as reflecting a *general picture* of yourself? *(Please select one of the choices presented)*

- A particular situation or instance ○
- Several situations or instances ○
- A general picture ○

e. Write one sentence in your own words explaining what the question meant to you. *(Please write below)*

.....

.....

Health Question 6 (3 of 3)

These questions are about how you feel and how things have been with you <u>during the past 4 weeks</u>. For each question, please give the one answer that comes closest to the way you have been feeling. How much of the time during the <u>past 4 weeks</u>...

	All of the time	Most of the time	Some of the time	A little of the time	None of the time
6C. Have you felt downhearted and depressed?	○	○	○	○	○

a. State briefly how you decided to answer the question in the way you did. That is, as best you can, say what you thought during the period between first seeing the question and selecting your answer *(Please write below)*

.....

.....

b. Did you focus on any word(s) or phrase(s) in the question? If so, which one(s)? And why did you focus on the word(s) or phrase(s)? *(Please write below)*

.....

.....

c. Did you find it *very easy, fairly easy, fairly hard,* or *very hard* to make the decision about your answer? *(Please select one of the choices presented)*

- Very easy ○
- Fairly easy ○
- Fairly hard ○
- Very hard ○

Can you say why this was? *(Please write below)*

.....

.....

d. When answering the question, did you feel that you had a *particular situation or instance* in mind, *several situations or instances,* or did you think of the answer as reflecting a *general picture* of yourself? *(Please select one of the choices presented)*

- A particular situation or instance ○
- Several situations or instances ○
- A general picture ○

e. Write one sentence in your own words explaining what the question meant to you. *(Please write below)*

.....

.....

Health Question 7

During the past 4 weeks, how much of the time has your physical health or emotional problems interfered with your social activities (like visiting friends, relatives, etc.)?

All of the time	Most of the time	Some of the time	A little of the time	None of the time
○	○	○	○	○

a. State briefly how you decided to answer the question in the way you did. That is, as best you can, say what you thought during the period between first seeing the question and selecting your answer *(Please write below)*

.....

.....

b. Did you focus on any word(s) or phrase(s) in the question? If so, which one(s)? And why did you focus on the word(s) or phrase(s)? *(Please write below)*

.....

.....

c. Did you find it *very easy, fairly easy, fairly hard,* or *very hard* to make the decision about your answer? *(Please select one of the choices presented)*

Very easy	○
Fairly easy	○
Fairly hard	○
Very hard	○

Can you say why this was? *(Please write below)*

.....

.....

d. When answering the question, did you feel that you had a *particular situation or instance* in mind, *several situations or instances,* or did you think of the answer as reflecting a *general picture* of yourself? *(Please select one of the choices presented)*

A particular situation or instance	○
Several situations or instances	○
A general picture	○

e. Write one sentence in your own words explaining what the question meant to you. *(Please write below)*

.....

.....

Thank you very much for completing this questionnaire.

Health Perceptions Study: About yourself

The three questions on this page ask for some basic information about you. Please provide an answer to each question.

How old were you on your last birthday (in whole years)?	.....	
Are you...?	Male	○
	Female	○
Are you currently... ? *(please select as many as apply)*	Working full-time (30 hours a week or more), employed or self-employed	○
	Working part-time (less than 30 hours a week), employed or self-employed.....	○
	Studying full-time	○
	Studying part-time	○
	Caring for your home and family or dependants	○
	Unemployed and seeking work	○
	Long-term sick or disabled, unable to work	○
Other *(please write your answer)*	.....	

Thank you very much for your co-operation in this study.

APPENDIX 5: City University ethics application

The application form included the following sections:

- Brief Details of the Application (title of project, details of the applicant, departmental details, staff involved, type of students to be recruited);
- Details of Funding (the source of funding for the study);
- Abstract of Project (the purpose of the study, any potential for participant discomfort and ways of dealing with this, the research protocol and materials, duration of procedures);
- Information on Subjects (sample size, demographics, recruitment procedures, means of obtaining informed consent, assessment of mental and physical suitability to take part, confidentiality, specific ethical issues);
- Declaration (the signatures of the applicant and the Head of Department).

Additional documentation was provided (as requested by the ethics committee): an explanatory statement for participants containing details of the study, and an informed consent form.

APPENDIX 6: City University explanatory statement

INFORMATION SHEET

MEASURING SUBJECTIVE HEALTH PERCEPTIONS: INSIGHTS FROM PSYCHOLOGICAL THEORY AND SOCIAL RESEARCH

Date:

My name is Steven Hope and I am conducting this study as part of a PhD in the School of Social Sciences at City University, under the supervision of Professor Ingrid Schoon. The aim of the research is to develop a more detailed understanding of the way questions about health are interpreted and answered by people. I hope that the findings of this project will improve the way health questions are developed and used in the future, while also providing more theoretical insights into health perceptions.

I am seeking people over 18 years of age who are willing to answer questions about themselves and their health, and provide some information on how they went about answering these questions. Being part of this research will take about 30 minutes. Half of those included in the study will be tape recorded during an interview session and then complete a short questionnaire, while the other half will be asked to complete a questionnaire.

Information relating to your participation in the study will be kept confidential. No information containing your name will be allowed off the university premises. The Data Protection Act requires that you should be aware that data obtained during the study will be held on computer but you will not be identified by name in any of these records. Only my supervisor and I will have access to the information, which will be stored on a password-protected computer. Information will only be used for the purposes of completing the PhD and producing related research publications. The results of the study will not be disclosed or published in a form by which you may be identified. The information will be deleted once the results of the study have been fully documented.

Participation in this research is entirely voluntary. If you agree to participate you may withdraw at any time. If you have any queries or would like to be informed of the research findings, please contact Steven Hope (telephone number 020 7040 0290; s.c.hope@city.ac.uk). Please note: security from non-university e-mail accounts cannot be guaranteed.

Should you experience any distress or require any information as a result of taking part in this study, you are advised to contact the City University Counselling Service or the University Health Service, who are aware that this research is taking place. Contact details for these Services, and outside support groups, are provided in a separate sheet you will be given.

You can complain about the study if you don't like something about it. To complain about this study, you need to phone 020 7040 8010. You can then ask to speak to the Secretary of the Ethics Committee (Saran Simpson) and tell them that the name of the project is: Measuring subjective health perceptions: insights from psychological theory and social research.

You could also write to the Secretary at the following address:
Saran Simpson
Secretary to the Senate Ethical Committee
Academic Registry
City University
Northampton Square
London
EC1V 0HB
Email: s.e.simpson@city.ac.uk

APPENDIX 7: City University helplines information sheet

City University London

HELPLINES

Should you experience any distress or require any information as a result of taking part in this research, you are advised to contact the City University Counselling Service or the University Health Service. There are a number of other organisations able to provide help, advice and information. The details of some of these organisations are also listed below.

City University Student Counselling Service
The Counselling Service offers the following services, free of charge: individual counselling, group counselling, focused groups and workshops, general counselling information, help with accessing appropriate support. A duty counsellor is available for urgent, same day advice or support. To book an appointment, telephone, email of call in:
Contact number: 020 7040 8094
Email: coun@city.ac.uk
Website: www.city.ac.uk/counselling/
Location: Health Centre, 20 Sebastian Street (off Northampton Square)
Opening times: Monday to Friday, 9am-5pm

City University Health Service
Students can consult the Nurse Advisor for confidential advice on minor illnesses, accidents and general advice on health matters and contraception.
Contact number: 020 7040 5999
Website: www.city.ac.uk/healthservice/
Location: Health Centre, 20 Sebastian Street (off Northampton Square)
Opening times: Appointments 9.30-11.00am / Drop-in 12.30-2.30pm

Drinkline
National alcohol helpline.
Contact number: 0800 917 8282

Nationwide Counselling for Students
Website: www.studentcounselling.org

NHS Direct
Health information and advice, including a 24-hour nurse-led helpline.
Contact number: 0845 4647
Website: www.nhsdirect.nhs.uk

Nightline
Listening service run by students.
Contact number: 020 7631 0101 (from 6 pm to 8 am during term time)

Samaritans
Confidential emotional support to anyone in crisis.
Contact number: 08457 90 90 90 (24 hours a day)
Website: www.samaritans.org.uk

APPENDIX 8: City University informed consent form

Informed Consent Form for Project Participants

Measuring Subjective Health Perceptions:
Insights From Psychological Theory And Social Research

I agree to take part in the above City University research project. I have had the project explained to me, and I have read the Explanatory Statement, which I may keep for my records. I understand that agreeing to take part means that I am willing to complete a questionnaire, or be tape recorded during an interview and then complete a short questionnaire. I understand that this study will include questions about my health.

I agree to City University recording and processing this information about me. I understand that this information will be used only for the purpose set out in the information sheet and my consent is conditional on the University complying with its duties and obligations under the Data Protection Act 1998.

I understand that my participation is voluntary, that I can choose not to participate in part or all of the project, and that I can withdraw at any stage of the project without being penalised or disadvantaged in any way.

Name: ..... (please print)

Signature: ..... Date: .....

Investigator's statement

I have explained the aims, purpose, nature and demands of the above research to the participant.

Name: ..... (please print)

Signature: ..... Date: .....

APPENDIX 9: Chelsea & Westminster Hospital ethics application

The application form included the following sections:

Name of Project;

Summary (background and aims of the study);

Design (materials completed by participants);

Methods (procedures followed in the study);

Data Analysis (planned analysis techniques);

Signatures of the researcher and of the Consultant in Overall Charge (the Clinical Director of the HIV/GUM Directorate, Chelsea & Westminster Hospital).

Additional documentation was provided (as requested by the ethics committee): a patient information sheet and consent form.

APPENDIX 10: Chelsea & Westminster Hospital participant information sheet

Chelsea and Westminster Healthcare NHS
NHS Trust

HIV / GUM Directorate
St. Stephen's Centre
369 Fulham Road
London SW10 9NH

PARTICIPANT INFORMATION SHEET
(VERSION NUMBER 2: 6th April 2004)

Title. Measuring subjective health perceptions: Insights from psychological theory and social research

INVITATION PARAGRAPH
You are being invited to take part in a research study. Before you decide it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully and discuss it with friends, relatives and your GP if you wish. Ask us if there is anything that is not clear or if you would like more information. Take time to decide whether or not you wish to take part. Consumers for Ethics in Research (CERES) publish a leaflet entitled 'Medical Research and You'. This leaflet gives more information about medical research and looks at some questions you may want to ask. A copy may be obtained from CERES, PO Box 1365, London N16 0BW.

INTRODUCTION
These notes give some information about a research study being undertaken at the Kobler Centre, Chelsea and Westminster Hospital and include details of research procedures being carried out. If there is anything that you do not understand, or if you require further information concerning the study, please contact the researcher, Steven Hope (telephone number 020 7040 0290; s.c.hope@city.ac.uk). This study conforms to the European Guidelines of Good Clinical Practice and has been considered and approved by the independent local Research Ethics Committee.

PURPOSE OF THE STUDY
Health and well-being questionnaires are used to measure people's health from their own point of view. They are widely used in health services and clinical research, and in large-scale social science research studies. The aim of this small-scale exploratory study is to develop a more detailed understanding of the way questions about health and well-being are interpreted and answered by people with different health experiences. The study is being undertaken by Steven Hope as part of a PhD research degree in social research methods at City University.

DESIGN OF THE STUDY
A small number of HIV positive participants will be asked to complete a standard health and well-being questionnaire. They will also be asked to provide additional information on the processes involved in interpreting and answering the questionnaire.

STUDY PROCEDURE
All participants will have a single study session with the researcher, taking part in one of two conditions. Either:

i. they will be asked to complete a booklet containing a health and well-being questionnaire plus some additional questions about the processes involved in answering the questionnaire. They will also complete a short questionnaire about themselves; or,
ii. they will be asked to complete a health and well-being questionnaire. While doing so, they will

say everything they are thinking and feeling as they read the instructions and go about answering each question. Thoughts will be tape recorded and later transcribed for analysis. They will also complete a short questionnaire about themselves.

POSSIBLE SIDE EFFECTS
N/A

RISKS AND DISCOMFORT
Participants will be asked to complete a questionnaire about their health and well-being.

BENEFITS OF THE STUDY
Results will provide an insight into the ways people with different health experiences answer health and well-being questionnaires, informing the development, use and interpretation of such questionnaires in the future.

MEDICINES, DIETARY and OTHER RESTRICTIONS
N/A

CONTRACEPTION (applies to both male & female) AND PREGNANCY PLEASE READ CAREFULLY
N/A

PARTICIPATING IN THE STUDY
Participation in this research is entirely voluntary. If you agree to participate you may withdraw at any time for any reason without prejudice to your future treatment/care. Any reason given will be recorded, as this may be relevant, but you do not have to give one.

You can ask the researcher any questions you want to in order to understand what being involved in the study will mean for you. If you want to take part you will be asked to sign a Consent form to say that you are taking part voluntarily and that you understand what is being asked of you.

CONFIDENTIALITY
All information which is collected about you during the course of the research will be kept strictly confidential. You will be identified only by a number that will be used on all written material, tape recordings, and computer files. Data from questionnaires and interviews will be entered by the researcher onto password-protected computer equipment.

The results of the study will be used for the purposes of completing the PhD research degree and producing related academic publications. No findings that could identify any individual participant will be published. Only the researcher involved in the study will have access to the coded data and the original materials. Original questionnaires and tapes will be stored in a locked filing cabinet at City University. The computer data, tapes and questionnaires will be destroyed once the results of the study have been fully documented and published by the researcher (by year 2006).

COMPENSATION
N/A

CONTACT PERSONS
Thank you for considering taking part in this study. You will be given this information sheet and a signed consent form to keep.

For further information, contact the researcher, Steven Hope, or the consultant in overall charge, Dr Simon Barton.

APPENDIX 11: HIV sample helplines information sheet

HELPLINES

There are a number of organisations able to provide help, advice and information, should you require it. The details of some of these organisations are also listed below, in alphabetical order:

Drinkline
National alcohol helpline.
Contact number: 0800 917 8282

NHS Direct
Health information and advice, including a nurse-led helpline.
Contact number: 0845 4647 (24 hours a day)
Website: www.nhsdirect.nhs.uk

NHS Smoking Helpline
Advice and support on giving up smoking
Contact number: 0800 169 0169

Positively Women
A helpline for HIV positive women.
Contact number: 020 7713 0222 (10am-4pm weekdays).
Website: www.positivelywomen.org.uk

Samaritans
Confidential emotional support to anyone in crisis.
Contact number: 08457 90 90 90 (24 hours a day)
Website: www.samaritans.org.uk

Sexual Healthline
Advice about HIV, AIDS, sexual health, sexually transmitted diseases, services and clinics.
Contact number: 0800 567 123 (24-hour)

Terrence Higgins Trust
Information, advice and support for HIV and AIDS.
Contact number: 0845 12 21 200 (10am-10pm weekdays, 12pm-6pm weekends).
Website: www.tht.org.uk

APPENDIX 12: Chelsea & Westminster Hospital consent form

Chelsea and Westminster Healthcare NHS
NHS Trust
HIV / GUM Directorate
St. Stephens Centre
269 Fulham Road
London SW10 9NH

RESEARCH CONSENT FORM (VERSION NUMBER 2: 6th April 2004)

Title of Project: Measuring subjective health perceptions: Insights from psychological theory and social research

(The patient/volunteer should complete the whole of this sheet him/herself)

Have you read the Information Sheet?	Yes	No
Have you had the opportunity to ask questions and discuss the study?	Yes	No
Have you received satisfactory answers to all of your questions?	Yes	No
Have you received enough information about the study?	Yes	No
Whom have you spoken to? (write name)		
Do you understand that you are free to withdraw from the study, at any time, without having to give a reason, and without affecting the quality of your present or future medical care?	Yes	No
Do you agree to take part in this study?	Yes	No

I understand that the Local Ethics Committee may review this form as part of a monitoring process.

NAME IN BLOCK LETTERS:

Signature: Date:

SIGNATURE OF PERSON OBTAINING CONSENT

Signature: Date:

APPENDIX 13: City University recruitment poster

Interested in taking part in a study about health perceptions?

Volunteers are needed for PhD research investigating how health survey questions are interpreted and answered.

Results will inform the way health surveys are developed and used, and provide theoretical insights into health perceptions.

Study sessions will last approximately 30 minutes and will take place at City University. Participants will answer a series of questions about themselves and their health, and provide some information on how they went about answering these questions.

All sessions will be conducted in private and all results will be anonymous.

Participants should ...

- be aged 18+
- be willing to take part in a tape recorded interview or complete a questionnaire
- be willing to answer questions about their health

For more information, or to arrange to take part, please contact Steven Hope, School of Social Sciences, on 020 7040 290, or email* s.c.hope@city.ac.uk.

*Please note: security from non-university e-mail accounts cannot be guaranteed

What type of accommodation do you currently live in?

Detached house or bungalow	○
Semi-detached house / end of terrace house or bungalow	○
Terraced house or bungalow	○
Flat or maisonette	○
Bedsit	○
Other	○

How many people live in your household, including all adults and children (include yourself)?

1	○
2	○
3	○
4	○
5	○
6	○
7	○
8	○
9	○
10 and over	○

This survey asks for your views about your health, including how you feel and how well you are able to do your usual activities. For each of the following questions, please tick the one circle that best describes your answer.

Health Question 1

In general, would you say your health is:

Excellent	Very Good	Good	Fair	Poor
○	○	○	○	○

Health Question 2 (1 of 2)			
The following questions are about activities you might do during a typical day. Does <u>your health now limit you</u> in these activities? If so, how much?			
	Yes, limited a lot	Yes, limited a little	No, not limited at all
2A. <u>Moderate activities</u>, such as moving a table, pushing a vacuum cleaner, bowling, or playing golf...	○	○	○

Health Question 2 (2 of 2)			
The following questions are about activities you might do during a typical day. Does <u>your health now limit you</u> in these activities? If so, how much?			
	Yes, limited a lot	Yes, limited a little	No, not limited at all
2B. Climbing <u>several</u> flights of stairs...	○	○	○

Health Question 3 (1 of 2)					
During the past 4 weeks, how much of the time have you had any of the following problems with your work or other regular daily activities as a result of your physical health?					
	All of the time	Most of the time	Some of the time	A little of the time	None of the time
3A. Accomplished less than you would like...	○	○	○	○	○

Health Question 3 (2 of 2)					
During the past 4 weeks, how much of the time have you had any of the following problems with your work or other regular daily activities as a result of your physical health?					
	All of the time	Most of the time	Some of the time	A little of the time	None of the time
3B. Were limited in the kind of work or other activities....	○	○	○	○	○

Health Question 4 (1 of 2)					
During the past 4 weeks, how much of the time have you had any of the following problems with your work or other regular daily activities as a result of any emotional problems (such as feeling depressed or anxious)?					
	All of the time	Most of the time	Some of the time	A little of the time	None of the time
4A. Accomplished less than you would like...	○	○	○	○	○

Health Question 4 (2 of 2)

During the past 4 weeks, how much of the time have you had any of the following problems with your work or other regular daily activities as a result of any emotional problems (such as feeling depressed or anxious)?

	All of the time	Most of the time	Some of the time	A little of the time	None of the time
4B. Did work or other activities less carefully than usual....	○	○	○	○	○

Health Question 5

During the past 4 weeks, how much did pain interfere with your normal work (including both work outside the home and housework)?

Not at all	A little bit	Moderately	Quite a bit	Extremely
○	○	○	○	○

Health Question 6 (1 of 3)					
These questions are about how you feel and how things have been with you during the past 4 weeks. For each question, please give the one answer that comes closest to the way you have been feeling. How much of the time during the past 4 weeks...					
	All of the time	Most of the time	Some of the time	A little of the time	None of the time
6A. Have you felt calm and peaceful?	○	○	○	○	○

Health Question 6 (2 of 3)					
These questions are about how you feel and how things have been with you during the past 4 weeks. For each question, please give the one answer that comes closest to the way you have been feeling. How much of the time during the past 4 weeks...					
	All of the time	Most of the time	Some of the time	A little of the time	None of the time
6B. Did you have a lot of energy?	○	○	○	○	○

Health Question 6 (3 of 3)					
These questions are about how you feel and how things have been with you during the past 4 weeks. For each question, please give the one answer that comes closest to the way you have been feeling. How much of the time during the past 4 weeks...					
	All of the time	Most of the time	Some of the time	A little of the time	None of the time
6C. Have you felt downhearted and depressed?	○	○	○	○	○

Health Question 7

During the past 4 weeks, how much of the time has your physical health or emotional problems interfered with your social activities (like visiting friends, relatives, etc.)?

All of the time	Most of the time	Some of the time	A little of the time	None of the time
○	○	○	○	○

APPENDIX 15: Framework codes

Comprehension
Key term (definition)
Vagueness
Double meaning
Inconsistent use of examples
Reinterpreted
Context (effects)
Timeframe (definition)
Normative assumptions

Retrieval / Judgement
General perceptions
    Self-reflection
    Comparison (with past)
    Comparison (with an ideal)
Specific situations
Comparison with others
Satisficing
Variability
Perceived easiness / difficult of task
Discounting health problems
Adaptation

Response
Vague quantifiers
Vacillation (over response)
End aversion
Ceiling (response)
Average (response)
Relative position
Social desirability
Emotional reactivity

APPENDIX 16: Calculating sample size for quantitative studies

Within and between samples, analyses were based on looking at how the health status scores vary according to the predictor variables, and looking for different patterns among the predictors.

It was proposed that sample size calculation should be based on SF-12v2 mean scale scores, since a large amount of research and normative data are available, in contrast to the other study factors to be investigated. In addition, differences shown for the SF-12v2 could be subsequently investigated in terms of the other predictor variables.

Example from SF-12v2v2 handbook

Table A16.1 indicates the sample size needed to detect differences between a group mean and a fixed norm (in this case, the US population norm data) (Ware et al, 2004).

Table A16.1: Sample size requirement to detect difference between a group mean and a fixed norm

	5-point difference	10-point difference
PCS	32	9
MCS	32	9

Legend:PCS=physical component scale; MCS=mental component scale

(Based on a 2-tailed distribution; false rejection rate at 5%; statistical power=80%)

A difference of 5 points (0.5 SD units) on the PCS and MCS scales between a sample mean and a norm can be detected with only 32 subjects.

However, in attempting to compare the means provided by two groups, more information is required. HIV patient scores are currently only available for the earlier SF-12, but since SF-12 and SF-12v2 are related, it would be expected that sample sizes calculated for version 1 should be comparable to that for version 2.

The comparison shown in Table A16.2 is for HIV patient scores versus US norms for 35-44 years of age. Different calculations are presented for PCS and MCS scales. Assumptions are a 2-tailed distribution, a significance level=0.05 and power=0.80. This indicated that an overall sample of 27 HIV patients and 24 healthy participants was required to detect a difference in the SF-12.

Table A16.2: Sample size requirement to detect difference between two means: HIV patients versus US norm (age range 35-44 years).

	HIV mean (SD)	**Norm mean (SD)**	**HIV sample N**	**Norm sample N**
PCS	43.8 (11.6)	52.2 (7.3)	25	16
MCS	42.8 (9.6)	50.1 (8.6)	27	24

Another comparison shown in Table A16.3 is for the HIV patients versus US norms for 18-34 years of age, which is closer to the age group of most students. Different calculations are presented for PCS and MCS scales. Assumptions are a 2-tailed distribution, a significance level=0.05 and power=0.80. These calculations suggested that an overall sample of 36 HIV patients and 36 healthy participants would be required to detect a significant difference in the SF-12.

Table A16.3: Sample size requirement to detect difference between a two means: HIV patients versus US norm (age range 18-34 years).

	HIV mean (SD)	Norm mean (SD)	HIV sample N	Norm sample N
PCS	43.8 (11.6)	53.3 (6.7)	19	11
MCS	42.8 (9.6)	49.2 (9.7)	36	36

Bivariate and multivariate analyses

Guidance for sample sizes when undertaking multivariate analyses recommends that a large number sample is required in order to produce reliable results (Tabachnik and Fidell, 2001).

Bivariate analyses – Although sample size was set in advance of analyses, according to the data presented on the number of respondents required to identify a significant difference in SF-12v2 scores between two groups, statistical power calculations were also used to calculate the optimal sample size for bivariate parametric analyses, including t-tests, analyses of variance, and correlations. The G*Power software package was used for this purpose (Buchner et al, 1997). For all analyses, convention dictated that alpha (or the risk that a difference detected is entirely due to chance) was set to 0.05; power (the probability of correctly detecting a difference between groups) was set to 0.80. The effect size (the meaningful difference between groups) for tests of difference was set to 0.50 of a standard deviation, while for correlation coefficients it was set to 0.30, both of which are considered to be medium effect sizes for the respective type of test (Cohen, 1988). By fixing the parameters of alpha, power and effect size, it was possible to calculate an estimate of the sample size that would have been required in order to have confidence in the significance of the results obtained. In

most analyses, the samples were effectively large enough for this purpose: for analyses of variance, required overall sample sizes of 42 and 48 were estimated, based on three or four categories respectively; for correlations, a sample of 64 was required. However, calculations for t-tests indicated that samples of 128 should have been obtained for university and HIV groups. Despite the suggestion that the sample sizes were generally large enough for t-tests and ANOVAs, it should also be noted that, in the actual analyses, there were not equal numbers of subjects in each response category, and therefore sample size estimates may not be fully accurate in this circumstance.

Path analyses – It is often difficult to estimate an *a priori* sample size for path modelling, since the paths are not always identified in advance of data collection. Nevertheless, it has been recommended that there should be at least ten times as many cases as parameters to be estimated in a path model (Kline, 1998). Using this formula, with 19 parameters estimated in the current path model, there should have been at least 190 respondents in each sample.

Exploratory and confirmatory factor analyses – In factor analysis, it is important for the sample to be large enough that correlations are reliably estimated (Tabachnik and Fidell, 2001). Although it has been suggested that a minimum sample of 50 might be acceptable for factor analysis (Barrett and Kline, 1981), others have suggested that any sample less than 100 should be considered to be "poor" (Comrey and Lee, 1992), with a sample size 150 or greater being necessary in order to generate a stable factor solution (Guadagnoli and Velicer, 1988).

Conclusion

For comparisons between the study groups, 60 students and 60 HIV patients was calculated to be adequate sample. Although the samples included in this thesis reached the minimum size according to some recommendations for bivariate and complex multivariate analyses, they were generally much smaller than would be considered necessary in order to produce reliable estimates. However, it was not possible to increase the sample sizes because of limitations in terms of time available and recruitment opportunities. Therefore, results obtained from multivariate analyses discussed should be considered indicative.

APPENDIX 17: Health Perceptions Study questionnaire (HIV sample version)

City University London

Health Perceptions Study

Dear participant,

Surveys of health and well-being are commonly used to measure people's health from their own point of view. The aim of this study is to develop a more detailed understanding of the way people answer the kinds of questions used in these surveys. To do this, the Health Perceptions Study questionnaire contains a series of questions about different aspects of your health and lifestyle. In addition, it includes questions asking you directly about the answers you have given.

This research is being undertaken as part of a PhD research degree in social research methods at City University. The findings of the study should improve the way health questions are developed and used in the future, while also providing more theoretical insights into health perceptions. If you have any queries or would like to be informed of the research findings, please contact Steven Hope (s.c.hope@city.ac.uk). You will also find a separate Helplines sheet, including contact details for a range of organisations able to provide help, advice and information, should you require it.

The Health Perceptions Study questionnaire will take you about 10 minutes to fill out. Please complete all the questions in each section of the questionnaire, marking your answers with a ✕. The questionnaire should be returned in the reply-paid envelope on or before 20th May 2005. So that the research results will be meaningful, it is important that you complete and return the questionnaire. The questionnaire is totally anonymous. Your answers cannot be traced back to you.

The £100 prize draw will take place in May 2005 and the winner will be notified shortly afterwards.

Thank you for your assistance.

Steven Hope
Research Student

Health and well-being survey

In this section, the questions numbered and in **bold** ask for your views about your health, including how you feel and how well you are able to do your usual activities. For each of the health questions, please mark a ✕ in the one circle that best describes your answer...

1. In general, would you say your health is:

Excellent	Very Good	Good	Fair	Poor
○	○	○	○	○

Three additional questions ask how you answered each health question, how easy the health question was to answer, and how useful you think the question is for assessing your current health...

Which of the following comes closest to the way you answered this health question?
Was your answer mainly based on...
(please choose a single option)

- comparing yourself to others ..... ○
- a general picture of yourself ..... ○
- specific experiences ..... ○
- Not sure: the answer just came to me ..... ○
- Other *(please specify below)* ..... ○

.....

How easy or difficult was this health question to answer?

- Very easy ..... ○
- Fairly easy ..... ○
- Fairly difficult ..... ○
- Very difficult ..... ○

How useful do you think this question is for assessing your current health?

- Very useful ..... ○
- Fairly useful ..... ○
- Not that useful ... ○
- Not at all useful .. ○

2. The following questions are about activities you might do during a typical day. Does your health now limit you in these activities? If so, how much?

2A. Moderate activities, such as moving a table, pushing a vacuum cleaner, bowling, or playing golf ...	**Yes, limited a lot**	**Yes, limited a little**	**No, not limited at all**
	○	○	○

Which of the following comes closest to the way you answered this health question?
Was your answer mainly based on...
(please choose a single option)

- comparing yourself to others ..... ○
- a general picture of yourself ..... ○
- specific experiences ..... ○
- Not sure: the answer just came to me ..... ○
- Other *(please specify below)* ..... ○

.....

How easy or difficult was this health question to answer?

- Very easy ..... ○
- Fairly easy ..... ○
- Fairly difficult ..... ○
- Very difficult ..... ○

How useful do you think this question is for assessing your current health?

- Very useful ..... ○
- Fairly useful ..... ○
- Not that useful ... ○
- Not at all useful .. ○

2B. Climbing several flights of stairs ...	**Yes, limited a lot**	**Yes, limited a little**	**No, not limited at all**
	○	○	○

Which of the following comes closest to the way you answered this health question?
Was your answer mainly based on...
(please choose a single option)

- comparing yourself to others ..... ○
- a general picture of yourself ..... ○
- specific experiences ..... ○
- Not sure: the answer just came to me ..... ○
- Other *(please specify below)* ..... ○

.....

How easy or difficult was this health question to answer?

- Very easy ..... ○
- Fairly easy ..... ○
- Fairly difficult ..... ○
- Very difficult ..... ○

How useful do you think this question is for assessing your current health?

- Very useful ..... ○
- Fairly useful ..... ○
- Not that useful ... ○
- Not at all useful .. ○

3. During the past 4 weeks how much of the time have you had any of the following problems with your work or other regular daily activities as a result of your physical health?

3A. Accomplished less than you would like...	All of the time	Most of the time	Some of the time	A little of the time	None of the time
	O	O	O	O	O

Which of the following comes closest to the way you answered this health question?
Was your answer mainly based on...
(please choose a single option)

- comparing yourself to others ..... O
- a general picture of yourself ..... O
- specific experiences ..... O
- Not sure: the answer just came to me ..... O
- Other *(please specify below)* ..... O

.....

How easy or difficult was this health question to answer?

- Very easy ..... O
- Fairly easy ..... O
- Fairly difficult ..... O
- Very difficult ..... O

How useful do you think this question is for assessing your current health?

- Very useful ..... O
- Fairly useful ..... O
- Not that useful ... O
- Not at all useful .. O

3B. Were limited in the kind of work or other activities...	All of the time	Most of the time	Some of the time	A little of the time	None of the time
	O	O	O	O	O

Which of the following comes closest to the way you answered this health question?
Was your answer mainly based on...
(please choose a single option)

- comparing yourself to others ..... O
- a general picture of yourself ..... O
- specific experiences ..... O
- Not sure: the answer just came to me ..... O
- Other *(please specify below)* ..... O

.....

How easy or difficult was this health question to answer?

- Very easy ..... O
- Fairly easy ..... O
- Fairly difficult ..... O
- Very difficult ..... O

How useful do you think this question is for assessing your current health?

- Very useful ..... O
- Fairly useful ..... O
- Not that useful ... O
- Not at all useful .. O

4. During the past 4 weeks how much of the time have you had any of the following problems with your work or other regular daily activities as a result of any emotional problems (such as feeling depressed or anxious)?

4A. Accomplished less than you would like...	All of the time	Most of the time	Some of the time	A little of the time	None of the time
	○	○	○	○	○

Which of the following comes closest to the way you answered this health question?
Was your answer mainly based on...
(please choose a single option)

- comparing yourself to others ..... ○
- a general picture of yourself ..... ○
- specific experiences ..... ○
- Not sure: the answer just came to me ..... ○
- Other *(please specify below)* ..... ○

.....

How easy or difficult was this health question to answer?

- Very easy ..... ○
- Fairly easy ..... ○
- Fairly difficult ..... ○
- Very difficult ..... ○

How useful do you think this question is for assessing your current health?

- Very useful ..... ○
- Fairly useful ..... ○
- Not that useful ... ○
- Not at all useful .. ○

4B. Did work or other activities less carefully than usual...	All of the time	Most of the time	Some of the time	A little of the time	None of the time
	○	○	○	○	○

Which of the following comes closest to the way you answered this health question?
Was your answer mainly based on...
(please choose a single option)

- comparing yourself to others ..... ○
- a general picture of yourself ..... ○
- specific experiences ..... ○
- Not sure: the answer just came to me ..... ○
- Other *(please specify below)* ..... ○

.....

How easy or difficult was this health question to answer?

- Very easy ..... ○
- Fairly easy ..... ○
- Fairly difficult ..... ○
- Very difficult ..... ○

How useful do you think this question is for assessing your current health?

- Very useful ..... ○
- Fairly useful ..... ○
- Not that useful ... ○
- Not at all useful .. ○

5. During the past 4 weeks, how much did pain interfere with your normal work (including both work outside the home and housework)?

Not at all	A little bit	Moderately	Quite a bit	Extremely
O	O	O	O	O

Which of the following comes closest to the way you answered this health question?
Was your answer mainly based on...
(please choose a single option)

- comparing yourself to others ..... O
- a general picture of yourself ..... O
- specific experiences ..... O
- Not sure: the answer just came to me ..... O
- Other *(please specify below)* ..... O

.....

How easy or difficult was this health question to answer?

- Very easy ..... O
- Fairly easy ..... O
- Fairly difficult ..... O
- Very difficult ..... O

How useful do you think this question is for assessing your current health?

- Very useful ..... O
- Fairly useful ..... O
- Not that useful ... O
- Not at all useful .. O

6. These questions are about how you feel and how things have been with you during the past 4 weeks. For each question, please give the one answer that comes closest to the way you have been feeling. How much of the time during the past 4 weeks...

	All of the time	Most of the time	Some of the time	A little of the time	None of the time
6A. Have you felt calm and peaceful?	O	O	O	O	O

Which of the following comes closest to the way you answered this health question?
Was your answer mainly based on...
(please choose a single option)

- comparing yourself to others ..... O
- a general picture of yourself ..... O
- specific experiences ..... O
- Not sure: the answer just came to me ..... O
- Other *(please specify below)* ..... O

.....

How easy or difficult was this health question to answer?

- Very easy ..... O
- Fairly easy ..... O
- Fairly difficult ..... O
- Very difficult ..... O

How useful do you think this question is for assessing your current health?

- Very useful ..... O
- Fairly useful ..... O
- Not that useful ... O
- Not at all useful .. O

6. These questions are about how you feel and how things have been with you during the past 4 weeks. For each question, please give the one answer that comes closest to the way you have been feeling. How much of the time during the past 4 weeks... (CONTINUED)

	All of the time	Most of the time	Some of the time	A little of the time	None of the time
6B. Did you have a lot of energy?	○	○	○	○	○

Which of the following comes closest to the way you answered this health question?
Was your answer mainly based on...
(please choose a single option)

- comparing yourself to others ..... ○
- a general picture of yourself ..... ○
- specific experiences ..... ○
- Not sure: the answer just came to me ..... ○
- Other *(please specify below)* ..... ○

.....

How easy or difficult was this health question to answer?

- Very easy ..... ○
- Fairly easy ..... ○
- Fairly difficult ..... ○
- Very difficult ..... ○

How useful do you think this question is for assessing your current health?

- Very useful ..... ○
- Fairly useful ..... ○
- Not that useful ... ○
- Not at all useful .. ○

	All of the time	Most of the time	Some of the time	A little of the time	None of the time
6C. Have you felt downhearted and depressed?	○	○	○	○	○

Which of the following comes closest to the way you answered this health question?
Was your answer mainly based on...
(please choose a single option)

- comparing yourself to others ..... ○
- a general picture of yourself ..... ○
- specific experiences ..... ○
- Not sure: the answer just came to me ..... ○
- Other *(please specify below)* ..... ○

.....

How easy or difficult was this health question to answer?

- Very easy ..... ○
- Fairly easy ..... ○
- Fairly difficult ..... ○
- Very difficult ..... ○

How useful do you think this question is for assessing your current health?

- Very useful ..... ○
- Fairly useful ..... ○
- Not that useful ... ○
- Not at all useful .. ○

7. During the past 4 weeks, how much of the time has your physical health or emotional problems interfered with your social activities (like visiting friends, relatives, etc.)?

All of the time	Most of the time	Some of the time	A little of the time	None of the time
O	O	O	O	O

Which of the following comes closest to the way you answered this health question?
Was your answer mainly based on...
(please choose a single option)

- comparing yourself to others ..... O
- a general picture of yourself ..... O
- specific experiences ..... O
- Not sure: the answer just came to me ..... O
- Other *(please specify below)* ..... O

.....

How easy or difficult was this health question to answer?

- Very easy ..... O
- Fairly easy ..... O
- Fairly difficult ..... O
- Very difficult ..... O

How useful do you think this question is for assessing your current health?

- Very useful ..... O
- Fairly useful ..... O
- Not that useful ... O
- Not at all useful .. O

Overall judgement about the health and well-being survey

These questions ask you to make a judgement about the twelve health questions you have just completed...

Overall, how easy or difficult were the health questions to answer?

- Very easy ..... O
- Fairly easy ..... O
- Fairly difficult ..... O
- Very difficult ..... O

Overall, how useful do you think these questions are for assessing your current health?

- Very useful ..... O
- Fairly useful ..... O
- Not that useful ... O
- Not at all useful .. O

General Health

The next three questions deal with your general health over the last year and your expectations for the year to come...

Over the past year, would you say your health has on the whole been...

Excellent	Very good	Good	Fair	Poor
○	○	○	○	○

Compared to one year ago, how would you rate your health in general now?

Much better now than one year ago	Somewhat better now than one year ago	About the same as one year ago	Somewhat worse now than one year ago	Much worse now than one year ago
○	○	○	○	○

Compared to your health in general now, what do you expect your health to be like in a year's time?

Much better in a year than now	Somewhat better in a year than now	About the same as it is now	Somewhat worse in a year than it is now	Much worse in a year than it is now
○	○	○	○	○

Long-standing illness

These questions ask about any long-standing illnesses you have. Please provide an answer to both questions...

Do you have any long-standing illness, disability or infirmity (that is, anything that has troubled you over a period of time, or that is likely to affect you over a period of time)?

Yes ○ No ○ *IF YES, please specify:*

.....

If you have any long-standing illness or disability, does it limit your activities in any way?

Yes	No	No long-standing illness or disability
○	○	○

HIV infection

If you are HIV positive, please answer the next four questions...

When were you diagnosed as HIV positive? ..... *(please specify the year)*

Are you currently taking medication for your HIV infection (ie. combination therapy, antiretroviral therapy / ART)?

Yes ○ No ○

What was the result of your most recent viral load test?

Undetectable (<250, <400)	○
400 – 1000	○
1001 – 10000	○
10001 – 100000	○
Over 100000	○
Don't know	○

What was the result of your most recent CD4 count? ..... *(please specify)*

Health concerns

The following questions ask about the level of concern you have for your health at the moment, and the amount of time you think about your health...

At the moment, how concerned are you about your health?

Not at all concerned	Not too concerned	Fairly concerned	Very concerned	Extremely concerned
○	○	○	○	○

In general, do you think that you are more concerned, less concerned, or have about the same level of concern about your health now as a year ago?

More concerned	About the same concern	Less concerned
○	○	○

Would you say you think about your health...

All of the time	Most of the time	Some of the time	A little of the time	None of the time
○	○	○	○	○

Health services contact

The next series of questions ask about any contact you may have had with health care services – that is, with a GP surgery, with a hospital casualty or outpatient department, as a hospital day patient, and finally as a hospital inpatient. Please provide an answer to the three questions in each section...

GP surgery contact

Have you ever had any illness or disability requiring medical care or advice from a GP surgery?

Yes	No
○	○

When did you most recently receive medical care or advice from a GP surgery?

Within the past year	1-5 years	More than 5 years	Not at all
○	○	○	○

<u>During the past year,</u> how many times have you received medical care or advice from a GP surgery?

Once	2-5 times	More than 5 times	Not at all
○	○	○	○

Hospital casualty or outpatient department contact

Have you ever been a patient of the casualty or outpatient departments of a hospital?

Yes	No
○	○

When were you most recently a patient of the casualty or outpatient departments of a hospital?

Within the past year	1-5 years	More than 5 years	Not at all
○	○	○	○

<u>During the past year</u>, how many times have you attended the casualty or outpatient departments of a hospital?

Once	2-5 times	More than 5 times	Not at all
○	○	○	○

Hospital day care contact

Have you ever been in hospital for treatment as a day patient (that is, admitted to a hospital bed or day ward, but not required to stay overnight)?

Yes	No
○	○

When was your most recent day patient admission?

Within the past year	1-5 years	More than 5 years	Not at all
○	○	○	○

During the past year, how many times have you been a day patient?

Once	2-5 times	More than 5 times	Not at all
○	○	○	○

Hospital inpatient contact

Have you ever had been in hospital as an inpatient (that is, staying overnight or longer)?

Yes	No
○	○

When was your most recent inpatient admission?

Within the past year	1-5 years	More than 5 years	Not at all
○	○	○	○

During the past year, how many times have you been an inpatient?

Once	2-5 times	More than 5 times	Not at all
○	○	○	○

Smoking and drinking habits

The next few questions ask about your current smoking and drinking habits. Please provide an answer to all questions in both sections...

Smoking habits

How would you describe your cigarette smoking?

Never smoked	Used to smoke	Still smoke
○	○	○

In an average day, how many cigarettes do you usually smoke? ..... cigarettes
(please specify – 0 for no cigarettes)

Drinking habits

How often do you have an alcoholic drink of any kind. Would you say you had a drink...

Every Day	5-6 times per week	3-4 times per week	1-2 times per week	1-2 times per month	Less than once a month	Never
○	○	○	○	○	○	○

In an average week, how many units of alcohol do you drink (a unit is half a pint of beer, a glass of wine or a single measure of spirit or liqueur)? ..... units
(please specify – 0 for no units)

	Yes	No
Have you ever felt you should cut down on your drinking?	○	○
Have people annoyed you by criticising your drinking?	○	○
Have you ever felt bad or guilty about your drinking?	○	○
Have you ever had a drink first thing in the morning to steady your nerves or to get rid of a hangover?	○	○

Personal characteristics

There follows a number of characteristics that may or may not apply to you. For example, do you agree that you are someone who *likes to spend time with others?* Please choose an answer for each statement to indicate the extent to which you agree or disagree with that statement.

I see myself as *someone who ...*

	Disagree strongly	Disagree a little	Neither agree nor disagree	Agree a little	Agree strongly
is talkative	○	○	○	○	○
is depressed, blue	○	○	○	○	○
is reserved	○	○	○	○	○
is relaxed, handles stress well	○	○	○	○	○
is full of energy	○	○	○	○	○
can be tense	○	○	○	○	○
generates a lot of enthusiasm	○	○	○	○	○
worries a lot	○	○	○	○	○
tends to be quiet	○	○	○	○	○
is emotionally stable, not easily upset	○	○	○	○	○
has an assertive personality	○	○	○	○	○
can be moody	○	○	○	○	○
is sometimes shy, inhibited	○	○	○	○	○
remains calm in tense situations	○	○	○	○	○
is outgoing, sociable	○	○	○	○	○
gets nervous easily	○	○	○	○	○

About you

The next few questions ask for some basic information about you...

Have you had any experiences of serious illness among people close to you, such as family or friends?

No experience	A little experience	Some experience	Quite a bit of experience	A lot of experience
○	○	○	○	○

How old were you on your last birthday (in whole years)? ..... years
(please specify)

Are you...
Male ..... ○
Female .... ○

What is your ethnic group...
(please select one option)

White
British ..... ○
Irish ..... ○
Any other white background ..... ○

Mixed
White and Black Caribbean ..... ○
White and Asian ..... ○
Any other mixed background ..... ○

Asian or Asian British
Indian ..... ○
Pakistani ..... ○
Bangladeshi ..... ○
Any other Asian background ..... ○

Black or Black British
Caribbean ..... ○
African ..... ○
Any other Black background ..... ○

Chinese or Other ethnic group
Chinese ..... ○
Other ..... ○

What is your highest level of education completed, or in the process of being completed?

Primary school, or equivalent ..... ○
Secondary school, or equivalent ..... ○
Further education / sixth form college, or equivalent .. ○
Higher education / university ..... ○
Post-graduate ..... ○
Other (*please specify below*) ..... ○

.....

Are you currently...
(please select as many options as apply)

Working full-time (30 hours a week or more), employed or self-employed ..... ○
Working part-time (less than 30 hours a week), employed or self-employed... ○

Studying full-time ..... ○
Studying part-time ..... ○

Caring for your home and family or dependants ..... ○

Unemployed and seeking work ..... ○

Long-term sick or disabled, unable to work ..... ○

Other (*please specify below*) ..... ○

.....

That is the end of the questionnaire.
Thank you very much for completing these questions.

APPENDIX 18: HIV advertisement

Health perceptions study

Volunteers are urgently required for a survey investigating how people understand and answer questions about their general health. Results will be used to improve the measurement of health in a range of settings, including clinical trials and surveys.

To take part you should be:
- diagnosed HIV positive
- aged 18 years or over
- willing to answer questions about your health

Questionnaires should take only around 10 minutes to complete and participants will be eligible to enter a £100 prize draw.

If you are interested in taking part, send your name and postal address to:

Steven Hope,
Sociology Department,
City University,
London EC1V 0HB
(or email this information to s.c.hope@city.ac.uk).

Please indicate whether or not you would like to enter the prize draw.

You will be posted more information about the study, a questionnaire to complete and a reply-paid return envelope. You will not be sent anything identifying you as HIV positive.

All information you provide is confidential and anonymous.

APPENDIX 19: Reminder letter

City University London

Health Perceptions Study

Dear participant,

I contacted you recently about some research I am currently undertaking. You may have already returned the Health Perceptions Study questionnaire that I sent you, in which case I would very much like to thank you for your help. If you have not yet had a chance to fill in the questionnaire, I would be grateful if you could complete and return it on or before 12th April 2005.

In a study of this kind, it is extremely important that as many people as possible take part. For this reason, you may be able to assist me in my research by helping me to recruit other participants. If you know of anyone else who meets the Health Perceptions Study criteria, please give them the spare questionnaire and reply-paid envelope. If they also wish to register to take part in the prize draw, they should return the form attached to the back of the questionnaire by post, or e-mail these details to me (s.c.hope@city.ac.uk).

Thank you very much for your assistance.

Steven Hope
Research Student

APPENDIX 20: Item distributions

1. SF-12v2

GH01

Study Group * SFQ1/GH01 general health Crosstabulation

			SFQ1/GH01 general health					
			Excellent	Very good	Good	Fair	Poor	Total
Study Group	University	Count	7	27	27	3	0	64
		% within Study Group	10.9%	42.2%	42.2%	4.7%	.0%	100.0%
	HIV	Count	4	14	30	16	8	72
		% within Study Group	5.6%	19.4%	41.7%	22.2%	11.1%	100.0%
Total		Count	11	41	57	19	8	136
		% within Study Group	8.1%	30.1%	41.9%	14.0%	5.9%	100.0%

PF02

Study Group * SFQ2a/PF02 physical functioning - mod activities Crosstabulation

			SFQ2a/PF02 physical functioning - mod activities			
			Yes, limited a lot	Yes, limited a little	No, not limited at all	Total
Study Group	University	Count	0	5	59	64
		% within Study Group	.0%	7.8%	92.2%	100.0%
	HIV	Count	11	21	40	72
		% within Study Group	15.3%	29.2%	55.6%	100.0%
Total		Count	11	26	99	136
		% within Study Group	8.1%	19.1%	72.8%	100.0%

PF04

Study Group * SFQ2b/PF04 physical functioning - climbing stairs Crosstabulation

			SFQ2b/PF04 physical functioning - climbing stairs			
			Yes, limited a lot	Yes, limited a little	No, not limited at all	Total
Study Group	University	Count	0	14	50	64
		% within Study Group	.0%	21.9%	78.1%	100.0%
	HIV	Count	16	26	30	72
		% within Study Group	22.2%	36.1%	41.7%	100.0%
Total		Count	16	40	80	136
		% within Study Group	11.8%	29.4%	58.8%	100.0%

RP02

Study Group * SFQ3a/RP02 role physical - accomplished less Crosstabulation

			SFQ3a/RP02 role physical - accomplished less					
			All of the time	Most of the time	Some of the time	A little of the time	None of the time	Total
Study Group	University	Count	0	5	17	11	30	63
		% within Study Group	.0%	7.9%	27.0%	17.5%	47.6%	100.0%
	HIV	Count	4	19	23	13	13	72
		% within Study Group	5.6%	26.4%	31.9%	18.1%	18.1%	100.0%
Total		Count	4	24	40	24	43	135
		% within Study Group	3.0%	17.8%	29.6%	17.8%	31.9%	100.0%

RP03

Study Group * SFQ3b/RP03 role physical - limited in kind of work Crosstabulation

			SFQ3b/RP03 role physical - limited in kind of work					
			All of the time	Most of the time	Some of the time	A little of the time	None of the time	Total
Study Group	University	Count	0	3	11	13	35	62
		% within Study Group	.0%	4.8%	17.7%	21.0%	56.5%	100.0%
	HIV	Count	8	10	25	10	19	72
		% within Study Group	11.1%	13.9%	34.7%	13.9%	26.4%	100.0%
Total		Count	8	13	36	23	54	134
		% within Study Group	6.0%	9.7%	26.9%	17.2%	40.3%	100.0%

RE02

Study Group * SFQ4a/RE02 role emotional - accomplished less Crosstabulation

			SFQ4a/RE02 role emotional - accomplished less					
			All of the time	Most of the time	Some of the time	A little of the time	None of the time	Total
Study Group	University	Count	2	4	18	23	14	61
		% within Study Group	3.3%	6.6%	29.5%	37.7%	23.0%	100.0%
	HIV	Count	6	14	27	13	12	72
		% within Study Group	8.3%	19.4%	37.5%	18.1%	16.7%	100.0%
Total		Count	8	18	45	36	26	133
		% within Study Group	6.0%	13.5%	33.8%	27.1%	19.5%	100.0%

RE03

Study Group * SFQ4b/RE03 role emotional - less careful Crosstabulation

			SFQ4b/RE03 role emotional - less careful					
			All of the time	Most of the time	Some of the time	A little of the time	None of the time	Total
Study Group	University	Count	0	2	9	25	26	62
		% within Study Group	.0%	3.2%	14.5%	40.3%	41.9%	100.0%
	HIV	Count	4	11	20	18	19	72
		% within Study Group	5.6%	15.3%	27.8%	25.0%	26.4%	100.0%
Total		Count	4	13	29	43	45	134
		% within Study Group	3.0%	9.7%	21.6%	32.1%	33.6%	100.0%

BP02

Study Group * SFQ5/BP02 bodily pain - pain interferes with work Crosstabulation

			SFQ5/BP02 bodily pain - pain interferes with work					
			Not at all	A little bit	Moderately	Quite a bit	Extremely	Total
Study Group	University	Count	34	19	3	6	1	63
		% within Study Group	54.0%	30.2%	4.8%	9.5%	1.6%	100.0%
	HIV	Count	27	16	11	12	4	70
		% within Study Group	38.6%	22.9%	15.7%	17.1%	5.7%	100.0%
Total		Count	61	35	14	18	5	133
		% within Study Group	45.9%	26.3%	10.5%	13.5%	3.8%	100.0%

MH03

Study Group * SFQ6a/MH03 mental health - calm and peaceful Crosstabulation

			SFQ6a/MH03 mental health - calm and peaceful					
			All of the time	Most of the time	Some of the time	A little of the time	None of the time	Total
Study Group	University	Count	3	28	17	11	4	63
		% within Study Group	4.8%	44.4%	27.0%	17.5%	6.3%	100.0%
	HIV	Count	4	17	20	22	9	72
		% within Study Group	5.6%	23.6%	27.8%	30.6%	12.5%	100.0%
Total		Count	7	45	37	33	13	135
		% within Study Group	5.2%	33.3%	27.4%	24.4%	9.6%	100.0%

MH04

Study Group * SFQ6c/MH04 mental health - downhearted and depressed Crosstabulation

			SFQ6c/MH04 mental health - downhearted and depressed					
			All of the time	Most of the time	Some of the time	A little of the time	None of the time	Total
Study Group	University	Count	1	6	13	30	14	64
		% within Study Group	1.6%	9.4%	20.3%	46.9%	21.9%	100.0%
	HIV	Count	6	12	30	19	5	72
		% within Study Group	8.3%	16.7%	41.7%	26.4%	6.9%	100.0%
Total		Count	7	18	43	49	19	136
		% within Study Group	5.1%	13.2%	31.6%	36.0%	14.0%	100.0%

VT02

Study Group * SFQ6b/VT02 vitality- energy Crosstabulation

			SFQ6b/VT02 vitality- energy					
			All of the time	Most of the time	Some of the time	A little of the time	None of the time	Total
Study Group	University	Count	2	26	23	12	1	64
		% within Study Group	3.1%	40.6%	35.9%	18.8%	1.6%	100.0%
	HIV	Count	1	19	22	18	12	72
		% within Study Group	1.4%	26.4%	30.6%	25.0%	16.7%	100.0%
Total		Count	3	45	45	30	13	136
		% within Study Group	2.2%	33.1%	33.1%	22.1%	9.6%	100.0%

SF02

Study Group * SFQ7/SF02 social functioning - health interferred with social Crosstabulation

			SFQ7/SF02 social functioning - health interferred with social					
			All of the time	Most of the time	Some of the time	A little of the time	None of the time	Total
Study Group	University	Count	2	7	10	14	31	64
		% within Study Group	3.1%	10.9%	15.6%	21.9%	48.4%	100.0%
	HIV	Count	5	15	25	13	14	72
		% within Study Group	6.9%	20.8%	34.7%	18.1%	19.4%	100.0%
Total		Count	7	22	35	27	45	136
		% within Study Group	5.1%	16.2%	25.7%	19.9%	33.1%	100.0%

2. Response strategy

GH01

Study Group * SFQ1 response strategy Crosstabulation

			SFQ1 response strategy						
			Comparing yourself to others	A general picture of yourself	Specific experiences	Not sure: the answer just came to me	Response options	comparison with past	Total
Study Group	University	Count	5	52	2	2	1	2	64
		% within Study Group	7.8%	81.3%	3.1%	3.1%	1.6%	3.1%	100.0%
	HIV	Count	7	47	14	3	0	1	72
		% within Study Group	9.7%	65.3%	19.4%	4.2%	.0%	1.4%	100.0%
Total		Count	12	99	16	5	1	3	136
		% within Study Group	8.8%	72.8%	11.8%	3.7%	.7%	2.2%	100.0%

PF02

Study Group * SFQ2a response strategy Crosstabulation

			SFQ2a response strategy				
			Comparing yourself to others	A general picture of yourself	Specific experiences	Not sure: the answer just came to me	Total
Study Group	University	Count	0	47	16	1	64
		% within Study Group	.0%	73.4%	25.0%	1.6%	100.0%
	HIV	Count	11	33	27	1	72
		% within Study Group	15.3%	45.8%	37.5%	1.4%	100.0%
Total		Count	11	80	43	2	136
		% within Study Group	8.1%	58.8%	31.6%	1.5%	100.0%

PF04

Study Group * SFQ2b response strategy Crosstabulation

			SFQ2b response strategy			
			Comparing yourself to others	A general picture of yourself	Specific experiences	Total
Study Group	University	Count	5	38	21	64
		% within Study Group	7.8%	59.4%	32.8%	100.0%
	HIV	Count	8	38	26	72
		% within Study Group	11.1%	52.8%	36.1%	100.0%
Total		Count	13	76	47	136
		% within Study Group	9.6%	55.9%	34.6%	100.0%

RP02

Study Group * SFQ3a response strategy Crosstabulation

			SFQ3a response strategy				
			Comparing yourself to others	A general picture of yourself	Specific experiences	Not sure: the answer just came to me	Total
Study Group	University	Count	3	34	25	1	63
		% within Study Group	4.8%	54.0%	39.7%	1.6%	100.0%
	HIV	Count	8	37	26	1	72
		% within Study Group	11.1%	51.4%	36.1%	1.4%	100.0%
Total		Count	11	71	51	2	135
		% within Study Group	8.1%	52.6%	37.8%	1.5%	100.0%

RP03

Study Group * SFQ3b response strategy Crosstabulation

			SFQ3b response strategy				
			Comparing yourself to others	A general picture of yourself	Specific experiences	Not sure: the answer just came to me	Total
Study Group	University	Count	3	36	22	1	62
		% within Study Group	4.8%	58.1%	35.5%	1.6%	100.0%
	HIV	Count	11	35	25	1	72
		% within Study Group	15.3%	48.6%	34.7%	1.4%	100.0%
Total		Count	14	71	47	2	134
		% within Study Group	10.4%	53.0%	35.1%	1.5%	100.0%

RE02

Study Group * SFQ4a response strategy Crosstabulation

			SFQ4a response strategy				
			Comparing yourself to others	A general picture of yourself	Specific experiences	Not sure: the answer just came to me	Total
Study Group	University	Count	2	35	22	2	61
		% within Study Group	3.3%	57.4%	36.1%	3.3%	100.0%
	HIV	Count	3	39	29	1	72
		% within Study Group	4.2%	54.2%	40.3%	1.4%	100.0%
Total		Count	5	74	51	3	133
		% within Study Group	3.8%	55.6%	38.3%	2.3%	100.0%

RE03

Study Group * SFQ4b response strategy Crosstabulation

			SFQ4b response strategy				
			Comparing yourself to others	A general picture of yourself	Specific experiences	Not sure: the answer just came to me	Total
Study Group	University	Count	1	43	15	3	62
		% within Study Group	1.6%	69.4%	24.2%	4.8%	100.0%
	HIV	Count	6	36	27	3	72
		% within Study Group	8.3%	50.0%	37.5%	4.2%	100.0%
Total		Count	7	79	42	6	134
		% within Study Group	5.2%	59.0%	31.3%	4.5%	100.0%

BP02

Study Group * SFQ5 response strategy Crosstabulation

			SFQ5 response strategy				
			Comparing yourself to others	A general picture of yourself	Specific experiences	Not sure: the answer just came to me	Total
Study Group	University	Count	1	37	23	2	63
		% within Study Group	1.6%	58.7%	36.5%	3.2%	100.0%
	HIV	Count	3	36	31	1	71
		% within Study Group	4.2%	50.7%	43.7%	1.4%	100.0%
Total		Count	4	73	54	3	134
		% within Study Group	3.0%	54.5%	40.3%	2.2%	100.0%

MH03

Study Group * SFQ6a response strategy Crosstabulation

			SFQ6a response strategy				
			Comparing yourself to others	A general picture of yourself	Specific experiences	Not sure: the answer just came to me	Total
Study Group	University	Count	3	42	17	1	63
		% within Study Group	4.8%	66.7%	27.0%	1.6%	100.0%
	HIV	Count	7	46	17	1	71
		% within Study Group	9.9%	64.8%	23.9%	1.4%	100.0%
Total		Count	10	88	34	2	134
		% within Study Group	7.5%	65.7%	25.4%	1.5%	100.0%

VT02

Study Group * SFQ6b response strategy Crosstabulation

			SFQ6b response strategy				
			Comparing yourself to others	A general picture of yourself	Specific experiences	Not sure: the answer just came to me	Total
Study Group	University	Count	3	44	16	0	63
		% within Study Group	4.8%	69.8%	25.4%	.0%	100.0%
	HIV	Count	4	45	22	1	72
		% within Study Group	5.6%	62.5%	30.6%	1.4%	100.0%
Total		Count	7	89	38	1	135
		% within Study Group	5.2%	65.9%	28.1%	.7%	100.0%

MH04

Study Group * SFQ6c response strategy Crosstabulation

			SFQ6c response strategy				
			Comparing yourself to others	A general picture of yourself	Specific experiences	Not sure: the answer just came to me	Total
Study Group	University	Count	4	38	20	1	63
		% within Study Group	6.3%	60.3%	31.7%	1.6%	100.0%
	HIV	Count	4	47	20	1	72
		% within Study Group	5.6%	65.3%	27.8%	1.4%	100.0%
Total		Count	8	85	40	2	135
		% within Study Group	5.9%	63.0%	29.6%	1.5%	100.0%

SF02

Study Group * SFQ7 response strategy Crosstabulation

			SFQ7 response strategy				
			Comparing yourself to others	A general picture of yourself	Specific experiences	Not sure: the answer just came to me	Total
Study Group	University	Count	3	38	21	0	62
		% within Study Group	4.8%	61.3%	33.9%	.0%	100.0%
	HIV	Count	7	40	22	3	72
		% within Study Group	9.7%	55.6%	30.6%	4.2%	100.0%
Total		Count	10	78	43	3	134
		% within Study Group	7.5%	58.2%	32.1%	2.2%	100.0%

3. Easiness rating

GH01

Study Group * SFQ1 ease of completion Crosstabulation

			SFQ1 ease of completion				
			Very easy	Fairly easy	Fairly difficult	Very difficult	Total
Study Group	University	Count	25	35	4	0	64
		% within Study Group	39.1%	54.7%	6.3%	.0%	100.0%
	HIV	Count	31	33	7	1	72
		% within Study Group	43.1%	45.8%	9.7%	1.4%	100.0%
Total		Count	56	68	11	1	136
		% within Study Group	41.2%	50.0%	8.1%	.7%	100.0%

PF02

Study Group * SFQ2a ease of completion Crosstabulation

			SFQ2a ease of completion			
			Very easy	Fairly easy	Fairly difficult	Total
Study Group	University	Count	40	22	1	63
		% within Study Group	63.5%	34.9%	1.6%	100.0%
	HIV	Count	47	22	3	72
		% within Study Group	65.3%	30.6%	4.2%	100.0%
Total		Count	87	44	4	135
		% within Study Group	64.4%	32.6%	3.0%	100.0%

PF04

Study Group * SFQ2b ease of completion Crosstabulation

			SFQ2b ease of completion			
			Very easy	Fairly easy	Fairly difficult	Total
Study Group	University	Count	36	28	0	64
		% within Study Group	56.3%	43.8%	.0%	100.0%
	HIV	Count	39	32	1	72
		% within Study Group	54.2%	44.4%	1.4%	100.0%
Total		Count	75	60	1	136
		% within Study Group	55.1%	44.1%	.7%	100.0%

RP02

Study Group * SFQ3a ease of completion Crosstabulation

			SFQ3a ease of completion				
			Very easy	Fairly easy	Fairly difficult	Very difficult	Total
Study Group	University	Count	19	31	12	2	64
		% within Study Group	29.7%	48.4%	18.8%	3.1%	100.0%
	HIV	Count	33	30	9	0	72
		% within Study Group	45.8%	41.7%	12.5%	.0%	100.0%
Total		Count	52	61	21	2	136
		% within Study Group	38.2%	44.9%	15.4%	1.5%	100.0%

RP03

Study Group * SFQ3b ease of completion Crosstabulation

			SFQ3b ease of completion				
			Very easy	Fairly easy	Fairly difficult	Very difficult	Total
Study Group	University	Count	19	33	9	2	63
		% within Study Group	30.2%	52.4%	14.3%	3.2%	100.0%
	HIV	Count	34	31	6	1	72
		% within Study Group	47.2%	43.1%	8.3%	1.4%	100.0%
Total		Count	53	64	15	3	135
		% within Study Group	39.3%	47.4%	11.1%	2.2%	100.0%

RE02

Study Group * SFQ4a ease of completion Crosstabulation

			SFQ4a ease of completion				
			Very easy	Fairly easy	Fairly difficult	Very difficult	Total
Study Group	University	Count	27	30	4	1	62
		% within Study Group	43.5%	48.4%	6.5%	1.6%	100.0%
	HIV	Count	33	32	7	0	72
		% within Study Group	45.8%	44.4%	9.7%	.0%	100.0%
Total		Count	60	62	11	1	134
		% within Study Group	44.8%	46.3%	8.2%	.7%	100.0%

RE03

Study Group * SFQ4b ease of completion Crosstabulation

			SFQ4b ease of completion				
			Very easy	Fairly easy	Fairly difficult	Very difficult	Total
Study Group	University	Count	21	33	8	1	63
		% within Study Group	33.3%	52.4%	12.7%	1.6%	100.0%
	HIV	Count	29	32	11	0	72
		% within Study Group	40.3%	44.4%	15.3%	.0%	100.0%
Total		Count	50	65	19	1	135
		% within Study Group	37.0%	48.1%	14.1%	.7%	100.0%

BP02

Study Group * SFQ5 ease of completion Crosstabulation

			SFQ5 ease of completion				
			Very easy	Fairly easy	Fairly difficult	Very difficult	Total
Study Group	University	Count	35	24	2	2	63
		% within Study Group	55.6%	38.1%	3.2%	3.2%	100.0%
	HIV	Count	49	20	2	0	71
		% within Study Group	69.0%	28.2%	2.8%	.0%	100.0%
Total		Count	84	44	4	2	134
		% within Study Group	62.7%	32.8%	3.0%	1.5%	100.0%

MH03

Study Group * SFQ6a ease of completion Crosstabulation

			SFQ6a ease of completion			
			Very easy	Fairly easy	Fairly difficult	Total
Study Group	University	Count	25	32	6	63
		% within Study Group	39.7%	50.8%	9.5%	100.0%
	HIV	Count	42	26	3	71
		% within Study Group	59.2%	36.6%	4.2%	100.0%
Total		Count	67	58	9	134
		% within Study Group	50.0%	43.3%	6.7%	100.0%

MH04

Study Group * SFQ6b ease of completion Crosstabulation

			SFQ6b ease of completion			
			Very easy	Fairly easy	Fairly difficult	Total
Study Group	University	Count	26	35	3	64
		% within Study Group	40.6%	54.7%	4.7%	100.0%
	HIV	Count	44	27	1	72
		% within Study Group	61.1%	37.5%	1.4%	100.0%
Total		Count	70	62	4	136
		% within Study Group	51.5%	45.6%	2.9%	100.0%

VT02

Study Group * SFQ7 ease of completion Crosstabulation

			SFQ7 ease of completion				
			Very easy	Fairly easy	Fairly difficult	Very difficult	Total
Study Group	University	Count	28	31	4	0	63
		% within Study Group	44.4%	49.2%	6.3%	.0%	100.0%
	HIV	Count	41	24	6	1	72
		% within Study Group	56.9%	33.3%	8.3%	1.4%	100.0%
Total		Count	69	55	10	1	135
		% within Study Group	51.1%	40.7%	7.4%	.7%	100.0%

SF02

Study Group * SFQ6c ease of completion Crosstabulation

			SFQ6c ease of completion				
			Very easy	Fairly easy	Fairly difficult	Very difficult	Total
Study Group	University	Count	23	34	6	1	64
		% within Study Group	35.9%	53.1%	9.4%	1.6%	100.0%
	HIV	Count	41	26	5	0	72
		% within Study Group	56.9%	36.1%	6.9%	.0%	100.0%
Total		Count	64	60	11	1	136
		% within Study Group	47.1%	44.1%	8.1%	.7%	100.0%

OVERALL RATING

Study Group * SFoverall ease of completion Crosstabulation

			SFoverall ease of completion			
			Very easy	Fairly easy	Fairly difficult	Total
Study Group	University	Count	13	49	2	64
		% within Study Group	20.3%	76.6%	3.1%	100.0%
	HIV	Count	33	35	4	72
		% within Study Group	45.8%	48.6%	5.6%	100.0%
Total		Count	46	84	6	136
		% within Study Group	33.8%	61.8%	4.4%	100.0%

4. Usefulness rating

GH01

Study Group * SFQ1 usefulness of question for assessing your health Crosstabulation

			SFQ1 usefulness of question for assessing your health				
			Very useful	Fairly useful	Not that useful	Not at all useful	Total
Study Group	University	Count	9	32	18	4	63
		% within Study Group	14.3%	50.8%	28.6%	6.3%	100.0%
	HIV	Count	18	31	22	1	72
		% within Study Group	25.0%	43.1%	30.6%	1.4%	100.0%
Total		Count	27	63	40	5	135
		% within Study Group	20.0%	46.7%	29.6%	3.7%	100.0%

PF02

Study Group * SFQ2a usefulness of question for assessing your health Crosstabulation

			SFQ2a usefulness of question for assessing your health				
			Very useful	Fairly useful	Not that useful	Not at all useful	Total
Study Group	University	Count	9	34	18	2	63
		% within Study Group	14.3%	54.0%	28.6%	3.2%	100.0%
	HIV	Count	22	32	15	3	72
		% within Study Group	30.6%	44.4%	20.8%	4.2%	100.0%
Total		Count	31	66	33	5	135
		% within Study Group	23.0%	48.9%	24.4%	3.7%	100.0%

PF04

Study Group * SFQ2b usefulness of question for assessing your health Crosstabulation

			SFQ2b usefulness of question for assessing your health				
			Very useful	Fairly useful	Not that useful	Not at all useful	Total
Study Group	University	Count	9	40	12	3	64
		% within Study Group	14.1%	62.5%	18.8%	4.7%	100.0%
	HIV	Count	25	32	14	1	72
		% within Study Group	34.7%	44.4%	19.4%	1.4%	100.0%
Total		Count	34	72	26	4	136
		% within Study Group	25.0%	52.9%	19.1%	2.9%	100.0%

RP02

Study Group * SFQ3a usefulness of question for assessing your health Crosstabulation

			SFQ3a usefulness of question for assessing your health				
			Very useful	Fairly useful	Not that useful	Not at all useful	Total
Study Group	University	Count	11	29	21	2	63
		% within Study Group	17.5%	46.0%	33.3%	3.2%	100.0%
	HIV	Count	24	36	10	2	72
		% within Study Group	33.3%	50.0%	13.9%	2.8%	100.0%
Total		Count	35	65	31	4	135
		% within Study Group	25.9%	48.1%	23.0%	3.0%	100.0%

RP03

Study Group * SFQ3b usefulness of question for assessing your health Crosstabulation

			SFQ3b usefulness of question for assessing your health				
			Very useful	Fairly useful	Not that useful	Not at all useful	Total
Study Group	University	Count	10	36	14	2	62
		% within Study Group	16.1%	58.1%	22.6%	3.2%	100.0%
	HIV	Count	21	40	9	2	72
		% within Study Group	29.2%	55.6%	12.5%	2.8%	100.0%
Total		Count	31	76	23	4	134
		% within Study Group	23.1%	56.7%	17.2%	3.0%	100.0%

RE02

Study Group * SFQ4a usefulness of question for assessing your health Crosstabulation

			SFQ4a usefulness of question for assessing your health				
			Very useful	Fairly useful	Not that useful	Not at all useful	Total
Study Group	University	Count	9	42	9	1	61
		% within Study Group	14.8%	68.9%	14.8%	1.6%	100.0%
	HIV	Count	32	30	8	2	72
		% within Study Group	44.4%	41.7%	11.1%	2.8%	100.0%
Total		Count	41	72	17	3	133
		% within Study Group	30.8%	54.1%	12.8%	2.3%	100.0%

RE03

Study Group * SFQ4b usefulness of question for assessing your health Crosstabulation

			SFQ4b usefulness of question for assessing your health				
			Very useful	Fairly useful	Not that useful	Not at all useful	Total
Study Group	University	Count	7	36	17	2	62
		% within Study Group	11.3%	58.1%	27.4%	3.2%	100.0%
	HIV	Count	17	35	17	3	72
		% within Study Group	23.6%	48.6%	23.6%	4.2%	100.0%
Total		Count	24	71	34	5	134
		% within Study Group	17.9%	53.0%	25.4%	3.7%	100.0%

BP02

Study Group * SFQ5 usefulness of question for assessing your health Crosstabulation

			SFQ5 usefulness of question for assessing your health				
			Very useful	Fairly useful	Not that useful	Not at all useful	Total
Study Group	University	Count	10	36	14	3	63
		% within Study Group	15.9%	57.1%	22.2%	4.8%	100.0%
	HIV	Count	30	31	8	1	70
		% within Study Group	42.9%	44.3%	11.4%	1.4%	100.0%
Total		Count	40	67	22	4	133
		% within Study Group	30.1%	50.4%	16.5%	3.0%	100.0%

MH03

Study Group * SFQ6a usefulness of question for assessing your health Crosstabulation

			SFQ6a usefulness of question for assessing your health				
			Very useful	Fairly useful	Not that useful	Not at all useful	Total
Study Group	University	Count	14	36	11	2	63
		% within Study Group	22.2%	57.1%	17.5%	3.2%	100.0%
	HIV	Count	33	23	12	3	71
		% within Study Group	46.5%	32.4%	16.9%	4.2%	100.0%
Total		Count	47	59	23	5	134
		% within Study Group	35.1%	44.0%	17.2%	3.7%	100.0%

MH04

Study Group * SFQ6b usefulness of question for assessing your health Crosstabulation

			SFQ6b usefulness of question for assessing your health				
			Very useful	Fairly useful	Not that useful	Not at all useful	Total
Study Group	University	Count	19	32	12	1	64
		% within Study Group	29.7%	50.0%	18.8%	1.6%	100.0%
	HIV	Count	35	28	8	1	72
		% within Study Group	48.6%	38.9%	11.1%	1.4%	100.0%
Total		Count	54	60	20	2	136
		% within Study Group	39.7%	44.1%	14.7%	1.5%	100.0%

VT02

Study Group * SFQ6c usefulness of question for assessing your health Crosstabulation

			SFQ6c usefulness of question for assessing your health				
			Very useful	Fairly useful	Not that useful	Not at all useful	Total
Study Group	University	Count	13	34	16	1	64
		% within Study Group	20.3%	53.1%	25.0%	1.6%	100.0%
	HIV	Count	38	25	7	2	72
		% within Study Group	52.8%	34.7%	9.7%	2.8%	100.0%
Total		Count	51	59	23	3	136
		% within Study Group	37.5%	43.4%	16.9%	2.2%	100.0%

SF02

Study Group * SFQ7 usefulness of question for assessing your health Crosstabulation

			SFQ7 usefulness of question for assessing your health				
			Very useful	Fairly useful	Not that useful	Not at all useful	Total
Study Group	University	Count	14	36	11	2	63
		% within Study Group	22.2%	57.1%	17.5%	3.2%	100.0%
	HIV	Count	31	30	10	1	72
		% within Study Group	43.1%	41.7%	13.9%	1.4%	100.0%
Total		Count	45	66	21	3	135
		% within Study Group	33.3%	48.9%	15.6%	2.2%	100.0%

OVERALL RATING

Study Group * SFoverall usefulness for assessing your health Crosstabulation

			SFoverall usefulness for assessing your health				
			Very useful	Fairly useful	Not that useful	Not at all useful	Total
Study Group	University	Count	6	45	13	0	64
		% within Study Group	9.4%	70.3%	20.3%	.0%	100.0%
	HIV	Count	22	36	12	2	72
		% within Study Group	30.6%	50.0%	16.7%	2.8%	100.0%
Total		Count	28	81	25	2	136
		% within Study Group	20.6%	59.6%	18.4%	1.5%	100.0%

5. Sociodemographics

GENDER

Study Group * Respondent gender Crosstabulation

			Respondent gender		
			Male	Female	Total
Study Group	University	Count	25	38	63
		% within Study Group	39.7%	60.3%	100.0%
	HIV	Count	58	13	71
		% within Study Group	81.7%	18.3%	100.0%
Total		Count	83	51	134
		% within Study Group	61.9%	38.1%	100.0%

AGE

Descriptives

	Study Group			Statistic	Std. Error
Respondent age	University	Mean		34.97	1.360
		95% Confidence Interval for Mean	Lower Bound	32.25	
			Upper Bound	37.69	
		5% Trimmed Mean		34.30	
		Median		31.50	
		Variance		110.914	
		Std. Deviation		10.532	
		Minimum		22	
		Maximum		61	
		Range		39	
		Interquartile Range		14	
		Skewness		.901	.309
		Kurtosis		.011	.608
	HIV	Mean		43.92	1.082
		95% Confidence Interval for Mean	Lower Bound	41.76	
			Upper Bound	46.07	
		5% Trimmed Mean		43.64	
		Median		42.00	
		Variance		83.078	
		Std. Deviation		9.115	
		Minimum		27	
		Maximum		71	
		Range		44	
		Interquartile Range		12	
		Skewness		.622	.285
		Kurtosis		.218	.563

ETHNICITY

Study Group * Respondent ethnicity Crosstabulation

			Respondent ethnicity										
			White-British	White-Irish	White-Other	Mixed-White/ Asian	Asian-Indian	Asian-Other	Black-Carib	Black-Afr	Chinese	Other	Total
Study Group	University	Count	18	2	28	1	1	3	3	4	2	1	63
		% within Study Group	28.6%	3.2%	44.4%	1.6%	1.6%	4.8%	4.8%	6.3%	3.2%	1.6%	100.0%
	HIV	Count	43	4	17	0	0	1	0	6	0	1	72
		% within Study Group	59.7%	5.6%	23.6%	.0%	.0%	1.4%	.0%	8.3%	.0%	1.4%	100.0%
Total		Count	61	6	45	1	1	4	3	10	2	2	135
		% within Study Group	45.2%	4.4%	33.3%	.7%	.7%	3.0%	2.2%	7.4%	1.5%	1.5%	100.0%

EDUCATION

Study Group * Respondent education Crosstabulation

			Respondent education					
			Primary school	Secondary school	Further education	Higher education	Post-graduate	Total
Study Group	University	Count	0	0	7	11	45	63
		% within Study Group	.0%	.0%	11.1%	17.5%	71.4%	100.0%
	HIV	Count	1	10	16	32	13	72
		% within Study Group	1.4%	13.9%	22.2%	44.4%	18.1%	100.0%
Total		Count	1	10	23	43	58	135
		% within Study Group	.7%	7.4%	17.0%	31.9%	43.0%	100.0%

ROLES OCCUPIED

Study Group * Work status - ft employed Crosstabulation

			Work status - ft employed		
			Not ticked	Ticked	Total
Study Group	University	Count	31	33	64
		% within Study Group	48.4%	51.6%	100.0%
	HIV	Count	49	23	72
		% within Study Group	68.1%	31.9%	100.0%
Total		Count	80	56	136
		% within Study Group	58.8%	41.2%	100.0%

Study Group * Work status - pt employed Crosstabulation

			Work status - pt employed		
			Not ticked	Ticked	Total
Study Group	University	Count	50	14	64
		% within Study Group	78.1%	21.9%	100.0%
	HIV	Count	60	12	72
		% within Study Group	83.3%	16.7%	100.0%
Total		Count	110	26	136
		% within Study Group	80.9%	19.1%	100.0%

Study Group * Work status - ft study Crosstabulation

			Work status - ft study		
			Not ticked	Ticked	Total
Study Group	University	Count	39	25	64
		% within Study Group	60.9%	39.1%	100.0%
	HIV	Count	68	4	72
		% within Study Group	94.4%	5.6%	100.0%
Total		Count	107	29	136
		% within Study Group	78.7%	21.3%	100.0%

Study Group * Work status - pt study Crosstabulation

			Work status - pt study		
			Not ticked	Ticked	Total
Study Group	University	Count	50	14	64
		% within Study Group	78.1%	21.9%	100.0%
	HIV	Count	67	5	72
		% within Study Group	93.1%	6.9%	100.0%
Total		Count	117	19	136
		% within Study Group	86.0%	14.0%	100.0%

Study Group * Work status - caring for home and family Crosstabulation

			Work status - caring for home and family		
			Not ticked	Ticked	Total
Study Group	University	Count	55	9	64
		% within Study Group	85.9%	14.1%	100.0%
	HIV	Count	67	5	72
		% within Study Group	93.1%	6.9%	100.0%
Total		Count	122	14	136
		% within Study Group	89.7%	10.3%	100.0%

Study Group * Work status - unemployed Crosstabulation

			Work status - unemployed		
			Not ticked	Ticked	Total
Study Group	University	Count	64	0	64
		% within Study Group	100.0%	.0%	100.0%
	HIV	Count	67	5	72
		% within Study Group	93.1%	6.9%	100.0%
Total		Count	131	5	136
		% within Study Group	96.3%	3.7%	100.0%

Study Group * Work status - long-term sick Crosstabulation

			Work status - long-term sick		
			Not ticked	Ticked	Total
Study Group	University	Count	64	0	64
		% within Study Group	100.0%	.0%	100.0%
	HIV	Count	43	29	72
		% within Study Group	59.7%	40.3%	100.0%
Total		Count	107	29	136
		% within Study Group	78.7%	21.3%	100.0%

6. General Health

GENERAL HEALTH IN PAST YEAR

Study Group * health in past year Crosstabulation

			health in past year					
			Excellent	Very good	Good	Fair	Poor	Total
Study Group	University	Count	1	33	23	5	1	63
		% within Study Group	1.6%	52.4%	36.5%	7.9%	1.6%	100.0%
	HIV	Count	2	16	23	22	9	72
		% within Study Group	2.8%	22.2%	31.9%	30.6%	12.5%	100.0%
Total		Count	3	49	46	27	10	135
		% within Study Group	2.2%	36.3%	34.1%	20.0%	7.4%	100.0%

HEALTH CHANGE IN YEAR

Study Group * health compared to last year Crosstabulation

			health compared to last year					
			Much better now than 1 yr ago	Somewhat better now than 1 yr ago	About the same as 1 yr ago	Somewhat worse now than 1 yr ago	Much worse now than 1 yr ago	Total
Study Group	University	Count	4	13	34	12	0	63
		% within Study Group	6.3%	20.6%	54.0%	19.0%	.0%	100.0%
	HIV	Count	8	10	36	14	4	72
		% within Study Group	11.1%	13.9%	50.0%	19.4%	5.6%	100.0%
Total		Count	12	23	70	26	4	135
		% within Study Group	8.9%	17.0%	51.9%	19.3%	3.0%	100.0%

HEALTH EXPECTATIONS IN YEAR

Study Group * health expected in next year Crosstabulation

			health expected in next year					
			Much better in 1 yr than now	Somewhat better in 1 yr than now	About the same in 1 yr as now	Somewhat worse in 1 yr than now	Much worse in 1 yr than now	Total
Study Group	University	Count	8	18	35	2	0	63
		% within Study Group	12.7%	28.6%	55.6%	3.2%	.0%	100.0%
	HIV	Count	6	19	38	7	1	71
		% within Study Group	8.5%	26.8%	53.5%	9.9%	1.4%	100.0%
Total		Count	14	37	73	9	1	134
		% within Study Group	10.4%	27.6%	54.5%	6.7%	.7%	100.0%

LONGSTANDING ILLNESSES

Study Group * longstanding illness Crosstabulation

			longstanding illness		
			Yes	No	Total
Study Group	University	Count	23	40	63
		% within Study Group	36.5%	63.5%	100.0%
	HIV	Count	64	8	72
		% within Study Group	88.9%	11.1%	100.0%
Total		Count	87	48	135
		% within Study Group	64.4%	35.6%	100.0%

LIMITING LONGSTANDING ILLNESSES

Study Group * limiting LSI Crosstabulation

			limiting LSI			
			Yes	No	None	Total
Study Group	University	Count	10	13	40	63
		% within Study Group	15.9%	20.6%	63.5%	100.0%
	HIV	Count	45	18	8	71
		% within Study Group	63.4%	25.4%	11.3%	100.0%
Total		Count	55	31	48	134
		% within Study Group	41.0%	23.1%	35.8%	100.0%

LONGSTANDING ILLNESS (UNIVERSITY)

longstanding illness specified

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		43	67.2	67.2	67.2
	acute stress condition	1	1.6	1.6	68.8
	allergy	1	1.6	1.6	70.3
	anaemia	1	1.6	1.6	71.9
	back ache	1	1.6	1.6	73.4
	back pain	1	1.6	1.6	75.0
	back problems	1	1.6	1.6	76.6
	backpain	1	1.6	1.6	78.1
	bent arm from broken elbow circa 1973	1	1.6	1.6	79.7
	depression	1	1.6	1.6	81.3
	endometriosis	1	1.6	1.6	82.8
	hayfever	1	1.6	1.6	84.4
	heel spur+high bp	1	1.6	1.6	85.9
	high bp	1	1.6	1.6	87.5
	high cholesterol - on permanent medication	1	1.6	1.6	89.1
	hypoglycemia	1	1.6	1.6	90.6
	menstrual pain	1	1.6	1.6	92.2
	operation on knee (ligament)	1	1.6	1.6	93.8
	osteoarthritis	1	1.6	1.6	95.3
	shoulder injury	1	1.6	1.6	96.9
	slipped disc in back	1	1.6	1.6	98.4
	thyroid disorder - undergoing radioactive treatment and medication	1	1.6	1.6	100.0
	Total	64	100.0	100.0	

LONGSTANDING ILLNESS (HIV)

longstanding illness specified

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		10	13.9	13.9	13.9
	advanced hiv disease (AIDS)	1	1.4	1.4	15.3
	aids	1	1.4	1.4	16.7
	AIDS, Hepatitis B, C	1	1.4	1.4	18.1
	anemia, COPD	1	1.4	1.4	19.4
	asthma and HIV infection	1	1.4	1.4	20.8
	chronic viral illness + HIV	1	1.4	1.4	22.2
	EPT-C, HIV, DEPRESSION, METHADONE ADDICTION	1	1.4	1.4	23.6
	gastro-intestinal problems	1	1.4	1.4	25.0
	have had breast cancer, double mastectomy, lymph nodes removed	1	1.4	1.4	26.4
	hiv	4	5.6	5.6	31.9
	HIV	9	12.5	12.5	44.4
	HIV (AIDS), epilepsy, diabetes, depression	1	1.4	1.4	45.8
	hiv +	2	2.8	2.8	48.6
	HIV +ve	1	1.4	1.4	50.0
	HIV and Hep C	1	1.4	1.4	51.4
	HIV and neuropathy	1	1.4	1.4	52.8
	HIV and ulcerative colitis	1	1.4	1.4	54.2
	HIV disease	1	1.4	1.4	55.6
	HIV infection, colitis, diabetes, epilepsy	1	1.4	1.4	56.9
	HIV, asthma, halyfever/allergies	1	1.4	1.4	58.3
	hiv, broken leg	1	1.4	1.4	59.7
	hiv, epilepsy	1	1.4	1.4	61.1
	HIV, HCV, depression (clinical), anxiety, OCD	1	1.4	1.4	62.5
	HIV, heart bypass	1	1.4	1.4	63.9
	hiv, hep B	1	1.4	1.4	65.3
	HIV/AIDS	2	2.8	2.8	68.1
	HIV/AIDS, colitis	1	1.4	1.4	69.4
	HIV; bipolar affective disorder	1	1.4	1.4	70.8
	HIV; Hep C+ (on interferon treatment since 5/1/05)	1	1.4	1.4	72.2
	hiv+	4	5.6	5.6	77.8
	HIV+	6	8.3	8.3	86.1
	HIV+ symptomatic	1	1.4	1.4	87.5
	HIV+, anxiety, depression	1	1.4	1.4	88.9
	HIV+, depression, peripheral neuropathy, gastritis, chronic diahrrea	1	1.4	1.4	90.3
	HIV+, diabetes, lipodistrophy	1	1.4	1.4	91.7
	HIV+; persistent back injury	1	1.4	1.4	93.1
	Hypertension, bladder control, psoriasis	1	1.4	1.4	94.4
	leg shake, impotence	1	1.4	1.4	95.8
	lung emphesema, asthma, HIV+(AIDS)	1	1.4	1.4	97.2
	terminally diagnosed in 1980	1	1.4	1.4	98.6
	vaginal bleeding (continuously) and abdominal pain	1	1.4	1.4	100.0
	Total	72	100.0	100.0	

7. Attitude strength

THINKING ABOUT HEALTH

Study Group * Amount of time thinking about health Crosstabulation

			Amount of time thinking about health					
			All of the time	Most of the time	Some of the time	A little of the time	None of the time	Total
Study Group	University	Count	1	13	31	18	0	63
		% within Study Group	1.6%	20.6%	49.2%	28.6%	.0%	100.0%
	HIV	Count	5	18	34	11	1	69
		% within Study Group	7.2%	26.1%	49.3%	15.9%	1.4%	100.0%
Total		Count	6	31	65	29	1	132
		% within Study Group	4.5%	23.5%	49.2%	22.0%	.8%	100.0%

EXPERIENCE OF OTHERS' ILLNESSES

Study Group * Experience of others illness Crosstabulation

			Experience of others illness					
			No experience	A little experience	Some experience	Quite a bit of experience	A lot of experience	Total
Study Group	University	Count	6	15	21	14	7	63
		% within Study Group	9.5%	23.8%	33.3%	22.2%	11.1%	100.0%
	HIV	Count	4	9	18	23	18	72
		% within Study Group	5.6%	12.5%	25.0%	31.9%	25.0%	100.0%
Total		Count	10	24	39	37	25	135
		% within Study Group	7.4%	17.8%	28.9%	27.4%	18.5%	100.0%

CONCERN ABOUT HEALTH

Study Group * Current level of concern about health Crosstabulation

			Current level of concern about health					
			Not at all concerned	Not too concerned	Fairly concerned	Very concerned	Extremely concerned	Total
Study Group	University	Count	3	35	20	4	1	63
		% within Study Group	4.8%	55.6%	31.7%	6.3%	1.6%	100.0%
	HIV	Count	1	20	31	12	6	70
		% within Study Group	1.4%	28.6%	44.3%	17.1%	8.6%	100.0%
Total		Count	4	55	51	16	7	133
		% within Study Group	3.0%	41.4%	38.3%	12.0%	5.3%	100.0%

CHANGE IN CONCERN

Study Group * Change in concern in last year Crosstabulation

			Change in concern in last year			
			More concerned	About the same concern	Less concerned	Total
Study Group	University	Count	19	39	5	63
		% within Study Group	30.2%	61.9%	7.9%	100.0%
	HIV	Count	29	34	7	70
		% within Study Group	41.4%	48.6%	10.0%	100.0%
Total		Count	48	73	12	133
		% within Study Group	36.1%	54.9%	9.0%	100.0%

8. Personality

BIG 5: NEUROTICISM

Study Group * BIG5-is depressed (N+) Crosstabulation

			BIG5-is depressed (N+)					
			Disagree strongly	Disagree a little	Neither agree nor disagree	Agree a little	Agree strongly	Total
Study Group	University	Count	31	10	5	16	1	63
		% within Study Group	49.2%	15.9%	7.9%	25.4%	1.6%	100.0%
	HIV	Count	15	3	10	28	16	72
		% within Study Group	20.8%	4.2%	13.9%	38.9%	22.2%	100.0%
Total		Count	46	13	15	44	17	135
		% within Study Group	34.1%	9.6%	11.1%	32.6%	12.6%	100.0%

Study Group * BIG5-is relaxed (N-) Crosstabulation

			BIG5-is relaxed (N-)					
			Disagree strongly	Disagree a little	Neither agree nor disagree	Agree a little	Agree strongly	Total
Study Group	University	Count	5	20	9	22	6	62
		% within Study Group	8.1%	32.3%	14.5%	35.5%	9.7%	100.0%
	HIV	Count	15	14	12	20	11	72
		% within Study Group	20.8%	19.4%	16.7%	27.8%	15.3%	100.0%
Total		Count	20	34	21	42	17	134
		% within Study Group	14.9%	25.4%	15.7%	31.3%	12.7%	100.0%

Study Group * BIG5-can be tense (N+) Crosstabulation

			BIG5-can be tense (N+)					
			Disagree strongly	Disagree a little	Neither agree nor disagree	Agree a little	Agree strongly	Total
Study Group	University	Count	2	5	11	38	7	63
		% within Study Group	3.2%	7.9%	17.5%	60.3%	11.1%	100.0%
	HIV	Count	2	6	7	39	18	72
		% within Study Group	2.8%	8.3%	9.7%	54.2%	25.0%	100.0%
Total		Count	4	11	18	77	25	135
		% within Study Group	3.0%	8.1%	13.3%	57.0%	18.5%	100.0%

Study Group * BIG5-worries a lot (N+) Crosstabulation

			BIG5-worries a lot (N+)					
			Disagree strongly	Disagree a little	Neither agree nor disagree	Agree a little	Agree strongly	Total
Study Group	University	Count	5	15	10	20	13	63
		% within Study Group	7.9%	23.8%	15.9%	31.7%	20.6%	100.0%
	HIV	Count	5	9	8	24	26	72
		% within Study Group	6.9%	12.5%	11.1%	33.3%	36.1%	100.0%
Total		Count	10	24	18	44	39	135
		% within Study Group	7.4%	17.8%	13.3%	32.6%	28.9%	100.0%

Study Group * BIG5-is emotionally stable (N-) Crosstabulation

			BIG5-is emotionally stable (N-)					
			Disagree strongly	Disagree a little	Neither agree nor disagree	Agree a little	Agree strongly	Total
Study Group	University	Count	3	11	10	24	15	63
		% within Study Group	4.8%	17.5%	15.9%	38.1%	23.8%	100.0%
	HIV	Count	6	24	13	15	14	72
		% within Study Group	8.3%	33.3%	18.1%	20.8%	19.4%	100.0%
Total		Count	9	35	23	39	29	135
		% within Study Group	6.7%	25.9%	17.0%	28.9%	21.5%	100.0%

Study Group * BIG5-can be moody (N+) Crosstabulation

			BIG5-can be moody (N+)					
			Disagree strongly	Disagree a little	Neither agree nor disagree	Agree a little	Agree strongly	Total
Study Group	University	Count	8	15	9	26	5	63
		% within Study Group	12.7%	23.8%	14.3%	41.3%	7.9%	100.0%
	HIV	Count	6	11	9	31	14	71
		% within Study Group	8.5%	15.5%	12.7%	43.7%	19.7%	100.0%
Total		Count	14	26	18	57	19	134
		% within Study Group	10.4%	19.4%	13.4%	42.5%	14.2%	100.0%

Study Group * BIG5-remains calm (N-) Crosstabulation

			BIG5-remains calm (N-)					
			Disagree strongly	Disagree a little	Neither agree nor disagree	Agree a little	Agree strongly	Total
Study Group	University	Count	2	10	14	23	14	63
		% within Study Group	3.2%	15.9%	22.2%	36.5%	22.2%	100.0%
	HIV	Count	3	9	19	28	13	72
		% within Study Group	4.2%	12.5%	26.4%	38.9%	18.1%	100.0%
Total		Count	5	19	33	51	27	135
		% within Study Group	3.7%	14.1%	24.4%	37.8%	20.0%	100.0%

Study Group * BIG5-gets nervous (N+) Crosstabulation

			BIG5-gets nervous (N+)					
			Disagree strongly	Disagree a little	Neither agree nor disagree	Agree a little	Agree strongly	Total
Study Group	University	Count	9	19	12	19	4	63
		% within Study Group	14.3%	30.2%	19.0%	30.2%	6.3%	100.0%
	HIV	Count	11	15	13	23	9	71
		% within Study Group	15.5%	21.1%	18.3%	32.4%	12.7%	100.0%
Total		Count	20	34	25	42	13	134
		% within Study Group	14.9%	25.4%	18.7%	31.3%	9.7%	100.0%

BIG 5: EXTRAVERSION

Study Group * BIG5-is talkative (E+) Crosstabulation

			BIG5-is talkative (E+)					
			Disagree strongly	Disagree a little	Neither agree nor disagree	Agree a little	Agree strongly	Total
Study Group	University	Count	7	5	14	20	18	64
		% within Study Group	10.9%	7.8%	21.9%	31.3%	28.1%	100.0%
	HIV	Count	4	11	9	24	24	72
		% within Study Group	5.6%	15.3%	12.5%	33.3%	33.3%	100.0%
Total		Count	11	16	23	44	42	136
		% within Study Group	8.1%	11.8%	16.9%	32.4%	30.9%	100.0%

Study Group * BIG5-is reserved (E-) Crosstabulation

			BIG5-is reserved (E-)					
			Disagree strongly	Disagree a little	Neither agree nor disagree	Agree a little	Agree strongly	Total
Study Group	University	Count	6	11	20	19	5	61
		% within Study Group	9.8%	18.0%	32.8%	31.1%	8.2%	100.0%
	HIV	Count	5	8	19	22	17	71
		% within Study Group	7.0%	11.3%	26.8%	31.0%	23.9%	100.0%
Total		Count	11	19	39	41	22	132
		% within Study Group	8.3%	14.4%	29.5%	31.1%	16.7%	100.0%

Study Group * BIG5-is full of energy (E+) Crosstabulation

			BIG5-is full of energy (E+)					
			Disagree strongly	Disagree a little	Neither agree nor disagree	Agree a little	Agree strongly	Total
Study Group	University	Count	1	11	7	34	10	63
		% within Study Group	1.6%	17.5%	11.1%	54.0%	15.9%	100.0%
	HIV	Count	19	19	7	18	9	72
		% within Study Group	26.4%	26.4%	9.7%	25.0%	12.5%	100.0%
Total		Count	20	30	14	52	19	135
		% within Study Group	14.8%	22.2%	10.4%	38.5%	14.1%	100.0%

Study Group * BIG5-generates enthusiasm (E+) Crosstabulation

			BIG5-generates enthusiasm (E+)					
			Disagree strongly	Disagree a little	Neither agree nor disagree	Agree a little	Agree strongly	Total
Study Group	University	Count	4	2	13	33	10	62
		% within Study Group	6.5%	3.2%	21.0%	53.2%	16.1%	100.0%
	HIV	Count	6	5	22	23	16	72
		% within Study Group	8.3%	6.9%	30.6%	31.9%	22.2%	100.0%
Total		Count	10	7	35	56	26	134
		% within Study Group	7.5%	5.2%	26.1%	41.8%	19.4%	100.0%

Study Group * BIG5-tends to be quiet (E-) Crosstabulation

			BIG5-tends to be quiet (E-)					
			Disagree strongly	Disagree a little	Neither agree nor disagree	Agree a little	Agree strongly	Total
Study Group	University	Count	10	15	19	14	5	63
		% within Study Group	15.9%	23.8%	30.2%	22.2%	7.9%	100.0%
	HIV	Count	10	10	17	19	16	72
		% within Study Group	13.9%	13.9%	23.6%	26.4%	22.2%	100.0%
Total		Count	20	25	36	33	21	135
		% within Study Group	14.8%	18.5%	26.7%	24.4%	15.6%	100.0%

Study Group * BIG5-has an assertive personality (E+) Crosstabulation

			BIG5-has an assertive personality (E+)					
			Disagree strongly	Disagree a little	Neither agree nor disagree	Agree a little	Agree strongly	Total
Study Group	University	Count	4	10	14	21	13	62
		% within Study Group	6.5%	16.1%	22.6%	33.9%	21.0%	100.0%
	HIV	Count	9	8	18	21	16	72
		% within Study Group	12.5%	11.1%	25.0%	29.2%	22.2%	100.0%
Total		Count	13	18	32	42	29	134
		% within Study Group	9.7%	13.4%	23.9%	31.3%	21.6%	100.0%

Study Group * BIG5-is sometimes shy (E-) Crosstabulation

			BIG5-is sometimes shy (E-)					
			Disagree strongly	Disagree a little	Neither agree nor disagree	Agree a little	Agree strongly	Total
Study Group	University	Count	6	8	9	32	8	63
		% within Study Group	9.5%	12.7%	14.3%	50.8%	12.7%	100.0%
	HIV	Count	6	7	10	32	17	72
		% within Study Group	8.3%	9.7%	13.9%	44.4%	23.6%	100.0%
Total		Count	12	15	19	64	25	135
		% within Study Group	8.9%	11.1%	14.1%	47.4%	18.5%	100.0%

Study Group * BIG5-is outgoing (E+) Crosstabulation

			BIG5-is outgoing (E+)					
			Disagree strongly	Disagree a little	Neither agree nor disagree	Agree a little	Agree strongly	Total
Study Group	University	Count	3	2	13	29	15	62
		% within Study Group	4.8%	3.2%	21.0%	46.8%	24.2%	100.0%
	HIV	Count	5	11	14	25	17	72
		% within Study Group	6.9%	15.3%	19.4%	34.7%	23.6%	100.0%
Total		Count	8	13	27	54	32	134
		% within Study Group	6.0%	9.7%	20.1%	40.3%	23.9%	100.0%

9. Health behaviours

CAGE

CAGE-felt should cut down

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	38	27.9	28.1	28.1
	No	97	71.3	71.9	100.0
	Total	135	99.3	100.0	
Missing	MISSING	1	.7		
Total		136	100.0		

CAGE-annoyed by criticism

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	16	11.8	11.9	11.9
	No	119	87.5	88.1	100.0
	Total	135	99.3	100.0	
Missing	MISSING	1	.7		
Total		136	100.0		

CAGE-guilty about drinking

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	31	22.8	23.0	23.0
	No	104	76.5	77.0	100.0
	Total	135	99.3	100.0	
Missing	MISSING	1	.7		
Total		136	100.0		

CAGE-morning drink to steady nerves

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	10	7.4	7.4	7.4
	No	125	91.9	92.6	100.0
	Total	135	99.3	100.0	
Missing	MISSING	1	.7		
Total		136	100.0		

DRINKING STATUS

Study Group * Drinking status Crosstabulation

			Drinking status							Total
			Every day	5-6 x wk	3-4 x wk	1-2 x wk	1-2 x mth	< 1 mth	never	
Study Group	University	Count	1	4	14	18	10	9	7	63
		% within Study Group	1.6%	6.3%	22.2%	28.6%	15.9%	14.3%	11.1%	100.0%
	HIV	Count	8	5	12	19	11	10	7	72
		% within Study Group	11.1%	6.9%	16.7%	26.4%	15.3%	13.9%	9.7%	100.0%
Total		Count	9	9	26	37	21	19	14	135
		% within Study Group	6.7%	6.7%	19.3%	27.4%	15.6%	14.1%	10.4%	100.0%

WEEKLY ALCOHOL CONSUMPTION

Descriptives

	Study Group			Statistic	Std. Error
Average weekly drinking	University	Mean		5.30	.754
		95% Confidence Interval for Mean	Lower Bound	3.79	
			Upper Bound	6.80	
		5% Trimmed Mean		4.77	
		Median		3.00	
		Variance		34.711	
		Std. Deviation		5.892	
		Minimum		0	
		Maximum		20	
		Range		20	
		Interquartile Range		9	
		Skewness		1.121	.306
		Kurtosis		.437	.604
	HIV	Mean		8.29	1.466
		95% Confidence Interval for Mean	Lower Bound	5.36	
			Upper Bound	11.21	
		5% Trimmed Mean		6.51	
		Median		3.00	
		Variance		150.381	
		Std. Deviation		12.263	
		Minimum		0	
		Maximum		50	
		Range		50	
		Interquartile Range		10	
		Skewness		2.297	.287
		Kurtosis		4.911	.566

SMOKING STATUS

Study Group * Cig smoking status Crosstabulation

			Cig smoking status			
			Never smoked	Used to smoke	Still smoke	Total
Study Group	University	Count	35	17	11	63
		% within Study Group	55.6%	27.0%	17.5%	100.0%
	HIV	Count	25	28	19	72
		% within Study Group	34.7%	38.9%	26.4%	100.0%
Total		Count	60	45	30	135
		% within Study Group	44.4%	33.3%	22.2%	100.0%

DAILY CIGARETTE CONSUMPTION

Descriptives

	Study Group			Statistic	Std. Error
Average daily cigs smoked	University	Mean		1.98	.612
		95% Confidence Interval for Mean	Lower Bound	.76	
			Upper Bound	3.21	
		5% Trimmed Mean		1.20	
		Median		.00	
		Variance		23.597	
		Std. Deviation		4.858	
		Minimum		0	
		Maximum		20	
		Range		20	
		Interquartile Range		0	
		Skewness		2.513	.302
		Kurtosis		5.596	.595
	HIV	Mean		3.72	1.038
		95% Confidence Interval for Mean	Lower Bound	1.65	
			Upper Bound	5.79	
		5% Trimmed Mean		2.32	
		Median		.00	
		Variance		76.434	
		Std. Deviation		8.743	
		Minimum		0	
		Maximum		40	
		Range		40	
		Interquartile Range		0	
		Skewness		2.601	.285
		Kurtosis		6.357	.563

10. Health service contact

GENERAL PRACTICE

Study Group * Ever had care or advice from GP Crosstabulation

			Ever had care or advice from GP		
			Yes	No	Total
Study Group	University	Count	60	3	63
		% within Study Group	95.2%	4.8%	100.0%
	HIV	Count	67	2	69
		% within Study Group	97.1%	2.9%	100.0%
Total		Count	127	5	132
		% within Study Group	96.2%	3.8%	100.0%

Study Group * Most recent GP care or advice Crosstabulation

			Most recent GP care or advice				
			Within the past yr	1-5 yrs	>5 yrs	Not at all	Total
Study Group	University	Count	49	9	1	3	62
		% within Study Group	79.0%	14.5%	1.6%	4.8%	100.0%
	HIV	Count	55	8	4	2	69
		% within Study Group	79.7%	11.6%	5.8%	2.9%	100.0%
Total		Count	104	17	5	5	131
		% within Study Group	79.4%	13.0%	3.8%	3.8%	100.0%

Study Group * Number of times received care or advice from GP in last yr Crosstabulation

			Number of times received care or advice from GP in last yr				
			Once	2-5 times	>5 times	Not at all	Total
Study Group	University	Count	17	25	7	13	62
		% within Study Group	27.4%	40.3%	11.3%	21.0%	100.0%
	HIV	Count	15	21	19	14	69
		% within Study Group	21.7%	30.4%	27.5%	20.3%	100.0%
Total		Count	32	46	26	27	131
		% within Study Group	24.4%	35.1%	19.8%	20.6%	100.0%

OUTPATIENT / ACCIDENT AND EMERGENCY

Study Group * Ever had care or advice from OPD or A&E Crosstabulation

			Ever had care or advice from OPD or A&E		
			Yes	No	Total
Study Group	University	Count	43	20	63
		% within Study Group	68.3%	31.7%	100.0%
	HIV	Count	66	3	69
		% within Study Group	95.7%	4.3%	100.0%
Total		Count	109	23	132
		% within Study Group	82.6%	17.4%	100.0%

Study Group * Most recent OPD or A&E Crosstabulation

			Most recent OPD or A&E				
			Within the past yr	1-5 yrs	>5 yrs	Not at all	Total
Study Group	University	Count	20	14	9	20	63
		% within Study Group	31.7%	22.2%	14.3%	31.7%	100.0%
	HIV	Count	56	8	2	3	69
		% within Study Group	81.2%	11.6%	2.9%	4.3%	100.0%
Total		Count	76	22	11	23	132
		% within Study Group	57.6%	16.7%	8.3%	17.4%	100.0%

Study Group * Number of times received care or advice from OPD or A&E in last yr Crosstabulation

			Number of times received care or advice from OPD or A&E in last yr				
			Once	2-5 times	>5 times	Not at all	Total
Study Group	University	Count	10	10	0	43	63
		% within Study Group	15.9%	15.9%	.0%	68.3%	100.0%
	HIV	Count	13	25	18	13	69
		% within Study Group	18.8%	36.2%	26.1%	18.8%	100.0%
Total		Count	23	35	18	56	132
		% within Study Group	17.4%	26.5%	13.6%	42.4%	100.0%

DAYCARE

Study Group * Ever been daypt Crosstabulation

			Ever been daypt		
			Yes	No	Total
Study Group	University	Count	21	42	63
		% within Study Group	33.3%	66.7%	100.0%
	HIV	Count	44	27	71
		% within Study Group	62.0%	38.0%	100.0%
Total		Count	65	69	134
		% within Study Group	48.5%	51.5%	100.0%

Study Group * Most recent daypt admission Crosstabulation

			Most recent daypt admission				
			Within the past yr	1-5 yrs	>5 yrs	Not at all	Total
Study Group	University	Count	4	8	9	42	63
		% within Study Group	6.3%	12.7%	14.3%	66.7%	100.0%
	HIV	Count	20	16	8	27	71
		% within Study Group	28.2%	22.5%	11.3%	38.0%	100.0%
Total		Count	24	24	17	69	134
		% within Study Group	17.9%	17.9%	12.7%	51.5%	100.0%

Study Group * Number of times been daypt in last yr Crosstabulation

			Number of times been daypt in last yr				
			Once	2-5 times	>5 times	Not at all	Total
Study Group	University	Count	1	3	0	59	63
		% within Study Group	1.6%	4.8%	.0%	93.7%	100.0%
	HIV	Count	6	12	2	51	71
		% within Study Group	8.5%	16.9%	2.8%	71.8%	100.0%
Total		Count	7	15	2	110	134
		% within Study Group	5.2%	11.2%	1.5%	82.1%	100.0%

INPATIENT CARE

Study Group * Ever been inpt Crosstabulation

			Ever been inpt		
			Yes	No	Total
Study Group	University	Count	38	25	63
		% within Study Group	60.3%	39.7%	100.0%
	HIV	Count	56	15	71
		% within Study Group	78.9%	21.1%	100.0%
Total		Count	94	40	134
		% within Study Group	70.1%	29.9%	100.0%

Study Group * Most recent inpt admission Crosstabulation

			Most recent inpt admission				
			Within the past yr	1-5 yrs	>5 yrs	Not at all	Total
Study Group	University	Count	7	6	25	25	63
		% within Study Group	11.1%	9.5%	39.7%	39.7%	100.0%
	HIV	Count	20	21	15	15	71
		% within Study Group	28.2%	29.6%	21.1%	21.1%	100.0%
Total		Count	27	27	40	40	134
		% within Study Group	20.1%	20.1%	29.9%	29.9%	100.0%

Study Group * Number of times been inpt in last yr Crosstabulation

			Number of times been inpt in last yr			
			Once	2-5 times	Not at all	Total
Study Group	University	Count	4	3	56	63
		% within Study Group	6.3%	4.8%	88.9%	100.0%
	HIV	Count	13	7	51	71
		% within Study Group	18.3%	9.9%	71.8%	100.0%
Total		Count	17	10	107	134
		% within Study Group	12.7%	7.5%	79.9%	100.0%

11. HIV clinical indicators

YEAR OF DIAGNOSIS (-2005)

Descriptives

			Statistic	Std. Error
year of HIV diagnosis	Mean		1995.99	.777
	95% Confidence Interval for Mean	Lower Bound	1994.44	
		Upper Bound	1997.54	
	5% Trimmed Mean		1996.26	
	Median		1998.00	
	Variance		42.871	
	Std. Deviation		6.548	
	Minimum		1980	
	Maximum		2004	
	Range		24	
	Interquartile Range		11	
	Skewness		-.604	.285
	Kurtosis		-.844	.563

ANTI-HIV THERAPY

Current ART status

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Currently on ART	57	79.2	80.3	80.3
	Not currently on ART	14	19.4	19.7	100.0
	Total	71	98.6	100.0	
Missing	-1	1	1.4		
Total		72	100.0		

VIRAL LOAD RESULT

Most recent viral load result

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Undetectable (<250, <400)	51	70.8	71.8	71.8
	400 – 1000	6	8.3	8.5	80.3
	1001 – 10000	4	5.6	5.6	85.9
	10001 – 100000	7	9.7	9.9	95.8
	Over 100000	3	4.2	4.2	100.0
	Total	71	98.6	100.0	
Missing	-1	1	1.4		
Total		72	100.0		

CD4 COUNT

Descriptives

			Statistic	Std. Error
Most recent CD4 count	Mean		449.99	28.707
	95% Confidence Interval for Mean	Lower Bound	392.72	
		Upper Bound	507.25	
	5% Trimmed Mean		429.10	
	Median		399.00	
	Variance		57686.275	
	Std. Deviation		240.180	
	Minimum		130	
	Maximum		1400	
	Range		1270	
	Interquartile Range		297	
	Skewness		1.498	.287
	Kurtosis		3.056	.566

APPENDIX 21: Relationship between SF-12v2 and contextual variables

SF-12v2 scores were analysed in relation to responses provided to the contextual variables. Parametric and non-parametric analyses were carried out, although only parametric analyses are reported, as results obtained from both sets of analyses were almost identical. All analyses were carried out separately for the university and HIV samples. Results for both samples are presented in parallel, using Tables and supporting text. Numbers in Tables vary according to scale due to differences in sample size.

The results are included in the following order:

Sociodemographics (gender, age, ethnicity, education level, role occupation)

General health (overall general health, overall health in the past year, health change during the year, health expectations in the year ahead, long-standing and long-standing limiting illnesses)

Attitude strength (thinking about health, experience of illnesses in others, concern about health, change in concern about health during the year)

Personality (Extraversion and Neuroticism traits)

Health behaviours (problem drinking, drinking frequency, weekly levels of consumption, smoking status, daily levels of cigarette consumption)

Health service contact (ever having had contact, most recent contact, and frequency of contact during the year: General Practice, outpatient department or accident and emergency, daycare, hospital inpatient admissions)

HIV clinical indicators (CD4 level, viral load level, whether taking anti-HIV medication, and length of time since diagnosed HIV positive)

Sociodemographics

Respondents reported their gender, age, ethnicity, education and work activities.

Gender

Scores on physical and mental health scales did not differ by gender in the university sample (Table A21.1). However, in the HIV sample scale scores were generally lower for women (Table A21.2), significantly so for Physical Function (PF: $t(69)=2.32$, $p<0.05$).

Table A21.1: SF-12v2 scale and means (SD) according to gender: University sample

	N	PF	RP	BP	GH	VT	SF	RE	MH	PCS	MCS
Male	**23-25**	54.41 (3.74)	51.28 (7.10)	51.50 (8.97)	49.83 (6.64)	51.77 (6.49)	46.47 (11.29)	45.36 (8.40)	45.49 (11.69)	54.79 (6.11)	43.91 (12.10)
Female	**36-38**	53.53 (5.39)	48.59 (9.29)	49.66 (10.17)	51.04 (8.53)	49.60 (9.60)	47.27 (12.06)	44.28 (9.14)	46.74 (10.36)	52.74 (7.67)	44.54 (10.71)
N	**59-63**	**63**	**62**	**62**	**63**	**63**	**63**	**60**	**62**	**59**	**59**

Table A21.2: SF-12v2 scale and means (SD) according to gender: HIV sample

	N	PF	RP	BP	GH	VT	SF	RE	MH	PCS	MCS
Male	**56-58**	46.25 (11.76)	41.69 (10.20)	45.25 (13.52)	42.25 (12.02)	44.97 (10.63)	38.98 (12.05)	37.95 (11.00)	40.05 (11.45)	46.36 (12.03)	38.12 (11.44)
Female	**13**	37.97 (11.00)	38.40 (12.11)	41.76 (11.48)	37.44 (14.18)	43.88 (12.69)	37.92 (12.26)	36.72 (13.62)	36.41 (12.07)	40.54 (11.66)	38.15 (13.07)
N	**69-71**	**71**	**71**	**69**	**71**	**71**	**71**	**71**	**71**	**69**	**69**

Age

Table A21.3 shows the associations between the age of the respondents and SF-12v2 scale scores. There were no significant correlations in the university sample. In contrast,

age was significantly correlated with mental health scales in the HIV sample (except VT), with increasing age associated with higher scores.

Table A21.3: Correlations between respondent age and SF-12v2 scale scores: University and HIV samples

	University sample	HIV sample
PF	-0.10	-0.06
RP	-0.17	0.18
BP	-0.08	0.08
GH	-0.06	0.06
VT	0.17	0.06
SF	0.04	0.27*
RE	0.11	0.30**
MH	0.14	0.30**
PCS	-0.11	-0.04
MCS	0.15	0.35**

* $p<0.05$ ** $p<0.01$

Ethnicity

The majority of the university sample classified themselves as white ('White-British', 'White-Irish' or 'White-Other') and therefore ethnicity was recoded into three categories: 'White-British', 'White-Other' (including 'White-Irish'), and all other groups (Table A21.4). Scale scores varied according to scale.

In the HIV sample, ethnicity was similarly recoded into the same three categories as used in the university sample (Table A21.5). Lowest mean scale scores were observed

among those in the 'other' category. However, in both samples, the heterogeneity of the 'other' category prevented meaningful analyses from being undertaken.

Table A21.4: SF-12v2 scale means (SD) according to ethnic group: University sample

	N	PF	RP	BP	GH	VT	SF	RE	MH	PCS	MCS
White-British	17-18	54.08 (3.96)	50.52 (7.78)	50.85 (10.15)	49.65 (7.75)	49.43 (9.29)	45.91 (11.73)	43.34 (9.36)	43.39 (10.80)	54.87 (7.74)	41.54 (12.22)
White-Other	28-30	54.18 (5.01)	50.51 (8.22)	49.63 (10.25)	51.50 (8.84)	51.10 (8.07)	48.49 (11.68)	46.69 (6.29)	47.07 (11.18)	53.27 (7.22)	46.10 (10.03)
Other	14-15	53.03 (5.43)	47.04 (9.88)	51.33 (8.44)	49.77 (5.57)	50.43 (8.89)	45.12 (11.99)	42.50 (11.75)	47.88 (10.17)	52.47 (6.36)	44.02 (12.13)
N	59-63	63	62	62	63	63	63	60	62	59	59

Table A21.5: SF-12v2 scale means (SD) according to age groups: HIV sample

	N	PF	RP	BP	GH	VT	SF	RE	MH	PCS	MCS
White-British	42-43	45.48 (11.30)	41.96 (9.93)	45.55 (13.86)	41.03 (12.76)	44.01 (10.54)	38.25 (11.51)	38.65 (10.72)	39.59 (11.73)	45.86 (12.05)	38.11 (11.86)
White-Other	21	44.20 (12.91)	41.16 (10.86)	44.82 (11.58)	42.07 (12.10)	45.83 (11.30)	42.14 (11.32)	38.50 (10.94)	39.58 (11.39)	45.26 (11.98)	39.91 (11.07)
Other	7-8	39.29 (15.23)	34.72 (12.42)	35.60 (12.38)	43.12 (13.57)	46.49 (12.54)	31.32 (14.28)	28.12 (14.94)	37.11 (11.75)	40.26 (13.12)	32.02 (11.08)
N	70-72	72	72	70	72	72	72	72	72	70	70

Education

All respondents in the university sample had received at least further education, and most were postgraduates. Within this narrow range of educational experience, there were no significant differences in SF-12v2 scores (Table A21.6).

The education of respondents in the HIV sample ranged from primary to postgraduate level. There was a relationship between education and health status: lower scores were more common among those with primary or secondary education (Table A21.7). The association was significant for Role Physical (RP) ($F(3,68)=2.95$, $p<0.05$), Role Emotional (RE) ($F(3,68)=4.90$, $p<0.01$) and the MCS ($F(3,66)=3.01$, $p<0.05$). Significant pairwise comparisons were identified: RP (primary/secondary versus further education, $p<0.05$), RE (primary/secondary versus further education, $p<0.01$; primary/secondary versus higher education, $p<0.01$; primary/secondary versus postgraduate level, $p<0.05$), and MCS (primary/secondary versus further education, $p<0.05$).

Table A21.6: SF-12v2 scale means (SD) according to education level (mean and SD): University sample

	N	PF	RP	BP	GH	VT	SF	RE	MH	PCS	MCS
FE	**5-7**	54.02 (6.49)	50.27 (6.99)	48.71 (7.03)	52.44 (5.26)	53.50 (5.38)	49.36 (12.66)	46.02 (4.68)	51.48 (6.52)	50.66 (7.25)	50.67 (4.86)
HE	**11**	53.35 (5.79)	50.06 (6.63)	49.10 (10.00)	47.88 (8.75)	48.66 (7.05)	42.80 (13.75)	43.37 (9.39)	42.93 (15.27)	53.47 (9.94)	40.78 (14.42)
Postgrd	**43-45**	53.99 (4.34)	49.50 (9.22)	50.96 (10.09)	50.92 (7.88)	50.43 (9.20)	47.59 (11.03)	44.90 (9.11)	46.25 (9.93)	53.89 (6.35)	44.45 (10.61)
N	**59-63**	**63**	**62**	**62**	**63**	**63**	**63**	**60**	**62**	**59**	**59**

Table A21.7: SF-12v2 scale means (SD) according to education level (mean and SD): HIV sample

	N	PF	RP	BP	GH	VT	SF	RE	MH	PCS	MCS
Prim'y / Sec'y	11	36.95 (14.42)	34.14 (8.98)	40.77 (12.29)	39.45 (14.98)	39.52 (10.86)	35.45 (10.55)	26.09 (9.44)	33.51 (9.23)	41.37 (12.35)	31.25 (5.89)
FE	16	45.20 (10.74)	45.95 (10.23)	43.43 (13.86)	40.29 (14.11)	47.75 (12.19)	45.21 (11.59)	40.35 (13.73)	45.11 (12.44)	44.93 (11.70)	44.02 (12.46)
HE	31-32	45.20 (12.43)	40.62 (10.97)	44.29 (14.22)	42.72 (11.23)	44.92 (10.91)	36.37 (11.18)	39.48 (10.09)	38.63 (10.73)	45.33 (12.68)	38.06 (10.85)
Postgr	12-13	47.88 (9.92)	41.23 (8.74)	48.95 (10.49)	42.09 (12.33)	45.43 (8.37	38.70 (13.77)	38.44 (9.09)	38.75 (11.98)	48.27 (11.18)	36.25 (13.36)
N	72	72	72	70	72	72	72	72	72	70	70

Role occupation

Respondents occupied a range of roles, singly or in combination. The scale scores of those respondents in the largest role groups were compared (three in the university sample and two in HIV sample). In the university sample, there were no clear differences between these groups, resulting in non-significant analyses (Table A21.8).

In the HIV sample, those who classified themselves as 'long-term sick only' had lower scale scores (Table A21.9), significantly so for all but one of the scales (PF: $t(44)=-3.48$, $p=0.001$; RP: $t(36.28)=-3.63$, $p=0.001$; BP: $t(40.16)=-3.64$, $p=0.001$; GH: $t(44)=-3.77$, $p<0.001$; PCS: $t(41.78)=-4.21$, $p<0.001$; VT: $t(44)=-2.11$, $p<0.05$; SF: $t(44)=-2.54$, $p<0.05$; RE: $t(44)=-2.33$, $p<0.05$; MH: $t(44)=-2.23$, $p<0.05$).

Table A21.8: SF-12v2 scale means (SD) according to the three most commonly reported role groups: mean (SD): University sample

	N	PF	RP	BP	GH	VT	SF	RE	MH	PCS	MCS
Work ft only	18-19	54.21 (4.83)	50.27 (8.10)	48.32 (9.54)	50.87 (8.01)	49.87 (7.92)	45.41 (13.42)	45.83 (8.63)	44.65 (12.17)	53.49 (8.51)	43.77 (11.97)
Study ft only	13	53.83 (5.42)	46.19 (10.73)	51.17 (9.79)	53.20 (6.31)	46.20 (9.04)	44.92 (13.58)	42.75 (10.60)	43.44 (12.09)	54.22 (5.49)	40.83 (11.29)
Wk ft+ ed pt	7-8	54.32 (3.98)	50.27 (9.85)	53.62 (10.81)	52.29 (6.62)	55.30 (8.92)	52.78 (7.51)	44.90 (8.54)	47.02 (8.27)	55.69 (8.24)	47.11 (10.87)
N	38-40	40	39	40	40	40	40	38	40	38	38

Table A21.9: SF-12v2 scale means (SD) according to the three most commonly reported role groups: mean (SD): HIV sample

	N	PF	RP	BP	GH	VT	SF	RE	MH	PCS	MCS
Lt sick only	24	38.22 (12.49)	35.10 (7.56)	37.48 (13.93)	35.31 (12.36)	39.78 (9.37)	32.16 (10.70)	32.78 (9.71)	34.57 (9.67)	38.68 (11.75)	33.83 (9.23)
Work ft only	21-22	49.83 (9.89)	45.45 (11.26)	50.16 (9.20)	47.88 (9.97)	46.38 (11.74)	40.96 (12.75)	40.32 (12.16)	41.27 (10.75)	51.51 (8.60)	39.07 (12.93)
N	45-46	46	46	45	46	46	46	46	46	45	45

Number of roles occupied

The total number of role occupied by respondents in both samples ranged from one to three. Most respondents performed a single role, and for the purposes of analysis two and three were combined since few respondents reported three roles. In the university sample, there were no consistent scoring patterns according to number of roles occupied (Table A21.10), and the only significant result was obtained for the Vitality (VT) scale, with mean scores lower among those performing a single role in comparison two or three roles ($t(61)=-2.07$, $p<0.05$).

In the HIV sample, findings varied by scale (Table A21.11). There was one borderline significant result (VT: $t(70)=-1.92$, $p=0.06$), with better health reported by those reporting more than one role.

Table A21.10: SF-12v2 scale means (SD) according to number of roles occupied: mean (SD): University sample

	N	PF	RP	BP	GH	VT	SF	RE	MH	PCS	MCS
1 role	34-36	54.08 (4.86)	49.28 (9.12)	49.51 (10.08)	52.11 (7.28)	48.59 (8.46)	45.35 (13.17)	44.57 (9.43)	45.07 (11.91)	53.78 (7.61)	42.79 (11.77)
2-3 roles	25-27	53.61 (4.76)	50.18 (7.81)	51.56 (9.19)	48.49 (8.12)	52.97 (8.07)	49.09 (9.12)	44.90 (8.07)	47.90 (9.05)	53.22 (6.54)	46.34 (10.17)
N	59-63	63	62	62	63	63	63	60	62	59	59

Table A21.11: SF-12v2 scale means (SD) according to number of roles occupied: mean (SD): HIV sample

	N	PF	RP	BP	GH	VT	SF	RE	MH	PCS	MCS
1 role	60-61	45.06 (11.81)	40.94 (10.29)	45.04 (12.88)	41.77 (12.17)	43.79 (10.76)	37.86 (12.07)	37.93 (11.44)	38.56 (11.56)	45.75 (11.34)	37.37 (11.93)
2-3 roles	10-11	40.85 (14.28)	40.84 (12.59)	40.12 (15.23)	40.43 (14.78)	50.49 (10.15)	42.80 (11.31)	34.73 (12.71)	43.48 (10.69)	41.33 (15.96)	42.06 (8.78)
N	70-72	72	72	70	72	72	72	72	72	70	70

General Health

A series of questions asked about current, past and future general health perceptions, and perceived long-standing illnesses. Scores for all but one (GH) of the SF-12v2 scales were divided on the basis of replies to the single global general health item (which constituted the General Health scale).

Overall general health

In both samples, linear trends were identified for all scales, with lower mean scale scores related to self-reported poorer general health. For statistical analyses, extreme categories, containing small numbers of respondents, were combined in both samples ('poor' with 'fair'; 'excellent' with 'very good').

In the university sample, only three respondents selected poor or fair, and therefore this category was excluded. Significantly higher scores were attained by those university respondents who selected 'excellent'/'very good' compared to 'good' for VT ($t(59)=2.10$, $p<0.05$), RP ($t(57)=2.28$, $p<0.05$), and the PCS ($t(54)=3.13$, $p<0.001$). The result for SF just failed to reach significance at the five percent level ($t(59)=1.86$, $p=0.06$) (Table A21.12).

In the HIV sample, the recoded general health item was significantly associated with all SF-12v2 scale scores (Table A21.13): PF: $F(2,69)=18.43$, $p<0.001$; RP: $F(2,69)=21.33$, $p<0.001$; BP: $F(2,67)=16.05$, $p<0.001$; VT: $F(2,69)=16.74$, $p<0.001$; VT: $F(2,69)=16.74$, $p<0.001$; SF: $F(2,69)=11.04$, $p<0.001$; RE: $F(2,69)=13.72$, $p<0.001$; MH: $F(2,69)=10.36$, $p<0.001$; PCS: $F(2,67)=32.66$, $p<0.001$; MCS: $F(2,67)=8.60$, $p<0.001$. Pairwise comparisons were significant between: excellent/v good-fair/poor (all

scales, p<0.001); excellent/v good-good (RP, VT, p<0.001), excellent/v good-fair/poor (all scales, p<0.001); good-fair/poor (all scales, p<0.001).

Table A21.12: SF-12v2 scale and means (SD) by self-rated general health: University sample

	N	PF	RP	BP	VT	SF	RE	MH	PCS	MCS
Excellent / V good	31-34	54.70 (4.11)	52.01 (8.13)	52.19 (8.50)	52.78 (7.93)	49.14 (12.00)	45.42 (9.88)	48.47 (10.09)	56.41 (5.59)	46.24 (11.44)
Good	25-27	53.61 (4.76)	47.08 (8.35)	48.00 (11.63)	48.50 (7.86)	43.48 (11.49)	44.23 (7.80)	44.22 (11.71)	51.27 (6.69)	42.31 (11.25)
N	**56-61**	**61**	**59**	**60**	**61**	**61**	**57**	**60**	**56**	**56**

Table A21.13: SF-12v2 scale and means (SD) by recoded self-rated general health: HIV sample

	N	PF	RP	BP	VT	SF	RE	MH	PCS	MCS
Excellent / V good	**17-18**	52.18 (8.96)	49.76 (8.68)	53.24 (8.10)	52.78 (8.63)	45.91 (10.08)	44.90 (11.18)	46.93 (10.22)	55.42 (6.41)	45.55 (10.32)
Good	**29-30**	47.59 (9.96)	42.13 (9.82)	47.25 (10.89)	46.41 (9.05)	40.41 (11.74)	39.49 (10.23)	40.16 (10.25)	48.16 (8.63)	38.78 (10.72)
Fair /Poor	**24**	34.64 (10.74)	32.80 (6.00)	34.51 (12.84)	36.85 (9.35)	30.90 (9.41)	29.29 (8.56)	32.54 (10.21)	34.15 (10.10)	31.84 (10.36)
N	**70-72**	**72**	**72**	**70**	**72**	**72**	**72**	**72**	**70**	**70**

General health during the previous year

A second question asked respondents to describe their general health perceptions during the previous year. Once again, the extreme responses were recoded before analyses were conducted.

In the university sample, as with the earlier question, scales were linearly related to general health perceptions over the previous year (Table A21.14), significantly so for most scales: PF ($F(2, 60)=5.89$, $p<0.01$), GH ($F(2, 60)=25.97$, $p<0.001$), PCS ($F(2, 55)=5.08$, $p<0.01$); VT ($F(2, 60)=5.33$, $p<0.01$); and MH ($F(2, 59)=3.14$, $p=0.05$). Post hoc comparisons showed significant pairwise differences for PF (excellent/very good – good, $p<0.05$; excellent/very good – fair/poor, $p<0.05$), GH (excellent/very good – good, $p<0.001$; excellent/very good – fair/poor, $p<0.001$; good – fair/poor, $p<0.01$), VT (excellent/very good – fair/poor, $p<0.01$; good – fair/poor, $p<0.01$) and the PCS (excellent/very good – fair/poor, $p<0.05$).

Similarly, a strong linear patterns was identified in the HIV sample (Table A21.15), associated with most scales (PF: $F(4,67)=13.35$, $p<0.001$; RP: $F(4,67)=8.66$, $p<0.001$; BP: $F(4,65)=9.26$, $p<0.001$; GH: $F(4,67)=16.63$, $p<0.001$; VT: $F(4,67)=7.21$, $p<0.001$; SF: $F(4,67)=5.64$, $p=0.001$; RE: $F(4,67)= 3.59$, $p=0.01$; PCS: $F(4,65)=17.02$, $p<0.001$). Post hoc comparisons showed significant pairwise differences for most scales: PF (excellent/very good – good, $p<0.05$; excellent/very good – fair/poor, $p<0.001$), RP (excellent/very good – good, $p<0.05$; excellent/very good – fair/poor, $p<0.001$), BP (excellent/very good – good, $p<0.05$; excellent/very good – fair/poor, $p<0.001$), GH (excellent/very good – fair/poor, $p<0.001$; good – fair/poor, $p<0.001$), VT (excellent/very good – fair/poor, $p<0.001$; good – fair/poor, $p<0.01$), SF (excellent/very good – fair/poor, $p<0.05$), RE (excellent/very good – good, $p<0.05$; excellent/very good

– fair/poor, p<0.01), MH (excellent/very good – fair/poor, p<0.05), PCS (excellent/very good – good, p<0.05; excellent/very good – fair/poor, p<0.001; good – fair/poor, p<0.05), MCS (excellent/very good – fair/poor, p<0.05).

Table A21.14: SF-12v2 scale means (SD) by self-rated general health during the previous year: University sample

	N	PF	RP	BP	GH	VT	SF	RE	MH	PCS	MCS
Excellent / V good	**29-34**	55.71 (2.47)	51.56 (8.34)	52.19 (9.57)	54.44 (5.57)	52.48 (8.30)	48.85 (11.94)	47.51 (8.78)	49.21 (10.24)	56.04 (5.21)	47.43 (11.18)
Good	**23**	52.74 (5.07)	49.17 (8.01)	47.69 (11.28)	47.83 (5.47)	49.94 (7.40)	43.84 (12.26)	43.19 (7.43)	43.07 (11.16)	52.47 (7.73)	41.74 (11.55)
Fair / Poor	**6**	50.74 (7.01)	44.13 (7.94)	45.55 (11.91)	37.20 (8.27)	41.04 (8.22)	43.10 (8.25)	40.24 (6.54)	41.17 (7.12)	47.26 (7.96)	38.70 (6.02)
N	**58-63**	**63**	**61**	**62**	**63**	**63**	**63**	**59**	**62**	**58**	**58**

Table A21.15: SF-12v2 scale means (SD) by self-rated general health during the previous year: HIV sample

	N	PF	RP	BP	GH	VT	SF	RE	MH	PCS	MCS
Excellent/ V good	**17-18**	54.56 (3.67)	48.99 (8.59)	53.84 (5.02)	51.33 (10.55)	52.78 (9.91)	44.23 (10.13)	44.90 (9.97)	44.56 (13.36)	55.48 (3.89)	43.40 (13.28)
Good	**22-23**	44.89 (11.76)	40.75 (10.56)	44.47 (13.04)	45.30 (8.18)	46.87 (9.55)	39.88 (11.23)	36.14 (12.25	39.89 (12.39	46.46 (9.93)	38.07 (11.32)
Fair /Poor	**31**	38.18 (11.89)	36.37 (8.97)	39.03 (13.78)	33.13 (10.77)	38.66 (8.76)	34.42 (12.35)	34.07 (10.30)	35.83 (8.36)	38.49 (12.26)	35.08 (10.02)
N	**72**	**72**	**72**	**70**	**72**	**72**	**72**	**72**	**72**	**70**	**70**

Health change during the year

Respondents compared their current health with their health a year earlier. Extreme responses were recoded into a variable with three categories, 'better', 'same' and 'worse'. In both samples, lower mean scores were attained by those who rated their current health worse than it was a year before (university sample: Tables A21.16; HIV sample: A21.17).

In the university sample, there was only one significant relationship, for the BP scale ($F(2, 59)=5.05$, $p<0.01$). Post hoc comparisons indicated that the pairwise difference between same – worse was significant ($p<0.01$).

In the HIV sample, there were more significant relationships: PF: $F(2,69)=4.42$, $p<0.05$; RP: $F(2,69)=6.14$, $p<0.01$; BP: $F(2,67)=8.22$, $p=0.001$; GH: $F(2,69)=4.95$, $p=0.01$; SF: $F(2,69)=3.12$, $p=0.05$; RE: $F(2,69)=6.52$, $p<0.01$; PCS: $F(2,67)=5.60$, $p<0.01$. Post hoc comparisons revealed a number of significant pairwise differences: PF (better-worse, $p<0.05$; same- worse, $p<0.05$), RP (same- worse, $p<0.05$),

Table A21.16: SF-12v2 scale means (SD) by health compared to last year: University sample

	N	PF	RP	BP	GH	VT	SF	RE	MH	PCS	MCS
Better	**16-17**	54.45 (3.76)	49.05 (7.56)	49.65 (11.69)	50.57 (7.88)	51.89 (10.10)	48.85 (8.40)	44.55 (9.24)	49.12 (8.92)	52.84 (8.16)	46.53 (10.41)
Same	**31-34**	54.45 (4.26)	51.46 (7.64)	52.81 (6.29)	51.78 (7.70)	51.30 (7.38)	47.36 (12.77)	46.47 (8.07)	46.25 (11.71)	55.19 (5.52)	44.82 (12.17)
Worse	**11-12**	52.89 (5.74)	46.71 (10.92)	42.16 (14.74)	46.18 (7.08)	46.07 (8.40)	40.58 (12.53)	41.85 (7.65)	41.68 (9.42)	50.84 (8.68)	39.44 (9.07)
N	**58-63**	**63**	**61**	**62**	**63**	**63**	**63**	**59**	**62**	**58**	**58**

Table A21.17: SF-12v2 scale means (SD) by health compared to last year: HIV sample

	N	PF	RP	BP	GH	VT	SF	RE	MH	PCS	MCS
Better	**17-18**	47.40 (11.59)	41.31 (12.46)	50.25 (10.67)	46.18 (11.07)	46.07 (11.58)	38.62 (12.75)	38.37 (13.60)	40.16 (11.83)	49.10 (10.73)	38.05 (14.63)
Same	**35-36**	46.45 (11.15)	44.12 (10.06)	46.38 (12.20)	42.88 (12.03)	46.35 (10.80)	41.42 (11.70)	40.86 (9.70)	41.34 (11.64)	47.08 (11.61)	40.43 (10.24)
Worse	**18**	37.38 (12.69)	34.14 (5.70)	34.80 (12.87)	34.32 (12.25)	40.48 (9.64)	33.00 (10.39)	29.67 (9.74)	34.40 (9.91)	37.54 (11.35)	33.38 (10.00)
N	**70-72**	**72**	**72**	**70**	**72**	**72**	**72**	**72**	**72**	**70**	**70**

Health expectations

Respondents also rated their health expectations for the next year. Extreme responses were combined, resulting in a three-category variable, better, same or worse.

In the university sample, only two respondents expected their health to get worse in the next year, and therefore these responses were excluded prior to analyses. The relationship between scale scores and rating of health expectations are shown in Table A21.18. Mean scores were higher among those who felt their health would remain the same in the future compared to those who expected it to get better. There were higher mean scores on all scales for respondents who felt their health would remain the same, significantly so for GH ($t(59)=-2.70$, $p<0.01$) and RE ($t(55)=-2.34$, $p<0.05$).

In the HIV sample, the lowest scores were found among those who expected health to get worse and the best scores among those expecting it to remain the same (Table A21.19). This pattern was significant for most scales: PF: $F(2,68)=6.08$, $p<0.01$; RP: $F(2,68)=6.10$, $p<0.01$; BP: $F(2,66)=4.71$, $p<0.05$; GH: $F(2,68)=7.38$, $p=0.001$; VT: $F(2,68)=5.87$, $p<0.01$; SF: $F(2,68)=5.02$, $p<0.01$; RE: $F(2,68)=7.17$, $p=0.001$; PCS:

F(2,66)=5.73, p<0.01; MCS: F(2,66)=4.00, p<0.05. There were also a number of significant pairwise comparisons: PF (same- worse, p<0.01), RP (better-same, p<0.05; same- worse, p<0.05), BP (same- worse, p<0.01), GH (same- worse, p=0.001), VT (better-worse, p<0.05; same- worse, p<0.01), SF (same- worse, p<0.05), RE (better-same, p<0.05; same- worse, p<0.01), PCS (same- worse, p<0.01), MCS (same- worse, p=0.05).

Table A21.18: SF-12v2 scale means (SD) by health expectations for the following year: University sample

	N	PF	RP	BP	GH	VT	SF	RE	MH	PCS	MCS
Better	24-26	53.50 (4.86)	47.60 (9.01)	47.25 (12.56)	47.39 (7.91)	48.91 (9.58)	44.53 (12.78)	42.33 (6.80)	44.61 (9.05)	52.15 (7.41)	42.09 (10.16)
Same	32-35	54.75 (4.06)	51.76 (7.39)	52.35 (7.63)	52.63 (7.17)	51.77 (7.40)	47.91 (11.26)	47.44 (8.96)	47.69 (11.63)	55.00 (6.73)	46.19 (11.93)
N	**56-61**	**61**	**59**	**60**	**61**	**61**	**61**	**57**	**60**	**56**	**56**

Table A21.19: SF-12v2 scale means (SD) by health expectations for the following year: HIV sample

	N	PF	RP	BP	GH	VT	SF	RE	MH	PCS	MCS
Better	**24-25**	41.70 (13.92)	37.46 (12.15)	43.85 (14.92)	39.39 (13.06)	44.13 (11.21)	35.56 (12.68)	34.38 (12.54)	36.74 (9.97)	43.15 (13.32)	35.18 (11.53)
Same	**37-38**	48.11 (10.08)	44.69 (9.02)	46.97 (10.87)	45.31 (10.91)	47.48 (10.06)	42.22 (11.17)	41.51 (10.20)	42.08 (12.84)	48.46 (10.32)	41.40 (11.61)
Worse	**8**	33.92 (7.87)	34.14 (4.92)	31.97 (12.18)	28.84 (8.06)	33.91 (7.49)	30.06 (7.51)	27.42 (6.29)	34.06 (5.64)	34.15 (8.68)	31.05 (7.28)
N	**71**	**71**	**71**	**69**	**71**	**71**	**71**	**71**	**71**	**69**	**69**

Long-standing illness

Respondents were asked whether they had any long-standing illnesses, what these illnesses were, and whether any long-standing illness limited activities.

In the university sample, scoring patterns varied, with generally lower mean physical scores among those who reported a long-standing illness than those who did not (Table A21.20). However, there was only one significant difference between the two groups (GH scale: $t(61)=-2.93$, $p<0.01$).

Table A21.20: SF-12v2 scale means (SD) by longstanding illness: University sample

	N	PF	RP	BP	GH	VT	SF	RE	MH	PCS	MCS
LSI	**21-23**	53.48 (4.92)	48.16 (7.67)	50.49 (9.63)	46.80 (8.78)	48.19 (8.30)	46.47 (9.14)	45.15 (7.62)	47.64 (8.81)	51.44 (6.97)	44.78 (8.91)
No LSI	**37-40**	54.54 (4.12)	51.00 (8.65)	49.54 (11.18)	52.45 (6.44)	51.77 (8.46)	46.47 (13.34)	45.05 (8.89)	45.34 (11.68)	55.01 (6.86)	43.98 (12.52)
N	**58-63**	**63**	**61**	**62**	**63**	**63**	**63**	**59**	**62**	**58**	**58**

When university respondents were asked to give details of any long-standing illnesses, almost half of the illnesses reported (10, 45.5%), and the majority of limiting illnesses (8, 80.0%), could be classified musculoskeletal conditions. The mean scores of respondents reporting a musculoskeletal longstanding illness were lower on all physical scales, and the VT scale, compared with those reporting other long-standing illnesses (Table A21.21). However, significant results were only obtained for the BP scale ($t(11.03)=3.21$, $p<0.01$) and the PCS ($t(13.49)=2.33$, $p<0.05$).

Table A21.21: SF-12v2 scale means (SD) among those reporting a musculoskeletal long-standing illness compared to other illnesses: University sample

	N	PF	RP	BP	GH	VT	SF	RE	MH	PCS	MCS
Musc. LSI	11-13	52.18 (6.07)	47.04 (6.80)	44.19 (10.80)	46.68 (10.87)	44.73 (8.28)	46.47 (6.73)	46.01 (8.25)	49.30 (5.93)	48.00 (7.93)	46.22 (5.37)
Other LSI	10	54.49 (3.77)	49.03 (8.45)	55.74 (3.97)	46.90 (7.26)	50.85 (7.56)	46.47 (10.91)	44.43 (7.33)	46.25 (10.72)	54.57 (4.25)	43.47 (11.35)
N	21-23	23	23	22	23	23	23	22	22	21	21

In the HIV sample, very few respondents indicated that they had *no* longstanding illness (Table A21.22). Those who reported a longstanding illness had lower health status scores, significantly so for a number of scales (PF: $t(14.96)=-2.73$, $p<0.05$; RP: $t(70)=-2.59$ $p<0.05$; GH: $t(70)=-2.18$, $p<0.05$; VT: $t(70)=-3.06$, $p<0.01$; SF: $t(70)=-2.00$, $p<0.05$; RE: $t(70)=-1.97$, $p=0.05$; MH: $t(37.70)=-6.66$, $p<0.001$; MCS: $t(11.43)=-3.99$, $p<0.01$).

Table A21.22: SF-12v2 scale means (SD) by longstanding illness: HIV sample

	N	PF	RP	BP	GH	VT	SF	RE	MH	PCS	MCS
LSI	63-64	43.59 (12.53)	39.83 (10.14)	43.85 (13.32)	40.46 (12.56)	43.50 (10.58)	37.63 (11.73)	36.51 (10.82)	37.97 (11.46)	44.42 (12.19)	36.94 (11.57)
No LSI	7-8	51.10 (6.39)	49.69 (10.43)	48.71 (12.38)	50.40 (8.06)	55.30 (7.12)	46.47 (12.07)	44.90 (15.53)	50.06 (3.16)	51.44 (9.42)	47.93 (6.17)
N	70-72	72	72	70	72	72	72	72	72	70	70

Most respondents reported HIV/AIDS as a longstanding illness. However, many respondents reported multiple illnesses. In terms of the relationship between total number of longstanding illnesses and SF-12v2 scores, the pattern of results was generally linear, particularly for the physical scales, with lowest scores among those reporting the most illnesses (Table A21.23). Significant results were shown for a number of scales (GH: $F(2,59)=10.07$, $p<0.001$; VT: $F(2,59)=3.54$, $p<0.05$; MH: $F(2,59)=3.67$, $p<0.05$; PCS: $F(2,59)=4.11$, $p<0.05$; MCS: $F(2,59)=3.35$, $p<0.05$). There

were also a number of significant pairwise comparisons: GH (1-2, $p<0.01$; 1-3+,$p=0.001$); MH (1-2, $p<0.05$; 1-2, $p<0.05$); PCS (1-3+, $p<0.05$); MCS (1-2, $p<0.05$).

Table A21.23: SF-12v2 scale means (SD) by number of illnesses: HIV sample

	N	PF	RP	BP	GH	VT	SF	RE	MH	PCS	MCS
1	34-35	46.41 (11.69)	42.44 (10.59)	46.65 (12.78)	45.79 (10.67)	46.31 (10.39)	40.12 (11.51)	39.14 (10.46)	40.68 (11.39)	47.68 (11.15)	39.50 (11.25)
2	17	41.31 (14.09)	37.12 (10.42)	42.45 (15.34)	34.85 (13.29)	40.65 (10.53)	32.21 (11.32)	32.40 (11.62)	31.91 (10.98)	42.85 (13.36)	31.15 (11.38)
3-5	10	37.57 (12.01)	35.53 (40.93)	36.04 (10.13)	30.51 (8.69)	37.69 (9.49)	37.38 (10.04)	33.15 (6.69)	38.33 (9.11)	35.90 (10.60)	37.04 (8.27)
N	61-62	62	62	61	62	62	62	62	62	61	61

Long-standing limiting illnesses

Respondents were also asked whether their long-standing illness limited them in their performance of activities.

In the university sample, those with a non-limiting illness had higher scores on all but one of the scales (RE) compared to others reporting that they were limited by their long-standing illness (Table A21.24). The differences in mean scores were reflected in significant results for BP ($t(9.72)=-2.81$, $p<0.05$), VT ($t(21)=-3.36$, $p<0.01$), and the PCS ($t(12.47)=-3.11$, $p<0.01$).

In the HIV sample, those who indicated that the longstanding illness was limiting had significantly lower scores on all the physical health scales and the SF and RE scales (Table A21.25): PF: $t(45.00)=-4.56$, $p<0.001$; RP: $t(61)=-3.22$ $p<0.01$; BP: $t(46.56)=-3.29$ $p<0.01$; GH: $t(51.34)=-4.44$, $p<0.001$; SF: $t(61)=-2.62$, $p<0.05$; RE: $t(61)=-3.51$, $p=0.001$; PCS: $t(46.74)=-4.40$, $p<0.001$.

Table A21.24: SF-12v2 scale means (SD) by limiting long-standing illness: University sample

	N	PF	RP	BP	GH	VT	SF	RE	MH	PCS	MCS
Yes	**9-10**	51.32 (6.01)	44.74 (6.89)	43.85 (11.39)	46.03 (10.02)	42.72 (7.12)	44.45 (6.39)	45.46 (8.11)	46.93 (9.37)	46.67 (7.10)	44.30 (7.91)
No	**12-13**	55.15 (3.23)	50.80 (7.42)	55.09 (4.47)	47.39 (8.07)	52.39 (6.64)	48.02 (10.79)	44.90 (7.54)	48.13 (8.76)	55.02 (4.37)	45.14 (9.93)
N	**21-23**	**23**	**23**	**22**	**23**	**23**	**23**	**22**	**22**	**21**	**21**

Table A21.25: SF-12v2 scale means (SD) by limiting long-standing illness: HIV sample

	N	PF	RP	BP	GH	VT	SF	RE	MH	PCS	MCS
Yes	**44-45**	39.86 (12.20)	37.21 (9.37)	40.77 (13.74)	36.93 (12.63)	41.94 (10.40)	35.02 (10.89)	33.46 (10.18)	36.36 (11.05)	40.87 (12.05)	35.27 (11.25)
No	**18**	52.18 (8.46)	45.66 (9.51)	50.65 (9.25)	48.45 (7.57)	46.63 (10.29)	43.10 (11.49)	43.03 (8.58)	41.17 (11.87)	52.46 (8.08)	40.04 (11.49)
N	**62-63**	**63**	**63**	**63**	**63**	**63**	**63**	**63**	**63**	**62**	**62**

Attitude strength

Thinking about health (accessibility)

In both samples, few respondents selected the more extreme response categories in relation to amount of time reportedly spent thinking about health. Therefore responses were recoded, combining 'all of the time' with 'most of the time' and 'a little of the time' with 'none of the time'. Most scales were linearly related to the amount of time spent thinking about health (university sample: Table A21.26; HIV sample: Table A21.27), with the lowest mean scores among those who responded all or most of the time, and highest for those responding a little or none of the time.

In the university sample, these differences were statistically significant for three scales (PF: $F(2, 60)=3.20$, $p<0.05$; RP: $F(2, 58)=5.13$, $p<0.01$; RE: $F(2, 56)=8.63$, $p<0.001$). Post hoc comparisons indicated significant pairwise differences for PF (all/most-a little/none, $p<0.05$), RP (all/most-a little/none, $p<0.01$; all/most-some, $p<0.05$), and RE (all/most-a little, $p<0.001$; all/most-some, $p<0.05$).

In the HIV sample, significant results were obtained for three scales (SF: $F(2,66)=8.07$, $p=0.001$; MH: $F(2,66)=3.53$, $p<0.05$; MCS: $F(2,64)=3.89$, $p<0.05$). There were also significant pairwise comparisons for these scales: SF (all-little, $p<0.001$; some-little, $p<0.05$); MH (all-little, $p<0.05$); MCS: (all-little, $p<0.05$).

Table A21.26: SF-12v2 scale means (SD) according to reported time spent thinking about health: University sample

	N	PF	RP	BP	GH	VT	SF	RE	MH	PCS	MCS
All - most	13-14	52.18 (5.59)	44.35 (9.25)	47.25 (10.58)	49.82 (6.31)	49.19 (8.70)	47.19 (10.07)	38.44 (8.50)	41.90 (9.08)	51.81 (7.75)	40.40 (11.78)
Some	29-31	53.98 (4.54)	50.73 (7.99)	49.22 (12.18)	49.82 (8.42)	49.37 (9.03)	44.84 (12.80)	45.28 (7.16)	45.47 (10.41)	53.79 (7.98)	43.14 (10.03)
A little - none	16-18	55.99 (2.02)	53.11 (6.07)	53.24 (6.30)	51.81 (7.99)	53.34 (7.09)	48.72 (11.77)	49.83 (7.10)	50.92 (11.31)	55.13 (4.10)	49.47 (11.81)
N	58-63	63	61	62	63	63	63	59	62	58	58

Table A21.27: SF-12v2 scale means (SD) according to reported time spent thinking about health: HIV sample

	N	PF	RP	BP	GH	VT	SF	RE	MH	PCS	MCS
All - most	23	41.90 (12.27)	37.95 (11.08)	42.38 (14.69)	38.65 (13.57)	42.50 (10.88)	33.30 (9.83)	34.20 (11.67)	35.65 (10.10)	43.19 (11.97)	34.19 (10.34)
Some	32-34	46.62 (11.41)	42.54 (9.66)	46.93 (11.71)	42.58 (11.77)	45.09 (11.44)	39.34 (12.31)	39.30 (10.57)	39.08 (12.33)	47.33 (11.18)	37.90 (9.83)
Little - none	12	47.16 (11.85)	45.66 (9.11)	45.55 (12.16)	44.74 (13.32)	47.75 (9.59)	49.00 (8.75)	41.63 (11.30)	46.26 (9.73)	46.92 (12.91)	45.45 (8.66)
N	67-69	69	69	67	69	69	69	69	69	67	67

Experience of others (direct experience/knowledge/identification)

In the university sample, the extreme responses, comprising small numbers of respondents, were recoded so that there were three almost equal groups: none/a little, some and quite a bit/a lot of experience. There were no clear patterns for SF-12v2 scales according to amount of experience (Table A21.28). The only significant result was for the GH scale ($F(2, 60)=3.29$, $p<0.05$), and there was a significant post hoc pairwise difference between none/a little - some ($p<0.05$).

In the HIV sample, few respondents answered 'none of the time' (4) or 'a little of the time' (9) and these were combined, resulting in four groups: none/a little, some, quite a bit and a lot. Those respondents with a lot of experience had poorer scores for all scales (Table A21.29). Patterns for other responses varied. There were significant associations for three scales (PF: $F(3,68)=2.68$, $p=0.05$; SF: $F(3,68)=3.86$, $p<0.05$; RE: $F(3,68)=4.00$, $p=0.01$). Significant post hoc pairwise differences were identified for two of these scales: SF (quite-a lot, $p<0.05$; some-a lot, $p<0.05$); RE (some-a lot, $p<0.05$; quite-a lot, $p<0.05$).

Table A21.28: SF-12v2 scale means (SD) according to experience of illness among others: University sample

	N	PF	RP	BP	GH	VT	SF	RE	MH	PCS	MCS
None / little	**20-21**	53.20 (5.75)	48.18 (10.04)	50.16 (8.61)	53.16 (6.57)	49.19 (9.16)	47.43 (11.91)	44.62 (9.68)	45.67 (10.89)	53.23 (6.17)	43.85 (10.89)
Some	**21**	54.02 (4.82)	50.38 (8.57)	48.71 (12.18)	47.31 (9.58)	50.62 (10.13)	48.39 (10.89)	46.76 (7.57)	48.58 (7.83)	51.72 (9.08)	46.82 (9.36)
Quite bit/ lot	**18-21**	54.42 (3.78)	50.50 (6.76)	52.35 (7.75)	51.21 (5.90)	51.58 (5.93)	45.03 (12.49)	42.54 (9.00)	44.43 (13.28)	56.01 (4.76)	41.85 (13.26)
N	**59-63**	**63**	**62**	**62**	**63**	**63**	**63**	**60**	**62**	**59**	**59**

Table A21.29: SF-12v2 scale means (SD) according to experience of illness among others: HIV sample

	N	PF	RP	BP	GH	VT	SF	RE	MH	PCS	MCS
None/ A little	13	48.54 (8.91)	41.59 (8.93)	44.11 (15.22)	45.07 (12.54)	46.98 (8.67)	41.81 (12.78)	37.58 (12.37)	42.50 (12.82)	47.34 (11.23)	40.08 (11.32)
Some	17-18	42.63 (10.27)	40.80 (11.20)	44.25 (13.37)	42.82 (11.19)	42.72 (11.05)	41.42 (11.09)	40.24 (10.01)	41.85 (9.54)	43.08 (10.90)	41.61 (11.95)
Quite a bit	23	47.88 (9.69)	43.56 (9.26)	48.58 (8.85)	41.83 (11.77)	46.00 (11.61)	40.76 (10.91)	41.01 (10.85)	37.77 (12.16)	48.73 (9.11)	38.28 (12.05)
A lot	17-18	33.81 (16.53)	37.21 (12.24)	38.86 (15.39)	37.43 (14.42)	43.84 (11.52)	30.76 (11.07)	29.98 (10.85)	36.43 (11.29)	40.58 (15.86)	32.59 (9.67)
N	72	72	72	70	72	72	72	72	72	70	70

Current concern (intensity)

Level of concern about health at the time of questionnaire completion was recoded prior to analyses, combining not at all and not too concerned and the very and extremely concerned responses. For all scales in both samples, the scores of those who considered themselves not at all or not too concerned about their current health were higher than the other groups (university sample: Table A21.30; HIV sample: Table A21.31).

In the university sample, results of analyses of variance proved significant for all physical health scales and one mental health scale (PF: $F(2, 60)=5.86$, $p<0.01$; RP: $F(2, 58)=3.94$, $p<0.05$; BP: $F(2, 59)=4.54$, $p<0.05$; GH: $F(2, 60)=4.65$, $p<0.05$; SF: $F(2, 60)=3.16$, $p=0.05$; PCS ($F(2, 55)=4.14$, $p<0.05$). Post hoc analyses revealed significant pairwise differences between not at all/not too concerned - fairly concerned categories (PF: $p<0.01$; RP: $p<0.05$; BP: $p<0.05$; GH: $p<0.01$; PCS, $p<0.05$).

In the HIV sample, the relationship between concern and health status was strongly linear, and significant for all scales, with consistently lower scores among those who

were more concerned and higher among those who were least concerned: PF: $F(2,67)=5.87$, $p<0.01$; RP: $F(2,67)=11.22$, $p<0.001$; BP: $(2,65)=7.47$, $p=0.001$; GH: $F(2,67)=10.65$, $p<0.001$ VT: $F(2,67)=6.44$, $p<0.01$; SF: $F(2,67)=11.21$, $p<0.001$; RE: $F(2,67)=9.49$, $p<0.001$; MH: $F(2,67)=6.54$, $p<0.01$; PCS: $F(2,65)=7.66$, $p=0.001$; MCS: $F(2,65)=8.28$, $p=0.001$. Significant pairwise comparisons were demonstrated for all scales: PF (not-very/extremely, $p<0.01$); RP (not-fairly, $p<0.01$; not-very/extremely, $p<0.001$); BP (not-very/extremely, $p=0.001$; fairly- very/extremely, $p<0.05$); GH (not-fairly, $p<0.05$; not-very/extremely, $p<0.001$); VT (not-fairly, $p<0.05$; not-very/extremely, $p<0.01$); SF (not-fairly, $p<0.01$; not-very/extremely, $p<0.001$); RE (not-fairly, $p=0.05$; not-very/extremely, $p<0.001$; fairly- very/extremely, $p<0.05$); MH (not-very/extremely, $p<0.01$); PCS (not-very/extremely, $p=0.001$); MCS (not-fairly, $p<0.05$; not-very/extremely, $p<0.001$).

Table A21.30: SF-12v2 scale means (SD) according to level of concern about health: University sample

	N	PF	RP	BP	GH	VT	SF	RE	MH	PCS	MCS
Not all/ Not too	35-38	55.57 (3.34)	52.20 (7.32)	53.03 (7.42)	52.63 (7.91)	51.99 (7.63)	49.39 (11.95)	46.76 (8.66)	48.56 (10.40)	55.71 (6.13)	46.48 (11.43)
Fairly	19-20	51.75 (5.20)	46.02 (9.00)	45.21 (13.47)	46.47 (6.55)	47.25 (8.92)	42.43 (10.57)	43.13 (6.74)	43.21 (10.37)	50.24 (7.75)	41.67 (9.14)
Very/ extrem	4-5	53.03 (4.70)	47.97 (8.62)	45.21 (11.16)	49.05 (5.90)	51.78 (11.47)	40.41 (11.52)	39.31 (10.21)	40.16 (11.40)	52.81 (5.96)	37.29 (16.26)
N	58-63	63	61	62	63	63	63	59	62	58	58

Table A21.31: SF-12v2 scale means (SD) according to level of concern about health: HIV sample

	N	PF	RP	BP	GH	VT	SF	RE	MH	PCS	MCS
Not all/ Not too	20-21	50.74 (6.84)	48.62 (7.88)	51.33 (8.36)	49.87 (9.29)	51.10 (7.35)	47.43 (11.02)	44.63 (11.53)	45.38 (12.97)	52.24 (7.38)	45.36 (12.25)
Fairly	31	44.55 (11.88)	40.09 (8.17)	45.61 (11.80)	40.92 (10.47)	42.56 (9.68)	37.35 (9.16)	37.86 (8.04)	38.39 (9.07)	45.32 (11.32)	36.98 (9.23)
Very / extrem	17-18	38.34 (14.10)	35.17 (11.56)	36.46 (14.62)	33.48 (13.90)	40.48 (13.28)	31.88 (12.11)	30.61 (11.22)	33.05 (10.51)	38.35 (12.92)	31.30 (11.09)
N	68-70	70	70	68	70	70	70	70	70	68	68

Change in concern (intensity)

Respondents were asked whether there had been a change in the level of concern they felt during the previous year. In both samples, the mean scores for respondents who were more concerned about their health were lower than for those who had the same amount of concern (university sample: Table A21.32; HIV sample: Table A21.33). Scores for the few respondents who reported that they were less concerned with their health varied.

In the university sample, significant differences were identified for three scales (PF: $F(2, 60)=3.69$, $p<0.05$; GH: $F(2, 60)=6.16$, $p<0.01$; SF: $F(2, 60)=5.47$, $p<0.01$). Post hoc pairwise comparisons showed significant differences for PF (more-same, $p<0.05$), GH (more-same, $p<0.05$; same-less, $p<0.05$), and SF (more-same, $p<0.01$).

In the HIV sample, significant results were obtained for two scales: GH: $F(2,67)=8.59$, $p<0.001$; SF: $F(2,67)=5.31$, $p<0.01$. Significant post hoc pairwise comparisons were found for both scales: GH (more-same, $p=0.001$; more-less, $p<0.05$); SF (more-same, $p<0.01$).

Table A21.32: SF-12v2 scale means (SD) according to change in concern about health: University sample

	N	PF	RP	BP	GH	VT	SF	RE	MH	PCS	MCS
More	**18-19**	51.95 (5.26)	46.68 (9.84)	46.18 (13.11)	47.12 (7.00)	47.22 (7.85)	39.56 (11.19)	41.48 (7.94)	42.72 (11.73)	51.54 (7.55)	39.65 (10.60)
Same	**35-39**	55.15 (3.71)	51.60 (7.51)	51.81 (8.44)	52.81 (7.09)	52.39 (7.94)	49.06 (11.52)	46.76 (8.35)	47.22 (10.17)	55.32 (6.44)	46.09 (11.41)
Less	**5**	54.75 (3.84)	48.89 (6.01)	49.29 (13.29)	43.88 (9.22)	47.75 (12.33)	52.53 (5.53)	46.01 (7.29)	51.13 (9.04)	50.30 (7.51)	48.18 (8.97)
N	**58-63**	**63**	**61**	**62**	**63**	**63**	**63**	**59**	**62**	**58**	**58**

Table A21.33: SF-12v2 scale means (SD) according to change in concern about health: HIV sample

	N	PF	RP	BP	GH	VT	SF	RE	MH	PCS	MCS
More	**29**	42.84 (12.68)	39.23 (10.18)	41.63 (14.04)	35.00 (12.39)	42.54 (11.61)	34.63 (10.82)	34.68 (11.58)	36.37 (11.57)	42.63 (12.20)	34.87 (11.92)
Same	**32-34**	47.37 (10.77)	43.90 (10.32)	47.89 (11.56)	46.14 (11.33)	46.27 (10.84)	43.50 (10.70)	40.95 (9.98)	41.95 (11.18)	48.41 (11.30)	41.10 (10.18)
Less	**7**	40.52 (14.40)	38.09 (9.38)	45.79 (10.89)	47.82 (5.26)	44.88 (7.60)	34.93 (15.89)	37.71 (12.80)	36.67 (11.60)	45.19 (10.78)	37.03 (15.63)
N	**68-70**	**70**	**70**	**68**	**70**	**70**	**70**	**70**	**70**	**68**	**68**

Personality (Extraversion and Neuroticism)

Correlations were carried out to investigate relationships between these personality dimensions and SF-12v2 scales (university sample: Table A21.34; HIV sample: Table A21.35).

In both samples, Extraversion was associated with better health identified using the SF-12v2 and Neuroticism with poorer health, particularly measured using the mental health scales.

In the university sample, the Extraversion scale was significantly positively associated with all physical health scales, together with most of the mental health scales. The Neuroticism scale was significantly negatively associated with mental health but not the physical health scales. These results indicate that higher scores on the Extraversion scale were related to better functioning across physical and mental health scales. In addition, those with lower levels of Neuroticism were more likely to have higher mental health scores on the SF-12v2.

In the HIV sample, Extraversion positively associated and Neuroticism negatively associated with health status, with significant results for both scales.

Table A21.34: Correlations between the SF-12v2 and the Extraversion and Neuroticism scales: University sample

Scale	Extraversion	Neuroticism
PF	0.30*	-0.10
RP	0.39**	-0.08
BP	0.39**	-0.23
GH	0.37**	-0.14
VT	0.36**	-0.26*
SF	0.28*	-0.25*
RE	0.27*	-0.45***
MH	0.17	-0.45***
PCS	0.41**	0.03
MCS	0.22	-0.47***

* $p<0.05$ ** $p<0.01$ *** $p<0.001$

Table A21.35: Correlations between the SF-12v2 and the Extraversion and Neuroticism scales: HIV sample

Scale	Extraversion	Neuroticism
PF	.15	-.33**
RP	.32**	-.43***
BP	.16	-.22
GH	.32**	-.32**
VT	.46***	-.42***
SF	.36**	-.46***
RE	.35**	-.42***
MH	.38***	-.52***
PCS	.16	-.24*
MCS	.43***	-.51***

* p<0.05 ** p<0.01 *** p<0.001

Health behaviours

Drinking behaviour

Drinking behaviour was measured according to problem drinking, drinking status and consumption levels.

Problem drinking was measured using a cut-off score of two or more on the CAGE measure. In the university sample, no consistent SF-12v2 scoring patterns were found, and none of the comparisons was significant (Table A21.36).

In the HIV sample, problem drinking was associated with lower health status scores (Table A21.37), resulting in significant relationships for six scales: PF: $t(70)=2.38$, $p<0.05$; RP: $t(31.32)=2.59$, $p<0.05$; GH: $t(70)=1.97$, $p=0.05$; SF: $t(70)=2.62$, $p=0.01$; RE: $t(70)=2.97$, $p<0.01$; MCS: $t(68)=2.23$, $p<0.05$.

Table A21.36: SF-12v2 scale means (SD) according to the CAGE measure, using the problem drinking cut-off: University sample

	N	PF	RP	BP	GH	VT	SF	RE	MH	PCS	MCS
0-1	**44-48**	53.96 (4.67)	49.34 (8.91)	49.63 (11.29)	50.31 (7.78)	50.27 (8.43)	45.42 (12.01)	45.02 (8.56)	46.12 (10.90)	53.39 (7.14)	43.89 (11.55)
2+	**14-15**	53.61 (5.30)	50.27 (7.40)	49.97 (8.14)	51.35 (8.09)	49.76 (9.47)	49.84 (11.24)	43.30 (9.91)	47.07 (11.02)	53.76 (7.51)	45.23 (10.59)
N	**58-63**	**63**	**61**	**62**	**63**	**63**	**63**	**59**	**62**	**58**	**58**

Table A21.37: SF-12v2 scale means (SD) according to the CAGE measure, using the problem drinking cut-off: HIV sample

	N	PF	RP	BP	GH	VT	SF	RE	MH	PCS	MCS
0-1	**55-56**	46.19 (11.40)	42.37 (10.79)	45.58 (13.12)	43.09 (12.01)	45.59 (10.81)	40.52 (10.86)	39.50 (11.23)	40.38 (11.03)	46.56 (12.08)	39.61 (10.61)
2+	**15-16**	38.22 (13.26)	35.87 (8.22)	39.78 (13.04)	36.25 (13.09)	42.09 (11.00)	31.95 (13.78)	30.22 (10.18)	35.59 (12.69)	39.83 (10.82)	32.29 (13.57)
N	**72**	**72**	**72**	**70**	**72**	**72**	**72**	**72**	**72**	**70**	**70**

Due to small numbers in response categories, drinking status was recoded into three groups, comprising those who reported drinking regularly (every day, 5-6 days a week, 3-4 days a week, or 1-2 days a week), infrequent drinkers (1-2 times a month, less than once a month) and those who reported that they never drank.

In the university sample, scoring patterns varied by scale, although mean SF-12v2 scores were generally higher among those who reported drinking regularly compared to

others, indicating better perceived health functioning, although there were no significant differences (Table A21.38).

Similarly, in the HIV sample, patterns varied by scale, although lower scores were more prevalent among non-drinkers and higher scores among regular drinkers (Table A21.39), and there was a significant result for the GH scale ($F(2, 69)=3.46$, $p<0.05$), but no significant pairwise differences between categories.

Table A21.38: SF-12v2 scale means (SD) according to drinking frequency: University sample

	N	PF	RP	BP	GH	VT	SF	RE	MH	PCS	MCS
Never	**6-7**	51.56 (4.59)	50.27 (9.10)	42.88 (15.41)	50.90 (5.76)	50.63 (9.57)	40.70 (12.85)	43.03 (8.42)	47.12 (8.92)	52.31 (6.35)	43.99 (11.61)
Infreq	**17-19**	52.85 (5.95)	47.72 (8.75)	52.35 (7.21)	49.39 (7.61)	49.34 (7.69)	45.94 (10.36)	43.34 (8.96)	44.22 (12.01)	53.48 (5.98)	42.32 (10.83)
Reg	**35-37**	54.84 (3.97)	50.40 (8.42)	49.73 (10.58)	51.09 (8.32)	50.47 (9.08)	47.84 (12.41)	45.54 (8.97)	47.24 (10.71)	53.68 (7.94)	45.17 (11.60)
N	**58-63**	**63**	**61**	**62**	**63**	**63**	**63**	**59**	**62**	**58**	**58**

Table A21.39: SF-12v2 scale means (SD) according to drinking frequency: HIV sample

	N	PF	RP	BP	GH	VT	SF	RE	MH	PCS	MCS
Never	**7**	36.84 (10.77)	38.75 (10.09)	37.06 (13.16)	34.89 (14.13)	43.44 (14.06)	37.81 (12.27)	36.11 (13.26)	34.93 (12.41)	38.48 (11.96)	37.74 (12.14)
Infreq	**21**	44.20 (11.29)	38.75 (10.97)	42.40 (12.32)	37.66 (15.52)	43.44 (10.82)	35.41 (13.51)	35.58 (11.77)	37.84 (12.42)	43.47 (13.71)	36.02 (13.72)
Reg	**42-44**	45.73 (11.29)	42.31 (10.97)	46.52 (13.39)	44.50 (9.72)	45.69 (10.54)	40.27 (11.15)	38.54 (11.42)	40.71 (10.91)	47.05 (10.94)	39.10 (13.15)
N	**70-72**	**72**	**72**	**70**	**72**	**72**	**72**	**72**	**72**	**70**	**70**

In the university sample, self-reported average weekly alcohol consumption was associated with the SF-12v2, with higher consumption positively related to health perceptions (Table A21.40). Two correlations were significant (Role-Physical (RP) and Social Functioning (SF)). In the HIV sample, there was no significant association between consumption and health status (Table A21.40).

Table A21.40: Correlations between the SF-12v2 and alcohol consumption

Scale	University sample	HIV sample
PF	0.10	0.02
RP	0.30*	0.02
BP	0.17	0.12
GH	0.15	-0.04
VT	0.17	-0.11
SF	0.25*	-0.09
RE	0.16	-0.07
MH	0.09	-0.10
PCS	0.19	0.09
MCS	0.16	-0.14

* $p<0.05$

Smoking behaviour

In the university sample, higher mean SF-12v2 scores were attained by respondents who reported that they used to smoke in comparison to those who still smoked or who had never smoked (Table A21.41). This pattern was statistically significant for the GH scale ($F(2, 60)=4.52$, $p<0.05$), with post hoc pairwise comparisons revealing significant differences both for used to smoke – never smoked ($p<0.05$) and used to smoke – still

smoke ($p<0.05$). In the HIV sample, those who never smoked tended to have highest scores, with those who currently smoked having lowest scores, particularly on physical health scales (Table A21.42). There were no significant results.

Table A21.41: SF-12v2 scale means (SD) according to smoking status: University sample

	N	PF	RP	BP	GH	VT	SF	RE	MH	PCS	MCS
Never	**33-35**	53.52 (5.08)	47.83 (8.97)	47.83 (11.58)	49.05 (7.84)	48.90 (9.69)	45.03 (12.76)	44.22 (8.82)	45.03 (11.34)	52.32 (7.83)	43.15 (12.10)
Used	**14-17**	54.45 (4.83)	52.28 (7.23)	53.62 (5.10)	55.14 (5.67)	52.48 (7.22)	50.63 (9.49)	47.51 (9.42)	50.83 (8.48)	55.35 (5.16)	49.07 (8.53)
Still	**11**	54.13 (4.01)	50.90 (4.79)	50.03 (12.14)	48.27 (8.20)	50.49 (6.51)	44.63 (11.79)	41.85 (7.65)	44.04 (11.33)	54.58 (7.16)	41.20 (10.58)
N	**58-63**	**63**	**61**	**62**	**63**	**63**	**63**	**59**	**62**	**58**	**58**

Table A21.42: SF-12v2 scale means (SD) according to smoking status: HIV sample

	N	PF	RP	BP	GH	VT	SF	RE	MH	PCS	MCS
Never	**25**	47.54 (11.22)	41.51 (10.56)	46.84 (11.94)	44.83 (10.72)	44.53 (11.52)	37.18 (11.99)	36.62 (11.65)	37.23 (9.66)	49.01 (11.51)	35.26 (10.05)
Used	**26-28**	44.51 (12.00)	42.04 (9.78)	44.51 (14.57)	41.28 (12.87)	45.95 (10.27)	40.70 (12.12)	37.91 (12.14)	41.03 (12.27)	44.85 (11.69)	39.66 (13.23)
Still	**19**	40.19 (13.09)	38.51 (11.84)	40.81 (12.80)	37.71 (13.56)	43.51 (11.28)	37.43 (12.09)	37.83 (11.31)	39.52 (12.67)	40.38 (12.13)	39.48 (11.02)
N	**70-72**	**72**	**72**	**70**	**72**	**72**	**72**	**72**	**72**	**70**	**70**

In neither sample was there a significant association between scale scores and reported number of cigarettes smoked in an average day (Table A21.43).

Table A21.43: Correlations between the SF-12v2 and cigarette consumption

Scale	University sample	HIV sample
PF	0.03	-0.20
RP	0.12	-0.05
BP	0.02	-0.16
GH	-0.20	-0.17
VT	0.00	-0.00
SF	0.05	-0.10
RE	-0.12	-0.07
MH	-0.05	-0.03
PCS	0.05	-0.18
MCS	-0.06	0.01

Health service contact

GP contact

Ever

Few respondents in either sample reported that they had never received care or advice from a GP surgery, and therefore no comparison of SF-12v2 scores was possible between those who had or had not received GP care or support.

Most recent contact

SF-12v2 scores of those who had been in contact with a GP surgery during the year before were compared with those of all other respondents (university sample: Table A21.44; HIV sample: Table A21.45). The majority of respondents had attended in the previous year, and there were no differences between these respondents and others.

Table A21.44: SF-12v2 scale means (SD) according to recent GP surgery attendance: University sample

	N	PF	RP	BP	GH	VT	SF	RE	MH	PCS	MCS
≤1 yr	46-49	53.67 (4.77)	50.08 (8.50)	50.43 (10.12)	50.20 (8.10)	50.42 (8.41)	46.47 (11.66)	44.78 (8.53)	46.38 (10.48)	53.44 (7.46)	44.27 (11.05)
Other	12-13	55.15 (4.76)	49.03 (8.65)	50.39 (8.71)	52.37 (6.68)	50.85 (9.53)	48.80 (12.47)	44.90 (10.39)	45.32 (12.65)	54.69 (5.51)	44.14 (12.56)
N	58-62	62	61	61	62	62	62	59	61	58	58

Table A21.45: SF-12v2 scale means (SD) according to recent GP surgery attendance: HIV sample

	N	PF	RP	BP	GH	VT	SF	RE	MH	PCS	MCS
≤1 yr	53-55	45.07 (11.70)	41.18 (10.56)	44.56 (13.13)	40.59 (12.64)	44.27 (10.99)	39.31 (12.40)	37.47 (11.69)	38.72 (12.13)	45.38 (11.74)	37.59 (12.14)
Other	14	45.43 (12.80)	43.03 (9.47)	47.25 (11.99)	45.82 (12.36)	46.31 (11.06)	37.81 (11.10)	40.10 (9.53)	41.03 (9.52)	47.56 (12.04)	39.45 (10.91)
N	67-69	69	69	67	69	69	69	69	69	67	67

Number of times contacted in last year

Analyses according to number of attendances in the year showed consistently lower scores among those attending more than five times in both samples. For other attendance categories, scoring patterns varied (university sample: Table A21.46; HIV sample: A21.47).

In the university sample, the result for the SF scale was significant ($F(3, 58)=3.18$, $p<0.05$), with post hoc pairwise differences between both not at all - more than five attendances ($p<0.05$) and 2-5 - more than five attendances ($p<0.05$).

In the HIV sample, the results were significant for most scales: PF: $F(3,65)=7.00$, $p<0.001$; RP: $F(3,65)=6.20$, $p=0.001$; BP: $F(3,63)=5.61$, $p<0.01$; GH: $F(3,65)=6.09$, $p=0.001$; VT: $F(3,65)=3.52$, $p<0.05$; SF: $F(3,65)=3.31$, $p=0.05$; RE: $F(3,65)=3.56$, $p<0.05$; PCS: $F(3,63)=8.59$, $p<0.001$. Post hoc tests revealed significant comparisons involving the largest number of attendances: PF (1->5, $p<0.01$; 2-5->5, $p=0.001$); RP (1->5, $p<0.01$; 2-5->5, $p<0.01$; not at all->5, $p<0.05$); BP (1->5, $p<0.01$; 2-5->5, $p=0.01$); GH (1->5, $p<0.01$; 2-5->5, $p<0.01$; not at all->5, $p<0.01$); VT (2-5->5,

p<0.05); SF (2-5->5, p<0.05); RE (1->5, p<0.05); PCS (1->5, p<0.001; 2-5->5, p<0.001; not at all->5, p=0.01).

Table A21.46: SF-12v2 scale means (SD) according to number of GP surgery contacted in the previous year: University sample

	N	PF	RP	BP	GH	VT	SF	RE	MH	PCS	MCS
Not at all	**12-13**	55.15 (4.76)	49.03 (8.65)	50.39 (8.71)	52.37 (6.68)	50.85 (9.53)	48.80 (12.47)	44.90 (10.39)	45.32 (12.65)	54.69 (5.51)	44.14 (12.56)
Once	**16-17**	53.44 (4.23)	49.86 (7.99)	52.98 (9.09)	48.42 (9.14)	50.71 (9.91)	47.06 (10.99)	45.88 (7.19)	45.49 (13.15)	53.73 (6.70)	44.44 (11.81)
2 - 5	**23-25**	54.75 (3.51)	50.46 (9.21)	51.33 (8.83)	52.67 (6.49)	51.77 (7.68)	49.30 (9.90)	45.87 (9.18)	48.94 (7.84)	54.09 (6.12)	46.83 (8.69)
> 5	7	50.33 (8.17)	49.28 (8.29)	41.43 (12.97)	45.66 (8.70)	44.88 (4.91)	34.93 (13.58)	38.50 (7.52)	39.29 (10.81)	50.62 (12.54)	35.47 (13.05)
N	**58-61**	**62**	**61**	**61**	**62**	**62**	**62**	**59**	**61**	**58**	**58**

Table A21.47: SF-12v2 scale means (SD) according to number of GP surgery contacted in the previous year: HIV sample

	N	PF	RP	BP	GH	VT	SF	RE	MH	PCS	MCS
Not at all	**14**	45.43 (12.80)	43.03 (9.47)	47.25 (11.99)	45.82 (12.36)	46.31 (11.06)	37.81 (11.10)	40.10 (9.53)	41.03 (9.52)	47.56 (12.04)	39.45 (10.91)
Once	**15**	49.60 (9.30)	46.12 (8.50)	50.65 (9.17)	46.03 (8.77)	46.41 (9.21)	42.43 (13.11)	43.03 (10.28)	40.56 (12.08)	51.06 (7.70)	40.08 (12.07)
2 - 5	**19-21**	49.93 (8.11)	44.23 (9.17)	48.32 (10.13)	44.33 (11.48)	48.23 (10.78)	43.10 (11.22)	38.77 (10.89)	40.16 (12.64)	50.24 (9.18)	38.74 (13.31)
> 5	**19**	36.13 (11.88)	33.90 (9.89)	35.99 (14.37)	32.15 (12.53)	38.22 (10.33)	32.65 (10.76)	31.65 (11.52)	35.67 (11.64)	36.03 (11.13)	34.45 (10.91)
N	**69**	**69**	**69**	**67**	**69**	**69**	**69**	**69**	**69**	**67**	**67**

Outpatient or casualty department contact

Ever

In the university sample, a comparison between those respondents who had ever been an outpatient or casualty department patient and the remaining respondents showed no significant differences in SF-12v2 scales (Table A21.48).

Only three HIV respondents indicated that they had never received care or advice from an outpatient or casualty department, and therefore no comparisons were carried out between this group and others.

Table A21.48: SF-12v2 scale means (SD) according to whether the respondent had ever having had contact with an outpatient or casualty department: University sample

	N	PF	RP	BP	GH	VT	SF	RE	MH	PCS	MCS
Yes	**40-43**	54.27 (4.63)	50.21 (7.51)	49.43 (11.15)	49.55 (8.24)	50.09 (8.46)	46.00 (11.86)	44.90 (8.57)	45.53 (11.44)	53.86 (7.27)	43.82 (11.91)
No	**18-20**	53.46 (5.04)	49.12 (10.34)	50.82 (9.51)	52.72 (6.42)	50.77 (9.29)	47.99 (12.38)	44.59 (9.68)	47.78 (9.46)	53.33 (6.82)	45.19 (9.94)
N	**58-63**	**63**	**61**	**62**	**63**	**63**	**63**	**59**	**62**	**58**	**58**

Most recent

Among those in the university sample who had received outpatient or casualty department care within the year, mean scores on all scales were lower, compared with other respondents. (Table A21.49). However, only one of these comparisons was significant, for the GH scale ($t(61)=-2.32$, $p<0.05$).

In the HIV sample, most respondents had attended an outpatient or casualty department during the previous year. Those attending in the previous year had lower scores but there were no significant results (Table A21.50).

Table A21.49: SF-12v2 scale means (SD) according to the most recent contact with an outpatient or casualty department: University sample

	N	PF	RP	BP	GH	VT	SF	RE	MH	PCS	MCS
≤1 yr	18-20	53.46 (5.76)	47.72 (8.20)	47.79 (12.00)	47.33 (8.32)	47.75 (7.30)	43.95 (11.76)	43.72 (8.25)	45.29 (10.61)	52.05 (6.44)	42.59 (11.10)
Other	40-43	54.27 (4.23)	50.82 (8.51)	50.80 (9.92)	52.06 (7.15)	51.49 (9.06)	47.88 (11.99)	45.32 (9.17)	46.68 (11.00)	54.44 (7.30)	44.98 (11.39)
N	58-63	63	61	62	63	63	63	59	62	58	58

Table A21.50: SF-12v2 scale means (SD) according to the most recent contact with an outpatient or casualty department: HIV sample

	N	PF	RP	BP	GH	VT	SF	RE	MH	PCS	MCS
≤1 yr	54-56	44.35 (11.56)	40.48 (10.04)	44.04 (13.10)	40.58 (13.15)	43.62 (10.47)	38.35 (12.39)	37.31 (11.15)	38.53 (10.87)	44.03 (14.59)	37.30 (11.70)
Other	13	48.54 (12.87)	46.19 (10.56)	49.60 (11.13)	46.23 (9.45)	49.30 (12.22)	41.81 (10.60)	41.02 (11.73)	41.02 (11.73)	50.50 (10.08)	40.77 (12.47)
N	69	69	69	67	69	69	69	69	69	67	67

Number of times contacted in last year

In both samples, those attending most often in the previous year generally had lower scores than others, although only the HIV sample included respondents who attended more than five times (university sample: Table A21.51; HIV sample A21.52). The pattern was more varied in the university sample and none of the statistical analyses was significant.

In contrast, in the HIV sample, the results were significant for three scales: GH: $F(3,65)=4.13$, $p=0.01$; VT: $F(3,65)=4.11$, $p=0.01$; SF: $F(3,65)=2.84$, $p<0.05$. There were also significant pairwise comparisons between those attending five or more times versus others: GH (not at all->5, $p<0.05$; 1->5, $p<0.05$; VT (not at all->5, $p<0.05$; 1->5, $p<0.05$).

Table A21.51: SF-12v2 scale means (SD) according to the number of times an outpatient or casualty department was contacted in the previous year: University sample

	N	PF	RP	BP	GH	VT	SF	RE	MH	PCS	MCS
Not at all	40-43	54.27 (4.23)	50.82 (8.51)	50.80 (9.92)	52.06 (7.15)	51.49 (9.06)	47.88 (11.99)	45.32 (9.17)	46.68 (11.00)	54.44 (7.30)	44.98 (11.39)
Once	9-10	54.75 (3.62)	50.52 (9.25)	48.27 (13.11)	48.19 (9.16)	46.74 (7.42)	44.45 (14.12)	43.03 (7.40)	45.04 (9.44)	54.90 (4.17)	41.42 (10.26)
2-5	9-10	52.18 (7.30)	45.20 (6.59)	47.25 (11.39)	46.47 (7.79)	48.76 (7.42)	43.44 (9.58)	44.34 (9.30)	45.58 (12.36)	49.19 (7.24)	43.76 (12.39)
N	58-63	63	61	62	63	63	63	59	62	58	58

Table A21.52: SF-12v2 scale means (SD) according to the number of times an outpatient or casualty department was contacted in the previous year: HIV sample

	N	PF	RP	BP	GH	VT	SF	RE	MH	PCS	MCS
Not at all	11-13	48.54 (12.87)	46.19 (10.56)	49.60 (11.13)	46.23 (9.45)	49.30 (12.22)	41.81 (10.60)	41.02 (11.73)	42.03 (14.59)	50.50 (10.08)	40.77 (12.47)
Once	13	47.22 (11.34)	44.42 (10.99)	47.25 (12.06	45.90 (10.91)	49.30 (8.05)	43.36 (11.20)	41.46 (9.00)	43.44 (10.14)	47.59 (12.05)	42.94 (10.67)
2-5	25	46.16 (11.89)	40.41 (10.20	46.03 (11.88)	42.93 (12.36)	44.53 (10.80)	40.01 (12.33)	37.96 (12.11)	38.94 (11.94)	46.65 (11.06)	37.99 (13.18)
>5	18	39.77 (10.41)	37.73 (8.59)	39.32 (14.64)	33.48 (13.30)	38.25 (9.44)	32.44 (11.56)	33.40 (10.41	34.40 (8.49)	50.50 (10.08)	32.90 (8.52)
N	69	69	69	67	69	69	69	69	69	67	67

Daypatient contact

Ever

There was no relationship between ever having been a daycare patient and SF-12v2 scores in the university sample (Table A21.53). In the HIV sample, those who had received daycare at some time had consistently lower scores (Table A21.54), significantly so for most scales (except MH): PF: $t(66.78)=-2.93$, $p<0.01$; RP: $t(69)=-3.19$, $p<0.01$ BP: $t(67)=-2.13$, $p<0.05$; GH: $t(69)=-2.24$, $p<0.05$; VT: $t(69)=-2.18$, $p<0.05$; SF: $t(69)=-2.23$, $p<0.05$; RE: $t(69)=-3.28$, $p<0.01$; PCS: $t(67)=-2.59$, $p<0.05$; MCS: $t(67)=-2.26$, $p<0.05$.

Table A21.53: SF-12v2 scale means (SD) according to whether the respondent had ever having had daycare: University sample

	N	PF	RP	BP	GH	VT	SF	RE	MH	PCS	MCS
Yes	19-21	54.83 (3.46)	51.42 (6.14)	48.78 (9.51)	50.39 (9.29)	50.15 (8.36)	44.55 (11.79)	42.94 (8.56)	43.51 (11.94)	55.11 (6.43)	41.34 (11.76)
No	39-42	53.61 (5.25)	49.09 (9.37)	50.40 (11.14)	50.64 (7.06)	50.39 (8.90)	47.67 (12.05)	45.76 (8.94)	47.56 (10.12)	53.01 (7.35)	45.66 (10.89)
N	58-63	63	61	62	63	63	63	59	62	58	58

Table A21.54: SF-12v2 scale means (SD) according to whether the respondent had ever having had daycare: HIV sample

	N	PF	RP	BP	GH	VT	SF	RE	MH	PCS	MCS
Yes	42-44	41.83 (12.64)	38.33 (9.20)	42.15 (12.78)	39.20 (11.77)	42.49 (10.06)	36.37 (11.32)	34.35 (10.67)	37.25 (11.19)	42.66 (11.69)	35.51 (11.88)
No	27	49.47 (9.23)	45.92 (10.56)	48.76 (12.22)	45.86 (12.79)	48.12 (11.33)	42.73 (12.26)	43.03 (11.08)	42.64 (11.62)	49.88 (10.66)	41.82 (10.43)
N	71	71	71	69	71	71	71	71	71	69	69

Most recent

Only four university respondents had received daycare within the previous year and therefore further analyses were not carried out into daycare service use in the university sample.

In the HIV sample, those who had attended during the previous year had significantly lower scores on all scales (Table A21.55): PF: t(69)=-3.14, p<0.01; RP: t(69)=-4.29, p<0.001; BP: t(67)=-3.00, p<0.01; GH: t(69)=-3.37, p=0.001; VT: t(69)=-3.06, p<0.01; SF: t(69)=-3.54, p=0.001; RE: t(69)=-5.27, p<0.001; MH: t(69)=-2.32, p<0.05; PCS: t(67)=-3.26, p<0.01; MCS: t(67)=-3.63, p=0.001.

Table A21.55: SF-12v2 scale means (SD) according to the most recent daycare episode: HIV sample

	N	PF	RP	BP	GH	VT	SF	RE	MH	PCS	MCS
<=1 yr	19-20	38.00 (12.85)	37.60 (13.36)	37.60 (13.36)	34.28 (11.79)	38.69 (10.27)	31.32 (12.04)	27.84 (8.21)	34.37 (10.92)	38.47 (11.31)	30.37 (11.10)
Other	50-51	47.37 (10.37)	47.45 (11.74)	47.45 (11.74)	44.66 (11.63)	46.96 (10.23)	41.72 (10.76)	41.50 (10.38)	41.23 (11.35)	48.15 (10.89)	40.87 (10.62)
N	71	71	71	69	71	71	71	71	71	69	69

Number of times contacted in last year

Only two HIV respondents had attended daycare services more than five times in the previous year and these were combined with those who attended 2-5 times to facilitate analyses. Scoring patterns varied, but were generally linear, particularly for physical health scales, with lower scores among those who had attended most frequently (Table A21.56). The results were significant for all most scales (except MH): PF: F(2,68)=6.79, p<0.01; RP: F(2,68)=7.97, p=0.001; BP: F(2,66)=5.13, p<0.01; GH: F(2,68)=4.70, p=0.01; VT: F(2,68)=5.41, p<0.01; SF: F(2,68)=6.25, p<0.01; RE:

F(2,68)=14.07, p<0.001; PCS: F(2,66)=6.12, p<0.01; MCS: F(2,66)=6.99, p<0.01. Pairwise comparisons were significant, especially those involving two or more attendances: PF (0-2+, p<0.001); RP (0-1, p=0.01; 0-2+, p<0.01); BP (0-2+, p<0.01); GH (0-2+, p=0.01); VT (0-1, p<0.05; 0-2+, p<0.05); SF (0-1, p<0.05; 0-2+, p<0.05; PCS (0-2+, p<0.01); MCS (0-1, p=0.01; 0-2+, p<0.05).

Table A21.56: SF-12v2 scale means (SD) according to the number of times daycare services contacted in the previous year: HIV sample

	N	PF	RP	BP	GH	VT	SF	RE	MH	PCS	MCS
Not at all	**50-51**	47.37 (10.65)	44.17 (9.43)	47.45 (11.74)	44.66 (11.63)	46.96 (10.23)	41.72 (10.76)	41.50 (10.38)	41.23 (11.35)	48.15 (10.89)	40.87 (10.62)
Once	**6**	45.02 (8.87)	30.30 (5.39)	42.16 (16.74)	35.40 (10.96)	36.01 (9.90)	29.64 (5.22)	29.05 (9.63)	30.00 (4.98)	43.02 (9.86)	27.00 (8.52)
2+	**13-14**	35.00 (13.37)	35.13 (9.76)	35.49 (11.65)	33.81 (12.50)	39.84 (10.58)	32.04 (14.12)	27.32 (7.86)	36.24 (12.33)	36.37 (11.67)	31.92 (12.10)
N	**69-71**	**71**	**71**	**69**	**71**	**71**	**71**	**71**	**71**	**69**	**69**

Inpatient contact

Ever

Most respondents had experience of inpatient care. However, there were contrasting relationships between inpatient experience and scores in the two samples. In the university sample, those who reported that they had received inpatient care were more likely to have higher scale scores, resulting in significant relationships for two scales (RP: t(37.4)=2.67, p<0.05; VT: t(50.0)=2.14, p<0.05) (Table A21.57).

In the HIV sample, mean SF-12v2 scores were higher among respondents who reported that they had never been a hospital inpatient, although there were no significant differences (Table A21.58).

Table A21.57: SF-12v2 scale means (SD) according to whether the respondent had ever been a hospital inpatient: University sample

	N	PF	RP	BP	GH	VT	SF	RE	MH	PCS	MCS
Yes	34-38	54.44 (4.21)	52.32 (6.32)	50.28 (10.71)	51.27 (7.15)	52.25 (7.28)	47.80 (12.01)	46.02 (8.66)	47.41 (11.57)	54.74 (6.65)	45.85 (12.27)
No	24-25	53.38 (5.48)	46.31 (9.94)	49.29 (10.61)	49.48 (8.74)	47.34 (9.84)	44.85 (11.91)	43.03 (8.98)	44.55 (9.56)	52.22 (7.54)	41.97 (9.44)
N	58-63	63	61	62	63	63	63	59	62	58	58

Table A21.58: SF-12v2 scale means (SD) according to whether the respondent had ever been a hospital inpatient: HIV sample

	N	PF	RP	BP	GH	VT	SF	RE	MH	PCS	MCS
Yes	54-56	43.43 (12.26)	40.81 (10.68)	44.04 (1.95)	41.66 (12.62)	43.80 (10.80)	38.54 (12.14)	38.01 (11.18)	39.40 (11.80)	44.37 (11.99)	38.31 (11.82)
No	15	49.60 (9.85)	42.74 (9.19)	47.25 (12.77)	42.01 (12.48)	47.75 (10.76)	39.74 (11.87)	36.32 (13.18)	38.94 (11.10)	49.49 (10.26)	36.78 (11.43)
N	69-71	71	71	69	71	71	71	71	71	69	69

Most recent contact

Most of those university respondents who had been an inpatient reported that their most recent admission had occurred more than five years before questionnaire completion. The few respondents who had been inpatients during the previous year had lower mean scores in comparison with others (Table A21.59), significantly so for three of the scales: PF: $t(61)=-2.25$, $p<0.05$; VT: $t(11.61)=-2.78$, $p<0.05$; SF: $t(61)=-2.13$, $p<0.05$. A similar pattern was observed in the HIV sample (Table A21.60), significant for BP ($t(67)=-2.26$, $p<0.05$) and PCS: $t(67)=-2.27$, $p<0.05$.

Table A21.59: SF-12v2 scale means (SD) according to the most recent hospital inpatient contact: University sample

	N	PF	RP	BP	GH	VT	SF	RE	MH	PCS	MCS
≤1 yr	6-7	50.33 (6.49)	49.50 (9.06)	38.52 (16.04)	48.74 (7.09)	44.88 (4.91)	37.81 (15.89)	41.17 (9.79)	41.90 (12.04)	50.73 (11.10)	38.70 (15.05)
Other	52-56	54.48 (4.33)	49.89 (8.49)	51.33 (8.90)	50.78 (7.91)	50.98 (8.81)	47.73 (11.07)	45.21 (8.73)	46.81 (10.64)	54.04 (6.54)	44.88 (10.75)
N	58-63	63	61	62	63	63	63	59	62	58	58

Table A21.60: SF-12v2 scale means (SD) according to the most recent hospital inpatient contact: HIV sample

	N	PF	RP	BP	GH	VT	SF	RE	MH	PCS	MCS
≤1 yr	19-20	41.01 (11.69)	37.83 (9.41)	39.21 (14.64)	39.24 (13.70)	42.22 (9.50)	35.36 (12.22)	36.79 (8.98)	38.63 (8.36)	40.43 (13.08)	37.15 (8.95)
Other	50-51	46.20 (11.91)	42.54 (10.49)	46.84 (11.64)	42.71 (12.01)	45.58 (11.26)	40.13 (11.77)	37.99 (12.48)	39.56 (12.69)	47.40 (10.75)	38.29 (12.62)
N	69-71	71	71	69	71	71	71	71	71	69	69

Number of admissions in last year

In terms of number of admissions in the year, no analyses were carried out in the university sample, because of the small number of respondents in that group. In the HIV sample, there was a linear pattern with lower scores among the respondents who had attended most frequently (Table A21.61). The relationship was significant for BP: $F(2,66)=5.08$, $p<0.01$; PCS: $F(2,66)=4.01$, $p<0.05$. There were significant post hoc pairwise comparisons between those who had no experience of inpatient care and those who had attended two or more times: BP (0 - 2-5, $p<0.01$; PCS: 0 - 2-5, $p<0.05$).

Table A21.61: SF-12v2 scale means (SD) according to the number of inpatient episodes in the previous year: HIV sample

	N	PF	RP	BP	GH	VT	SF	RE	MH	PCS	MCS
Not at all	**50-51**	46.20 (11.91)	42.54 (10.49)	46.84 (11.64)	42.71 (12.01)	45.58 (11.26)	40.13 (11.77)	37.99 (12.48)	39.56 (12.69)	47.40 (10.75)	38.29 (12.62)
Once	**12-13**	43.92 (10.87)	38.40 (10.38)	43.85 (13.27)	40.93 (12.76)	40.78 (10.38)	37.15 (10.48)	37.58 (7.36)	37.81 (8.45)	43.71 (13.38)	35.60 (8.93)
2 - 5	**7**	35.61 (12.00)	36.78 (7.91)	31.24 (14.24)	36.12 (15.84)	44.88 (7.60)	32.04 (15.27)	35.31 (11.95)	40.16 (8.62)	34.81 (11.24)	39.79 (9.00)
N	**69-71**	**71**	**71**	**69**	**71**	**71**	**71**	**71**	**71**	**69**	**69**

Clinical indicators (HIV sample)

A series of questions included in the HIV survey asked specifically about disease status, including immunologic/virologic markers (CD4 and viral load), anti-HIV treatment status and length of diagnosis.

CD4 level

There was a linear relation between CD4 level and scale scores, which was particularly apparent for physical scales, with poorer health reported by those with lower CD4 (Table A21.62). The result was significant for three physical scales (PF: $F(2, 67)=4.67$, $p<0.05$; BP: $F(2, 65)=4.91$, $p<0.05$; PCS: $F(2, 65)=5.46$, $p<0.01$). Pairwise comparisons involving low levels of CD4 were significant: PF (<200 versus 500+, $p<0.05$), BP (<200 versus 200-499, $p<0.05$; <200 versus 500+, $p<0.01$), and PCS (<200 versus 500+, $p<0.01$).

Table A21.62: Mean SF-12v2 scale scores (SD) according to CD4 level

CD4 level	N	PF	RP	BP	GH	VT	SF	RE	MH	PCS	MCS
<200	5	32.42 (11.20)	31.38 (15.14)	28.91 (16.74)	33.53 (11.14)	45.74 (13.12)	32.33 (13.55)	25.89 (17.50)	40.16 (9.64)	32.01 (12.97)	37.65 (10.49)
200-499	38-40	42.73 (12.43)	40.02 (10.06)	43.50 (13.49)	39.62 (12.35)	42.72 (10.19)	38.39 (39.20)	37.07 (10.19)	37.87 (11.02)	43.49 (12.30)	37.09 (11.75)
500+	25	48.57 (10.20)	43.36 (9.40)	48.07 (10.16)	45.34 (11.88)	46.94 (11.22)	39.20 (11.11)	39.53 (11.69)	40.40 (12.63)	49.40 (9.45)	38.58 (11.57)
N	68-70	70	70	68	70	70	70	70	70	68	68

Viral load

The majority of respondents had an undetectable viral load. There was no significant relationship between level of reported viral load and SF-12v2 score, although mean scale scores were generally higher among those with undetectable viral load (Table A21.63).

Table A21.63: Mean SF-12v2 scale scores (SD) according to viral load

	N	PF	RP	BP	GH	VT	SF	RE	MH	PCS	MCS
undet	49-51	44.01 (12.54)	41.82 (10.12)	46.21 (11.99)	42.04 (12.30)	44.59 (10.74)	40.13 (11.77)	38.54 (10.79)	39.20 (11.40)	45.71 (12.15)	38.59 (11.42)
≤10000 c/mL	10	42.73 (10.87)	35.99 (10.00)	37.06 (14.41)	41.94 (12.74)	44.73 (12.60)	32.33 (8.52)	30.92 (13.25)	38.94 (8.52)	41.96 (11.45)	35.14 (8.21)
>10000 c/mL	10	47.02 (12.45)	39.67 (12.25)	42.16 (16.81)	36.76 (12.49)	44.73 (10.66)	35.36 (13.84)	37.07 (12.97)	38.94 (15.15)	44.20 (12.97)	36.77 (15.26)
N	69-71	71	71	69	71	71	71	71	71	69	69

Anti-HIV therapy

The majority of respondents reported that were on an anti-HIV therapy at the time of the survey (Table A21.64). However, although mean SF-12v2 scores for most scales were marginally higher among those on treatment, this was not always the case and there were no significant differences on any scale.

Table A21.64: Mean SF-12v2 scale scores (SD) according whether taking HIV therapy

	N	PF	RP	BP	GH	VT	SF	RE	MH	PCS	MCS
Yes	55-57	43.96 (12.16)	40.77 (10.59)	44.84 (12.85)	42.17 (11.72)	44.75 (10.75)	39.38 (11.45)	38.13 (11.37)	39.73 (11.51)	44.90 (12.05)	38.80 (11.27)
No	14	45.43 (12.80)	40.40 (10.32)	42.15 (15.35)	37.66 (14.53)	44.16 (11.58)	34.21 (13.24)	33.71 (12.21)	36.68 (11.39)	45.13 (12.61)	34.03 (12.27)
N	69-71	71	71	69	71	71	71	71	71	69	69

Length of HIV diagnosis

Mean scores were generally lower among those with longest period since diagnosis (Table A21.65). However, for most scales, the highest scores were not found for respondents with the most recent diagnosis; rather it was among those who were diagnosed between five to fifteen years before, depending on the scale. However none of the differences was significant.

Table A21.65: Mean SF-12v2 scale scores (SD) according to years since HIV diagnosis

Years	N	PF	RP	BP	GH	VT	SF	RE	MH	PCS	MCS
1-4	**22**	45.54 (12.76	40.64 (11.52	45.31 (14.98)	39.55 (13.17)	42.72 (12.32)	37.75 (13.69)	35.24 (12.82)	36.83 (12.30)	46.25 (11.98)	34.33 (13.69)
5-7	**16**	47.34 (11.51	41.05 (11.78)	45.98 (14.35)	44.34 (9.96)	49.64 (6.59)	38.90 (11.37)	37.91 (10.31)	41.30 (11.61)	47.35 (12.70)	39.65 (10.97)
8-15	**18**	43.59 (11.88	40.80 (10.14)	43.29 (10.57)	44.26 (12.45)	46.07 (12.08)	40.30 (11.03)	39.93 (12.85)	42.19 (10.24)	44.10 (11.26)	41.66 (10.15)
16-25	**15**	39.86 (12.35	40.29 (8.65)	42.15 (13.70)	36.98 (12.67)	40.37 (8.89)	36.37 (11.45)	36.32 (9.65)	36.50 (11.24)	41.34 (12.82)	36.08 (9.40)
N	**69-71**	**71**	**71**	**69**	**71**	**71**	**71**	**71**	**71**	**69**	**69**

Appendix 22: Breakdown of long-standing illnesses reported in the university and HIV samples, grouped according to ICD-10 chapter headings

Table A22.1.1:Long-standing illnesses in the university sample

Reported long-standing illnesses	Total (% of reported conditions)
Diseases of the blood and blood-forming organs and certain disorders involving the immune (D50-D89)	
Anaemia (1)	1 (4.5)
Endocrine, nutritional and metabolic diseases (E00-E90)	
High cholesterol (1); Hypoglycaemia (1); Thyroid disorder (1)	3 (13.6)
Mental and behavioural disorders (F00-F99)	
Acute stress condition (1); Depression (1)	2 (9.1)
Diseases of the circulatory system (I00-I99)	
High blood pressure (2)	2 (9.1)
Diseases of the respiratory system (J00-J99)	
Hayfever (1)	1 (4.5)
Diseases of the musculoskeletal system and connective tissue (M00-M99)	
Back pain (2); Back ache (1); Back problems (1); Slipped disc in back (1); Bent arm from broken elbow (1); Knee ligament (1); Osteoarthritis (1); Shoulder injury (1); Heel spur (1)	10 (45.5)
Diseases of the genitourinary system (N00-N99)	
Endometriosis (1); Menstrual pain (1)	2 (9.1)
Injury, poisoning and certain other consequences of external causes (S00-T98)	
Allergy (1)	1 (4.5)
TOTAL	**22**

Table A22.2.1:Long-standing illnesses in the HIV sample

Reported long-standing illnesses	Total (% of reported conditions)
Certain infectious and parasitic diseases (A00-B99)	63 (59.4)
HIV/AIDS (56); Hepatitis (5); Extrapulminary TB (1); Chronic viral illness (1)	
Neoplasms (C00-D48)	1 (0.9)
Breast cancer (1)	
Diseases of the blood and blood-forming organs and certain disorders involving the immune (D50-D89)	1 (0.9)
Anaemia (1)	
Endocrine, nutritional and metabolic diseases (E00-E90)	4 (3.8)
Diabetes (3); Lipodistrophy (1)	
Mental and behavioural disorders (F00-F99)	11 (10.4)
Depression (5); Anxiety (2); Bipolar disorder (1); Bladder control (1); Methadone addiction (1); Obsessive Compulsive Disorder (1)	
Diseases of the nervous system (G00-G99)	5 (4.7)
Epilepsy (3); Neuropathy (2)	
Diseases of the circulatory system (I00-I99)	2 (1.9)
Heart bypass (1); Hypertension (1)	
Diseases of the respiratory system (J00-J99)	6 (5.7)
Asthma (3); Chronic Obstructive Pulmonary Disease (1); Emphysema (1); Hayfever (1)	
Diseases of the digestive system (K00-K93)	6 (5.7)
Colitis (3); Chronic diarrhoea (1); gastritis (1); gastrointestinal problems (1)	
Diseases of the skin and subcutaneous tissue (L00-L99)	1 (0.9)
Psoriasis (1)	
Diseases of the musculoskeletal system and connective tissue (M00-M99)	2 (1.9)
Back problem (1); Broken leg (1)	
Diseases of the genitourinary system (N00-N99)	3 (2.8)
Abdominal pain (1); Impotence (1); Vaginal bleeding (1)	
Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified (R00-R99)	1 (0.9)
Leg shake (1)	
TOTAL	**106**

APPENDIX 23: Psychometric evaluation of Neuroticism and Extraversion scales

Item completeness

Most respondents completed all sixteen Big 5 Neuroticism and Extraversion scale items, although the data were more complete in the HIV sample. Summated scale scores for Extraversion and Neuroticism were calculated if respondents had complete data for that scale. In the university sample, Extraversion scale scores were calculated for 59 respondents (92.2% of the sample of 64) and Neuroticism for 62 respondents (96.9% of the 64). In the HIV sample, 71 respondents (98.6% of the sample of 72) had both an Extraversion and a Neuroticism score.

Item analysis

The distributions of the sixteen Extraversion and Neuroticism items were examined: first, item facility; and second, testing item discriminant and convergent validity.

Item facility

Item facility (mean) and standard deviations for both studies are shown in Table A23.1. Six items were recoded (Reserved, Quiet, Shy, Relaxed, Stable, Calm; specified by '(r)' in the Table), so that high scores represented the scale trait. In neither study did any of the items attain the extreme facility score of 1 or 5, and all facility scores were within the range 2 to 4. In both samples, the full range of response options were selected for all items. Facility scores were lower for Extraversion (with the exception of the "Talkative" item) and higher for Neuroticism items in the HIV sample. The difference was largest for the "Depressed" item. The standard deviations for items in both samples indicated generally similar levels of item variation between samples. Of note, the difference in both facility score and standard deviation was large for the item on Energy, suggesting a lower rating of energy but also more variation in response in the HIV sample.

Table A23.1: Extraversion and Neuroticism item facility: University and HIV samples

Item	University sample Mean (SD)	HIV sample Mean (SD)	Range of possible response categories
Extraversion			
Talkative	3.58 (1.28)	3.74 (1.23)	1 – 5
Reserved (r)	2.90 (1.11)	2.46 (1.18)	1 – 5
Energy	3.65 (1.00)	2.71 (1.42)	1 – 5
Enthusiasm	3.69 (1.19)	3.53 (1.16)	1 – 5
Quiet (r)	3.17 (1.18)	2.71 (1.34)	1 – 5
Assertive	3.47 (1.16)	3.38 (1.29)	1 – 5
Shy (r)	2.56 (1.16)	2.35 (1.19)	1 – 5
Outgoing	3.82 (1.00)	3.53 (1.21)	1 – 5
Neuroticism			
Depressed	2.14 (1.32)	3.37 (1.43)	1 – 5
Relaxed (r)	2.94 (1.19)	3.03 (1.39)	1 – 5
Tense	3.68 (0.90)	3.90 (0.97)	1 – 5
Worries	3.33 (1.27)	3.79 (1.26)	1 – 5
Stable (r)	2.41 (1.17)	2.90 (1.29)	1 – 5
Moody	3.08 (1.22)	3.51 (1.22)	1 – 5
Calm (r)	2.41 (1.10)	2.46 (1.06)	1 – 5
Nervous	2.84 (1.19)	3.06 (1.30)	1 – 5

Item convergent and discriminant validity

The results of item-scale convergent and discriminant validity are shown in Table A23.2, using the recoded variables. In both samples, all items correlated positively and strongly with the hypothesised scales, suggesting convergent validity. In addition, tests of discriminant validity were carried out to determine that items were not strongly related to the scale they should not be related to. All items were shown to correlate more strongly with the hypothesised scale than the alternative scale. However, in both samples, there were some significant negative correlations between items and the alternative scale. Most notably, these were between "Worries" and Extraversion in the university sample, and "Depressed" and Extraversion in the HIV sample, indicating that a high score on the Extraversion scale was associated with low ratings for these items in the respective samples. In addition, the Extraversion item "Talkative" was positively associated not just with the Extraversion scale but also with Neuroticism, although not significantly in either sample.

Table A23.2: Tests of item convergent and discriminant validity: University and HIV samples

	University sample		HIV sample	
	Extraversion	**Neuroticism**	**Extraversion**	**Neuroticism**
	N=59	**N=62**	**N=70-71**	**N=70-71**
Extraversion				
Talkative	0.68***	0.19	0.63***	0.17
Energy	0.63***	-0.10	0.53***	-0.27*
Enthusiasm	0.72***	-0.16	0.63***	-0.27*
Assertive	0.63***	-0.09	0.63***	-0.27*
Outgoing	0.81***	-0.16	0.72***	-0.24*
Reserved (r)	0.71***	-0.18	0.74***	-0.10
Quiet (r)	0.73***	0.10	0.81***	-0.19
Shy (r)	0.67***	-0.22	0.59***	-0.28*
Neuroticism				
Depressed	-0.17	0.66***	-0.52***	0.69***
Tense	-0.15	0.60***	-0.13	0.60***
Worries	-0.45***	0.69***	-0.14	0.72***
Moody	-0.04	0.63***	-0.19	0.55***
Nervous	-0.14	0.71***	-0.20	0.60***
Relaxed (r)	-0.13	0.67***	-0.04	0.64***
Stable (r)	0.03	0.80***	-0.14	0.61***
Calm (r)	0.01	0.77***	0.08	0.48***

* $p<0.05$, ** $p<0.01$, *** $p<0.001$

Relationship between Extraversion and Neuroticism scales

In line with the finding of negative relationships between Extraversion and Neuroticism items, in both samples, the correlations between the Extraversion and Neuroticism scales were negative, but only significant in the HIV sample (university sample: $r=-0.19$, $p>0.05$; HIV sample: $r= -0.28$, $p<0.05$).

Reliability analysis

Cronbach's alpha was calculated as a measure of internal consistency. In both samples, alpha coefficients were good for both the Extraversion (university sample: $\alpha=0.85$ HIV sample: $\alpha=0.82$) and the Neuroticism scales (university sample: $\alpha=0.84$; HIV sample: $\alpha=.76$).

Component structure

Principal component analyses were carried out on the Extraversion and Neuroticism items using loading on two components (Tables A23.3 and A23.4). In the university sample, the two components accounted for 51.0% of the variance in scoring. Items loaded on the rotated solution as hypothesised, with all Extraversion items loading more strongly on the first component and all Neuroticism items similarly strongly loading on the second component. The first, "Extraversion" component, accounted for 25.8% of the variance, and the second, "Neuroticism" component, accounted for 25.2% of the variance. In the HIV sample, the two components accounted for less of the scoring variance (44.7%). Once again, items loaded on the rotated solution as hypothesised. The "Extraversion" component, accounted for a quarter of the variance (24.9%) and the "Neuroticism" component accounted for 19.8% of the variance. In the two samples, once again, as in the earlier correlations, "Talkative" was positively related to Extraversion and Neuroticism. In addition, in both samples the two components

explained less than half of the item variance for "Energy", "Assertive", "Relaxed", "Tense", and "Moody". The explained variance for other items differed according to sample.

Table A23.3: Hypothesised associations between Extraversion and Neuroticism items and results from principal component analysis: University sample

	Hypothesised association			Rotated PCs	
Item	**h^2**	**E**	**N**	**E**	**N**
Talkative (E)	.56	X		.69	.29
Reserved (r) (E)	.49	X		.70	-.11
Energy (E)	.37	X		.60	.00
Enthusiasm (E)	.54	X		.72	-.16
Quiet (r) (E)	.61	X		.76	.19
Assertive (E)	.36	X		.58	-.17
Shy (r) (E)	.54	X		.66	-.32
Outgoing (E)	.68	X		.82	.00
Depressed (N)	.36		X	-.10	.59
Relaxed (r) (N)	.42		X	.00	.64
Tense (N)	.39		X	-.14	.61
Worries (N)	.62		X	-.44	.65
Stable (r) (N)	.71		X	.15	.83
Moody (N)	.36		X	.00	.60
Calm (r) (N)	.60		X	.00	.77
Nervous (N)	.56		X	-.16	.73

h^2: Proportion of the total variance of each item explained by the two components

X: Hypothesised association

Table A23.4: Hypothesised associations between Extraversion and Neuroticism items and results from principal component analysis: HIV sample

	Hypothesised association			Rotated PCs	
Item	**h^2**	**E**	**N**	**E**	**N**
Talkative (E)	.57	X		.65	.39
Reserved (r) (E)	.62	X		.78	.10
Energy (E)	.32	X		.54	-.18
Enthusiasm (E)	.37	X		.58	-.18
Quiet (r) (E)	.72	X		.85	.00
Assertive (E)	.35	X		.57	-.18
Shy (r) (E)	.39	X		.60	-.19
Outgoing (E)	.52	X		.72	.00
Depressed (N)	.61		X	-.53	.58
Relaxed (r) (N)	.42		X	.00	.65
Tense (N)	.40		X	-.11	.62
Worries (N)	.56		X	-.11	.74
Stable (r) (N)	.34		X	-.11	.58
Moody (N)	.28		X	-.19	.49
Calm (r) (N)	.30		X	.18	.52
Nervous (N)	.36		X	-.16	.58

h^2: Proportion of the total variance of each item explained by the two components

X: Hypothesised association

Descriptives

Scale distributions were tested by dividing skewness statistics by their respective standard errors (zskew). Neither scale was found to be significantly skewed. The kurtosis of the distribution was also investigated, dividing kurtosis statistics by their respective standard errors (zkurt). No significant kurtosis was demonstrated. The Shapiro-Wilk test was also carried out as a test of the normality of the scale distributions. In the university sample, the findings for the Extraversion scale suggested that the distribution was significantly different from normal, although this result was of borderline significance ($p=0.05$). In contrast, in the HIV sample neither scale was found to differ significantly from the normal distribution.

APPENDIX 24: Psychometric evaluation of Health behaviour indicators

CAGE

Item facility

Table A24.1 shows university and HIV sample facility scores, which are item means, along with the possible range of scores (1 for "yes" and 2 for "no"). For both samples, similar patterns of mean scores were observed. All means were closer to a score of 2 than 1, indicating the predominance of the "no" response. The two lowest mean scores (highest levels of item endorsement) related to whether, at some time, respondents believed they should "Cut-down" or had felt "Guilty" about their drinking. The item asking respondents whether they had ever drunk in the morning drink to steady their nerves ("Eye-opener") had the smallest mean in both samples (lowest levels of endorsement).

Table A24.1: CAGE item facility: University and HIV samples

Item	University sample Mean (SD)	HIV sample Mean (SD)	Range of response categories
Cut-down	1.71 (0.46)	1.72 (0.45)	1-2
Annoyed	1.89 (0.32)	1.88 (0.33)	1-2
Guilty	1.78 (0.42)	1.76 (0.43)	1-2
Eye-opener	1.92 (0.27)	1.93 (0.26)	1-2

Item convergent validity

Tables A24.2 and A24.3 show the item correlation matrix for the CAGE items for the university and HIV samples, respectively. The matrices differed, with only the

association in the university sample between "Cut-down" and "Guilty" items. In contrast, all items were significantly correlated in the HIV sample.

Table A24.2: CAGE item correlation matrix: University sample

	Cut-down	Annoyed	Guilty	Eye-opener
Cut-down	-			
Annoyed	.22	-		
Guilty	.42**	.05	-	
Eye-opener	.07	.08	-.02	-

*p<0.05; **p<0.01; ***p<0.001

Table A24.3: CAGE item correlation matrix: HIV sample

	Cut-down	Annoyed	Guilty	Eye-opener
Cut-down	-			
Annoyed	.52***	-		
Guilty	.68***	.38**	-	
Eye-opener	.32**	.56***	.36**	-

* p<0.05; ** p<0.01; ***p<0.001

Correlations were also carried out to assess the relationships between items and the overall CAGE scale (Table A24.4). The associations were negative, as a "yes" to an item was scored 2 and a "no" scored 1, whereas scale scores were the sum of the "yes" responses. All items were significantly correlated with the scale, although all correlations were weaker in the university sample. There were stronger associations between the scale and "Cut-down" and "Guilty" items than for the "Annoyed" and "Eye-opener" items.

Table A24.4: Tests of item convergent validity: University and HIV samples

	University sample	HIV sample
CAGE item		
Cut-down	-0.80***	-0.86***
Annoyed	-0.51***	-0.61***
Guilty	-0.69***	-0.80***
Eye-opener	-0.36**	-0.38**

* $p<0.05$; ** $p<0.01$; ***$p<0.001$

Reliability analysis

Internal reliability for the four CAGE items in the university sample was low (α =0.43). Two questions, "Annoyed" and "Eye-opener", were particularly poorly related to the scale, reflecting the lower associations between these items and the scale identified earlier. In contrast, the HIV sample internal consistency for the CAGE scale was good (α =0.77).

CAGE scale

All four items were summated to form a CAGE scale (Table A24.5). Most respondents did not respond positively to any of the items, resulting in a score of 0 on the scale. In the university sample, no respondent achieved a score of four, indicating endorsement of all items, whereas, in the HIV sample, the full scoring range was represented.

Table A24.5: CAGE score frequency distribution: University and HIV samples

CAGE score	University sample	HIV sample
	N (%)	N (%)
0	36 (57.1)	47 (65.3)
1	12 (19.0)	9 (12.5)
2	13 (20.6)	10 (13.9)
3	2 (3.2)	2 (2.8)
4	0 (0.0)	4 (5.6)
Total	**63 (100.0)**	**72 (100.0)**

The cut-off score of two or more was reached by just over a fifth of respondents in both samples (university sample: 15, 23.8%; HIV sample: 16, 22.2%) (Exact test: $\chi^2(1)=0.48$, $p>0.05$; Phi=-0.02). However, analysis of the CAGE according to gender revealed differences between males and females. In the university sample, considerably more females than males scored above the cut-off (males: 3, 12.5%; females: 12, 31.6%), although this difference was not significant (Exact test: $\chi^2(1)=2.92$, $p>0.05$; Phi=0.22). In the HIV sample, by contrast, more men scored above the cut-off (males: 23, 22.4%; females: 2, 15.4%), although again the gender difference was not significant (Exact test: $\chi^2(1)=0.32$, $p>0.05$; Phi=0.06).

Alcohol consumption

Due to small numbers, drinking frequency was recoded into "regular drinkers" (including those who reported drinking daily, 5-6 times a week, 3-4 times a week and 1-2 times a week), "infrequent drinkers" (1-2 times a month, or less than once a month) and "non drinkers" (who never drank) (Table A24.6). Most respondents in both

samples were regular drinkers and few reported that they never drank alcohol (Exact test: $\chi^2(2)=0.11$, $p>0.05$; Phi=0.03).

Table A24.6: Drinking frequency: University and HIV samples

Drinking	**University sample**	**HIV sample**
	N (%)	**N (%)**
Regular	37 (58.7)	44 (61.1)
Infrequent	19 (30.2)	21 (29.2)
Never	7 (11.1)	7 (9.7)
Total	**63 (100.0)**	**72 (100.0)**

In the university sample, more males than females reported that they never drank alcohol (males: 4, 16.7%; females: 2, 5.3%), The majority of respondents of both sexes drank regularly (males: 14, 58.3%; females: 23, 60.5%), and more females drank occasionally (males: 6, 25.0%; females: 13, 34.2%). A different pattern was observed in the HIV sample, with more female non-drinkers (males: 4, 6.9%; females: 3, 23.1%) and infrequent drinkers (males: 16, 27.6%; females: 5, 38.5) and more male regular drinkers (males: 38, 65.5%; females: 5, 38.5%).

Respondents also estimated their average weekly alcohol consumption, the descriptive statistics of which are included in Table A24.7:

Table A24.7: Estimated average weekly alcohol consumption: University and HIV samples

	University sample	HIV Sample
Mean	5.30	8.29
25th ptile	0.00	1.00
50th ptile	3.00	3.00
75th ptile	9.00	10.50
SD	5.89	12.26
N	61	70

The estimated number of units consumed by respondents in the two samples differed, with the HIV sample reporting higher levels of alcohol consumption, although non-significantly so at the five percent level ($t(102.15)=-1.81$, $p=0.07$). Modal consumption in both samples was 0, but the proportion reporting this level was higher in the university sample (university sample: 19, 31%; HIV sample: 16, 23%). Both distributions were positively skewed (university sample: $Zskew=3.10$, $p<0.001$; HIV sample: $Zskew=10.35$, $p<0.001$), reflecting the large proportion of respondents reporting that they had consumed less than one unit of alcohol in the previous week, and generally low levels of consumption. In addition, the HIV sample was significantly kurtotic, indicating a distribution peaked around the mean ($Zkurt=8.68$, $p<0.001$). Both distributions deviated significantly from normal (both samples: Shapiro-Wilk test $p<0.001$).

Underlying the differences between samples were also clear gender differences, largely confined to the HIV sample, although the number of females in that sample was small. While average consumption was slightly elevated among males in the university sample (males: 5.91 units; females: 5.05 units), the difference was greater in the HIV sample (males: 9.46; females: 2.92 units). The gender disparity in the HIV sample was found in most other statistics: the range of units consumed was identical for males and females in the university sample (0-20 units) whereas in the HIV sample it was wider for males (males: 0-59 units; females: 0-12 units). Modal consumption of 0 was reported by the same proportions of males and females in the university sample (30%) but by a smaller proportion of males in the HIV sample (males: 10, 18%; females: 6, 46%). In the university sample, no males reported consumption above recommended weekly levels of 21 units, and 3 (8.1%) females exceeded the equivalent level of 14 units (Royal Colleges, 1995). In the HIV sample, six males reported consumption above recommended weekly level (10.7%), and no females exceeded the equivalent level.

Alcohol consumption and the CAGE

Drinking frequency and problem drinking were significantly associated in the university sample, whereby the proportion of respondents identified by the CAGE cut-off increased with drinking frequency (non-drinkers: 0, 0%; infrequent drinkers 1, 5.3%; regular drinkers: 14, 37.8%) (Exact test: χ^2 (2)= 9.80, $p<0.01$; Cramer's V: 0.39). While regular drinking was related to problem drinking regardless of gender, a significant association was only identified with female respondents (Exact test: χ^2 (2)= 7.17, $p<0.05$; Cramer's V: 0.43). In the equivalent HIV sample analysis, both regular and infrequent drinking were similarly associated with an elevated CAGE score (non-drinkers: 0, 0%; infrequent drinkers 6, 28.6%; regular drinkers: 10, 22.7%), leading to a

non-significant result (Exact test: χ^2 (2)= 2.50, p>0.05; Cramer's V: 0.19). Analysis by gender was also non-significant.

Level of alcohol consumption was significantly higher in the problem drinking group compared to the remaining respondents in the university sample (mean: 11.13 units versus 3.39 units) (t(59)=-5.34, p<0.001). Although consumption levels were raised among problem drinkers compared to others in the HIV sample (mean: 14.50 units versus 6.44 units) the difference was not significant (t(17.69)=-1.75, p>0.05). Results from both samples were replicated for males and females separately.

Smoking behaviour

The majority of respondents in both samples indicated that they did not currently smoke cigarettes (Table A24.8). More university respondents reported that they had never smoked compared with the HIV respondents, who were more likely to have given up smoking, and a larger proportion of the HIV sample remained smokers. The association between smoking status and sample just failed to reach significance (Exact test: χ^2(2)=5.92, p=0.06; Cramer's V=0.21).

Table A24.8: Current smoking status: University and HIV samples

Smoking status	**University sample**	**HIV Sample**
	N (%)	N (%)
Still smoke	11 (17.2)	25 (34.7)
Used to smoke	17 (26.6)	28 (38.9)
Never smoked	35 (55.6)	19 (26.4)
Total	**63 (100.0)**	**72 (100.1)**

Respondents were asked how many cigarettes they smoked in an average day (Table A24.9). A wide range of cigarette consumption was reported in both samples, particularly in the HIV sample. The distributions for both samples were highly positively skewed (Zskew: university sample=3.66, $p<0.001$; HIV sample=9.12, $p<0.001$) and kurtotic (Zkurt: university sample= 8.32, $p<0.001$; HIV sample=11.29, $p<0.001$), reflecting a majority of respondents reporting that they did not smoke any cigarettes in an average day (university sample: 52, 82.5%; HIV sample: 54, 76.1%). The Shapiro-Wilk test results for cigarette consumption confirmed that both distributions deviated from normal ($p<0.001$). Mean cigarette consumption was lower in the university sample (1.98 cigarettes) compared to the HIV sample (3.72 cigarettes), but this difference was non-significant ($t(111.89)=-1.44$, $p>0.05$).

Table A24.9: Estimated average daily number of cigarettes smoked: University and HIV samples

	University sample	HIV sample
Mean	1.00	3.72
25th ptile	0.00	0.00
50th ptile	0.00	0.00
75th ptile	0.00	0.00
SD	4.86	8.74
N	63	71

APPENDIX 25: Analyses of response strategy and individual SF-12v2 item responses

The association between reported response strategies and item responses was examined for each of the SF-12v2 items. In all cases, exact test results are reported, since a large proportion of cells had an expected count of five or less. Every response strategy item was recoded, retaining the two most frequently reported strategies overall ('A general picture of yourself' and 'Specific experiences'), and deriving an 'other' category from the remaining strategies combined. This, and the SF-12v2 item responses, are called the 'original' coding in the following analyses. In order to identify the relationship between the SF-12v2 items and the strategies, additional analyses were also carried out excluding any 'other' strategies. For some analyses, the SF-12v2 items were recoded to assist in the interpretation of relationships, excluding small categories, merging extreme responses, or dichotomising the item so that a response indicating good functioning was compared with all other responses combined. Dichotomisation was only carried out for those variables where there was an obvious category indicating good functioning: PF02, PF04, RP02, RP03, RE02, RE03, BP02, MH04, SF02. Other variables that had less clear-cut good functioning response, or where few respondents provided extreme responses, were only recoded to merge or exclude small, extreme response categories, (GH01, MH03, and VT02).

GH01

The dominant strategy for the general health item, reported across all responses, particularly in the university sample, was 'a general picture of yourself' (university sample: Table A25.1; HIV sample: Table A25.2).

There was some evidence that better health was particularly associated with a general picture strategy in the university sample, although no respondent rated their health as less than 'fair', and the association between the original strategy and response variables failed to reach the five percent level of significance (although reaching the seven percent level). Additional analyses were carried out with recoded versions of item GH01. Results were similarly non-significant when the general health responses 'excellent' and 'very good' were combined, the category 'fair' excluded, and including or excluding 'other' strategies.

In the HIV sample, by contrast, the association was significant (Exact test: $\chi^2(8)= 15.65$, $p<0.05$; Cramer's $V=0.33$, $p<0.05$), and similarly significant results were attained for recoded variables, and when including or excluding 'other' strategies. Those with better health were more likely to refer to a general picture while specific experiences were more commonly reported among those who rated their health less that 'good'.

Table A25.1: Strategies reported according to GH01 response: University sample

	General	Specifics	Other*	N (%)
Excellent	7 (100%)	0 (0%)	0 (0%)	**7 (100%)**
Very good	19 (70%)	1 (4%)	7 (26%)	**27 (100%)**
Good	24 (89%)	0 (0%)	3 (11%)	**27 (100%)**
Fair	2 (67%)	1 (33%)	0 (0%)	**3 (100%)**
Poor	0 (0%)	0 (0%)	0 (0%)	**0 (0%)**
N (%)	**52 (81%)**	**2 (3%)**	**10 (16%)**	**64 (100%)**

Table A25.2: Strategies reported according to GH01 response: HIV sample

	General	Specifics	Other*	N (%)
Excellent	4 (100%)	0 (0%)	0 (0%)	**4 (100%)**
Very good	9 (64%)	2 (14%)	3 (21%)	**14 (100%)**
Good	21 (70%)	2 (7%)	7 (23%)	**30 (100%)**
Fair	9 (56%)	6 (38%)	1 (6%)	**16 (100%)**
Poor	4 (50%)	4 (50%)	0 (0%)	**8 (100%)**
N (%)	**47 (65%)**	**14 (19%)**	**11 (15%)**	**72 (100%)**

* Other: includes response strategies other than 'A general picture of yourself' and 'Specific experiences'

PF02

In both samples, a greater use of a general picture strategy was identified among those without limitations, with specific experiences more commonly referred to by those with limitations, particularly in the HIV sample (university sample: Table A25.3; HIV sample: Table A25.4).

The university sample, however, included fewer, and less severely, restricted respondents, and the relationship between original strategy and PF02 was non-significant. A comparable result was obtained when the analysis was repeated excluding the 'other' response strategies category.

In the HIV sample, however, the initial association was also non-significant. Exclusion of 'other' strategies resulted in a significant result (Exact test: χ^2 (2)=6.54, $p<0.05$; Cramer's V=0.33). Analysis using a dichotomised version of item PF02, comparing 'not limited' with the 'limited' categories combined, did not reach significance at the five percent level (although significant at the seven percent level), but the result again became significant when 'other' strategies were excluded (Fisher's Exact, $p<0.05$; phi=-0.29).

Table A25.3: Strategies reported according to PF02 response: University sample

	General	Specifics	Other*	N (%)
Yes, limited a lot	0 (0%)	0 (0%)	0 (0%)	**0 (0%)**
Yes, limited a little	3 (60%)	2 (40%)	0 (0%)	**5 (100%)**
No, not limited at all	44 (75%)	14 (24%)	1 (2%)	**59 (100%)**
N (%)	**47 (73%)**	**16 (25%)**	**1 (2%)**	**64 (100%)**

Table A25.4: Strategies reported according to PF02 response: HIV sample

	General	Specifics	Other*	N (%)
Yes, limited a lot	2 (18%)	7 (64%)	2 (18%)	**11 (100%)**
Yes, limited a little	8 (38%)	9 (43%)	4 (19%)	**21 (100%)**
No, not limited at all	23 (58%)	11 (28%)	6 (15%)	**40 (100%)**
N (%)	**33 (46%)**	**27 (38%)**	**12 (17%)**	**72 (100%)**

* Other: includes response strategies other than 'A general picture of yourself' and 'Specific experiences'

PF04

In the university sample, although few respondents were limited, a pattern was identified, linking absence of limitation with general perceptions and limitation with the greater use of specific experiences (Table A25.5). However, the relationship between strategy and response failed to reach significance at the five percent level (reaching significance at the seven percent level). Analyses employing recoded versions of PF04 and excluding the 'other' strategies category did not lead to the result achieving significance at the five percent level.

In the HIV sample, differences in general picture and specific experiences strategy use between PF04 response categories were small, although respondents who were 'limited of lot' were more likely to indicate that they had considered specific experiences (Table A25.6). The relationship between strategy and response was non-significant for any test.

Table A25.5: Strategies reported according to PF04 response: University sample

	General	Specifics	Other*	N (%)
Yes, limited a lot	0 (0%)	0 (0%)	0 (0%)	**0 (0%)**
Yes, limited a little	6 (43%)	8 (57%)	0 (0%)	**14 (100%)**
No, not limited at all	32 (64%)	13 (26%)	5 (10%)	**50 (100%)**
N (%)	**38 (59%)**	**21 (33%)**	**5 (8%)**	**64 (100%)**

Table A25.6: Strategies reported according to PF04 response: HIV sample

	General	Specifics	Other*	N (%)
Yes, limited a lot	8 (50%)	7 (44%)	1 (6%)	**16 (100%)**
Yes, limited a little	14 (54%)	9 (35%)	3 (12%)	**26 (100%)**
No, not limited at all	16 (53%)	10 (33%)	4 (13%)	**30 (100%)**
N (%)	**38 (53%)**	**26 (36%)**	**8 (11%)**	**72 (100%)**

* Other: includes response strategies other than 'A general picture of yourself' and 'Specific experiences'

RP02

In both samples, those who considered 'A general picture of yourself' were more likely to response 'None of the time' (no limitations) to item RP02. For other responses, the use of 'Specific experiences' was common (university sample: Table A25.7; HIV sample: Table A25.8).

In the university sample, the association between strategy and response did not reach significance at the five percent level for the original variables. A significant result was obtained when the relationship between the strategy variable and the original RP02 item was assessed with the 'other' response strategies category excluded (Exact test: $\chi^2(3)=8.50$, $p<0.05$; Cramer's $V=0.38$). Additional analyses were also carried out with a dichotomised version of item RP02, so that the response indicating an absence of limiting health problems, 'none of the time', was compared with all other responses combined. The relationship between the strategy and response variables was significant (Exact test: $\chi^2(2)=5.99$, $p<0.05$; Cramer's $V=0.31$). This result was replicated following exclusion of the 'other' strategies category. These results indicate differences in reported general picture and specific experiences strategies used according to the answer provided to the item, with significantly more of those who responded 'none of the time' considering a general picture of themselves in order to answer the item.

Despite the general picture strategy being more commonly reported by those with no limitations, the relationship between strategy and other responses was less clear in the HIV sample and none of the tests carried out using original or recoded variables was significant.

Table A25.7: Strategies reported according to RP02 response: University sample

	General	Specifics	Other*	N (%)
All of the time	0 (0%)	0 (0%)	0 (0%)	**0 (0%)**
Most of the time	2 (40%)	2 (40%)	1 (20%)	**5 (100%)**
Some of the time	9 (53%)	7 (41%)	1 (6%)	**17 (100%)**
A little of the time	2 (18%)	8 (73%)	1 (9%)	**11 (100%)**
None of the time	21 (70%)	8 (27%)	1 (3%)	**30 (100%)**
N (%)	**34 (54%)**	**25 (40%)**	**4 (6%)**	**63 (100%)**

Table A25.8: Strategies reported according to RP02 response: HIV sample

	General	Specifics	Other	N (%)
All of the time	2 (50%)	1 (25%)	1 (25%)	**4 (100%)**
Most of the time	8 (42%)	10 (53%)	1 (5%)	**19 (100%)**
Some of the time	10 (44%)	10 (44%)	3 (13%)	**23 (100%)**
A little of the time	7 (54%)	2 (15%)	4 (31%)	**13 (100%)**
None of the time	10 (77%)	3 (23%)	0 (0%)	**13 (100%)**
N (%)	**37 (51%)**	**26 (36%)**	**9 (13%)**	**72 (100%)**

* Other: includes response strategies other than 'A general picture of yourself' and 'Specific experiences'

RP03

The strategy of basing the response on a general picture strategy was most frequently mentioned by those without health limitations in relation to item RP03 (response option 'none of the time'). Those with limitations were more likely to refer to specific experiences (university sample: A25.9; HIV sample: A25.10).

In the university sample, however, the original association between the strategy and response variables was not significant. Further analyses were conducted with a dichotomised version of the RP03 variable, where the response 'none of the time' was compared with other categories combined. Results failed to reach the five percent level of significance (although significant at six percent when the 'other' strategies category was excluded).

In the HIV sample, the relationship between strategy and response was significant (Exact test: χ^2 (8)=22.64, $p<0.01$; Cramer's V=0.40, $p<0.01$). The association was strong and persisted when the 'other' strategy was excluded, and when the dichotomised version of the RP03 variable was used.

Table A25.9: Strategies reported according to RP03 response: University sample

	General	Specifics	Other*	N (%)
All of the time	0 (0%)	0 (0%)	0 (0%)	**0 (0%)**
Most of the time	1 (33%)	2 (67%)	0 (0%)	**3 (100%)**
Some of the time	5 (46%)	4 (36%)	2 (18%)	**11 (100%)**
A little of the time	6 (46%)	7 (54%)	0 (0%)	**13 (100%)**
None of the time	24 (69%)	9 (26%)	2 (6%)	**35 (100%)**
N (%)	**36 (58%)**	**22 (36%)**	**4 (7%)**	**62 (100%)**

Table A25.10: Strategies reported according to RP03 response: HIV sample

	General	Specifics	Other	N (%)
All of the time	1 (13%)	4 (50%)	3 (38%)	**8 (100%)**
Most of the time	1 (10%)	5 (50%)	4 (40%)	**10 (100%)**
Some of the time	13 (52%)	10 (40%)	2 (8%)	**25 (100%)**
A little of the time	5 (50%)	2 (20%)	3 (30%)	**10 (100%)**
None of the time	15 (79%)	4 (21%)	0 (0%)	**19 (100%)**
N (%)	**35 (49%)**	**25 (35%)**	**12 (17%)**	**72 (100%)**

* Other: includes response strategies other than 'A general picture' and 'Specific experiences'

RE02

The response strategy 'A general picture of yourself' was most frequently reported among those who answered that they had no experience of limitations in relation to the item ('none of the time'), with specific experiences mentioned more frequently by those who gave other responses (university sample: Table: A25.11; HIV sample: Table A25.12).

However, the association between the original strategy and response to item RE02 was not significant in the university sample. The RE02 item was dichotomised, with 'none of the time' compared to the other answers combined, but the relationship between strategy and response remained non-significant at the five percent level (although significant at six percent when the 'other' strategies category was excluded), suggesting differences between the use of the general picture or specific experience strategies among those who responded 'none of the time' compared to others.

In the HIV sample, there was a significant relationship between strategy and response (Exact test: χ^2 (8)=16.71, $p<0.05$; Cramer's V=0.34). Results were significant for the dichotomous RE02, and regardless of whether the 'other' response strategy was included or excluded.

Table A25.11: Strategies reported according to RE02 response: University sample

	General	Specifics	Other*	N (%)
All of the time	1 (50%)	1 (50%)	0 (0%)	**2 (100%)**
Most of the time	1 (25%)	2 (50%)	1 (25%)	**4 (100%)**
Some of the time	12 (67%)	6 (33%)	0 (0%)	**18 (100%)**
A little of the time	9 (39%)	11 (48%)	3 (13%)	**23 (100%)**
None of the time	12 (86%)	2 (14%)	0 (0%)	**14 (100%)**
N (%)	**35 (57%)**	**22 (36%)**	**4 (7%)**	**61 (100%)**

Table A25.12: Strategies reported according to RE02 response: HIV sample

	General	Specifics	Other	N (%)
All of the time	3 (50%)	2 (33%)	1 (17%)	**6 (100%)**
Most of the time	4 (29%)	10 (71%)	0 (0%)	**14 (100%)**
Some of the time	13 (48%)	12 (44%)	2 (7%)	**27 (100%)**
A little of the time	8 (62%)	5 (39%)	0 (0%)	**13 (100%)**
None of the time	11 (92%)	0 (0%)	1 (8%)	**12 (100%)**
N (%)	**39 (54%)**	**29 (40%)**	**4 (6%)**	**72 (100%)**

* Other: includes response strategies other than 'A general picture of yourself' and 'Specific experiences'

RE03

Different patterns of response strategy use for item RE03 were observed in the two samples. The majority of respondents in all response categories of the university sample reported that they had considered a general picture of themselves when answering. However, responses to the item were very skewed, with most respondents selecting none or a little of the time and no clear relationship was identified, despite an indication from the two largest RE03 responses that a general picture strategy may have been associated with no limitations (Table A25.13).

In the HIV sample, response was more evenly divided between positive and negative functioning, and reporting of the general picture was linearly related to item response, with the smallest percentage for 'All of the time' and the largest for 'None of the time' (no limitations) (Table A25.14).

However, in neither sample was there a significant association between original and the dichotomised RE03 and strategy variables, including or excluding the 'other' category.

Table A25.13: Strategies reported according to RE03 response: University sample

	General	Specifics	Other*	N (%)
All of the time	0 (0%)	0 (0%)	0 (0%)	**0 (0%)**
Most of the time	2 (100%)	0 (0%)	0 (0%)	**2 (100%)**
Some of the time	8 (89%)	1 (11%)	0 (0%)	**9 (100%)**
A little of the time	14 (56%)	8 (32%)	3 (12%)	**25 (100%)**
None of the time	19 (73%)	6 (23%)	1 (4%)	**26 (100%)**
N (%)	**43 (69%)**	**15 (24%)**	**4 (7%)**	**62 (100%)**

Table A25.14: Strategies reported according to RE03 response: HIV sample

	General	Specifics	Other	N (%)
All of the time	1 (25%)	1 (25%)	2 (50%)	**4 (100%)**
Most of the time	3 (27%)	6 (55%)	2 (18%)	**11 (100%)**
Some of the time	10 (50%)	7 (35%)	3 (15%)	**20 (100%)**
A little of the time	10 (56%)	7 (39%)	1 (6%)	**18 (100%)**
None of the time	12 (63%)	6 (32%)	1 (5%)	**19 (100%)**
N (%)	**36 (50%)**	**27 (38%)**	**9 (13%)**	**72 (100%)**

* Other: includes response strategies other than 'A general picture of yourself' and 'Specific experiences'

BP02

Responses to this item were skewed in the university sample, with most respondents indicating that pain had interfered with their activities during the previous four weeks 'not at all' or only 'a little bit' (Table A25.15). In both samples, among those answering 'not at all', the major strategy reported by respondents involved a general picture of themselves. Specific experiences were more likely to be recalled in relation to other responses. More HIV respondents reported that they were limited by bodily pain, and there was a linear pattern in the use of a general picture, with the proportion reporting this strategy increasing from the lowest among those answering 'extremely' to the highest among those responding 'not at all' (Table A25:16). The use of specific experiences was more likely among those who recalled some limitations.

In the university sample, the relationship between strategy and response was non-significant for the original, or the dichotomised BP02, regardless of whether 'other' strategies were included or excluded.

In contrast, in the HIV sample, there was a significant association for both the original variables (Exact test: χ^2 (8)=26.00, $p<0.01$; Cramer's V=0.43), and the dichotomous version of BP02 ('none of the time' versus other responses combined). These results were replicated when the 'other' strategy category was excluded.

Table A25.15: Strategies reported according to BP02 response: University sample

	General	Specifics	Other*	N (%)
Not at all	23 (68%)	10 (29%)	1 (3%)	**34 (100%)**
A little bit	9 (47%)	9 (47%)	1 (5%)	**19 (100%)**
Moderately	3 (100%)	0 (0%)	0(0%)	**3 (100%)**
Quite a bit	2 (33%)	3 (50%)	1 (17%)	**6 (100%)**
Extremely	0 (0%)	1 (100%)	0 (0%)	**1 (100%)**
N (%)	**37 (59%)**	**23 (37%)**	**3 (5%)**	**63 (100%)**

Table A25.16: Strategies reported according to BP02 response: HIV sample

	General	Specifics	Other	N (%)
Not at all	20 (74%)	6 (22%)	1 (4%)	**27 (100%)**
A little bit	7 (44%)	9 (56%)	0 (0%)	**16 (100%)**
Moderately	4 (36%)	6 (55%)	1 (9%)	**11 (100%)**
Quite a bit	4 (33%)	8 (67%)	0 (0%)	**12 (100%)**
Extremely	1 (25%)	1 (25%)	2 (50%)	**4 (100%)**
N (%)	**36 (51%)**	**30 (43%)**	**4 (6%)**	**70 (100%)**

* Other: includes response strategies other than 'A general picture of yourself' and 'Specific experiences'

MH03

At least half of respondents in each response category (except among university respondents who selected 'none of the time') considered a general picture in relation to item MH03, regardless of their response. However, few respondents in either sample chose the extreme responses to item MH03 (university sample: Table A25.17; HIV sample: Table A25.18). Although the pattern was complex, there was the suggestion of an underlying U-shaped relationship between strategy and response in both samples, particularly in the HIV sample, whereby respondents who selected the middle options were less likely to refer to a general picture strategy and more likely to consider specific experiences in comparison to those who chose more extreme categories.

In the university sample, the association between the original strategy and response variables just failed to reach significance at the five percent level (but did so at six percent). However, significance was achieved when the 'other' strategies category was excluded, reflecting the different patterns in the use of general picture and specific experiences strategies in relation to the item (Exact test: $\chi^2(4)=12.10$, $p<0.05$; Cramer's V= 0.45). Analyses using a recoded version of item MH03, combining the extreme categories, all with most of the time and a little with none of the time, were non-significant for analyses including or excluding the 'other' category.

In the HIV sample, the association between the original variables was non-significant, regardless of the inclusion or exclusion of the 'other' strategies category. However, when extreme MH03 categories were recoded, as described above, the result was significant (Exact test: χ^2 $(4)=10.66$, $p<0.05$; Cramer's V=0.39), although only in the analysis including 'other' strategies.

Table A25.17: Strategies reported according to MH03 response: University sample

	General	Specifics	Other*	N (%)
All of the time	3 (100%)	0 (0%)	0 (0%)	**3 (100%)**
Most of the time	20 (71%)	5 (18%)	3 (11%)	**28 (100%)**
Some of the time	11 (65%)	5 (29%)	1 (6%)	**17 (100%)**
A little of the time	8 (73%)	3 (27%)	0 (0%)	**11 (100%)**
None of the time	0 (0%)	4 (100%)	0 (0%)	**4 (100%)**
N (%)	**42 (67%)**	**17 (27%)**	**4 (6%)**	**63 (100%)**

Table A25.18: Strategies reported according to MH03 response: HIV sample

	General	Specifics	Other*	N (%)
All of the time	3 (75%)	0 (0%)	1 (25%)	**4 (100%)**
Most of the time	12 (75%)	2 (13%)	2 (13%)	**16 (100%)**
Some of the time	10 (50%)	5 (25%)	5 (25%)	**20 (100%)**
A little of the time	14 (64%)	8 (36%)	0 (0%)	**22 (100%)**
None of the time	7 (78%)	2 (22%)	0 (0%)	**9 (100%)**
N (%)	**46 (65%)**	**17 (24%)**	**8 (11%)**	**71 (100%)**

* Other: includes response strategies other than 'A general picture of yourself' and 'Specific experiences'

VT02

Few respondents in either sample felt they were full of energy 'all of the time' and, similarly, few university respondents responded 'none of the time'. In both samples, more of those responding positively to the item had considered a general picture strategy, while those indicating negatively were less likely to refer to a general picture and instead refer to specific experiences (university sample: Table A25.19; HIV sample: Table A25.20).

The relationship between the original strategy and response variables was non-significant in the university sample. However, exclusion of the 'other' category strategies resulted in a significant association between strategy and the original response variable (Exact test: $\chi^2(4)=12.76$, $p<0.01$; Cramer's V= 0.46). The association was also significant when extreme responses to item VT02 were recoded, combining all and most of the time and a little and none of the time, regardless of whether the 'other' strategy was included (Exact test: $\chi^2(4)=11.77$, $p<0.05$; Cramer's V= 0.31) or excluded.

In the HIV sample, the only significant result was obtained when the extreme VT02 categories were recoded, and 'other' response strategies excluded (Exact test: $\chi^2(2)=5.99$, $p=0.05$; Cramer's V=0.30).

Table A25.19: Strategies reported according to VT02 response: University sample

	General	Specifics	Other*	N (%)
All of the time	2 (100%)	0 (0%)	0 (0%)	**2 (100%)**
Most of the time	20 (77%)	4 (15%)	2 (8%)	**26 (100%)**
Some of the time	17 (77%)	4 (18%)	1 (5%)	**22 (100%)**
A little of the time	4 (33%)	8 (67%)	0 (0%)	**12 (100%)**
None of the time	1 (100%)	0 (0%)	0 (0%)	**1 (100%)**
N (%)	**44 (70%)**	**16 (25%)**	**3 (5%)**	**63 (100%)**

Table A25.20: Strategies reported according to VT02 response: HIV sample

	General	Specifics	Other	N (%)
All of the time	1 (100%)	0 (0%)	0 (0%)	**1 (100%)**
Most of the time	16 (84%)	2 (11%)	1 (5%)	**19 (100%)**
Some of the time	11 (50%)	8 (36%)	3 (14%)	**22 (100%)**
A little of the time	10 (56%)	7 (39%)	1 (6%)	**18 (100%)**
None of the time	7 (58%)	5 (42%)	0 (0%)	**12 (100%)**
N (%)	**45 (63%)**	**22 (31%)**	**5 (7%)**	**72 (100%)**

* Other: includes response strategies other than 'A general picture of yourself' and 'Specific experiences'

MH04

In both samples, the predominant strategy reported by respondents to item MH04 involved assessing a general picture strategy. Those who responded 'None of the time' were considerably more likely to report this strategy. In other categories, specific experiences were more prominent (university sample: A25.21; HIV sample: A25.22).

In the university sample, the initial association between strategy and MH04 variables was non-significant. However, when the 'other' strategies category was excluded, the relationship became significant (Exact test: $\chi^2(4)=10.00$, $p<0.05$; Cramer's $V=0.42$), whereby a general perception of themselves was more likely to be reported than the use of specific experiences by those who answered that they felt downhearted and depressed 'None of the time' rather than one of the other categories. MH04 was dichotomised in order to compare those who responded 'None of the time' with all other respondents, and the relationship was significant (Exact test: $\chi^2(2)=7.98$, $p<0.05$; Cramer's $V=0.36$), a result replicated after the exclusion of the 'other' strategies category, indicating that the use of general perceptions were significantly more likely to be reported by those responding 'none of the time' compared to others.

In the HIV sample, the relationship between strategy and response was clearly linear. The association between strategy and response was non-significant for either the original or dichotomised version of the MH04 variable, regardless of inclusion or exclusion of the 'other' strategy.

Table A25.21: Strategies reported according to MH04 response: University sample

	General	Specifics	Other*	N (%)
All of the time	0 (0%)	1 (100%)	0 (0%)	**1 (100%)**
Most of the time	4 (67%)	2 (33%)	0 (0%)	**6 (100%)**
Some of the time	7 (54%)	4 (31%)	2 (15%)	**13 (100%)**
A little of the time	15 (50%)	13 (43%)	2 (7%)	**30 (100%)**
None of the time	12 (92%)	0 (0%)	1 (8%)	**13 (100%)**
N (%)	**38 (60%)**	**20 (32%)**	**5 (8%)**	**63 (100%)**

Table A25.22: Strategies reported according to MH04 response: HIV sample

	General	Specifics	Other	N (%)
All of the time	3 (50%)	3 (50%)	0 (0%)	**6 (100%)**
Most of the time	7 (58%)	4 (33%)	1 (8%)	**12 (100%)**
Some of the time	20 (67%)	9 (30%)	1 (3%)	**30 (100%)**
A little of the time	13 (68%)	4 (21%)	2 (11%)	**19 (100%)**
None of the time	4 (80%)	0 (0%)	1 (20%)	**5 (100%)**
N (%)	**47 (65%)**	**20 (28%)**	**5 (7%)**	**72 (100%)**

* Other: includes response strategies other than 'A general picture of yourself' and 'Specific experiences'

SF02

The largest proportion of respondents who indicated that they used a general picture of themselves in order to answer the question, felt that their physical and mental health interfered with social activities 'none of the time' during the previous four weeks. Specific experiences were more frequently mentioned for other response categories (university sample: A25.23; HIV sample: A25.24).

The relationship between strategy and response was linear in the university sample, although it did not achieve significance at the five percent level (but did so at six percent). Following the exclusion of 'other' strategies, the test reached significance (Exact test: $\chi^2(4)=11.64$, $p<0.05$; Cramer's $V=0.44$), confirming that proportions of respondents considering a general picture of themselves compared to specific experiences differed according to SF02 response. Response to item SF02 was dichotomised, dividing respondents between those who answered 'none of the time' and all others combined. The association between the dichotomised response variable and strategy was significant (Exact test: $\chi^2(2)=10.80$, $p<0.01$; Cramer's $V=0.42$), and this result was replicated when the 'other' strategies response was excluded, reflecting the high proportion of respondents who reported that they used a general picture of themselves when answering 'none of the time' compared to other responses.

Initially, there was no significant relationship between strategy and response in the HIV sample, However, when the SF02 item was dichotomised, comparing none of the time with other responses combined, there was a significant relationship, indicating the higher proportion of those responding 'none of the time' referred to a general picture of themselves compared to other responses to this item (Exact test: χ^2 $(2)=6.53$, $p<0.05$; Cramer's $V=0.30$). This result was replicated when the 'other' strategies were excluded.

Table A25.23: Strategies reported according to SF02 response: University sample

	General	Specifics	Other*	N (%)
All of the time	1 (50%)	1 (50%)	0 (0%)	**2 (100%)**
Most of the time	2 (29%)	5 (71%)	0 (0%)	**7 (100%)**
Some of the time	5 (50%)	5 (50%)	0 (0%)	**10 (100%)**
A little of the time	6 (43%)	6 (43%)	2 (14%)	**14 (100%)**
None of the time	24 (83%)	4 (14%)	1 (3%)	**29 (100%)**
N (%)	**38 (61%)**	**21 (34%)**	**3 (5%)**	**62 (100%)**

Table A25.24: Strategies reported according to SF02 response: HIV sample

	General	Specifics	Other	N (%)
All of the time	1 (20%)	3 (60%)	1 (20%)	**5 (100%)**
Most of the time	8 (53%)	4 (27%)	3 (20%)	**15 (100%)**
Some of the time	13 (52%)	10 (40%)	2 (8%)	**25 (100%)**
A little of the time	6 (46%)	4 (31%)	3 (23%)	**13 (100%)**
None of the time	12 (86%)	1 (7%)	1 (7%)	**14 (100%)**
N (%)	**40 (56%)**	**22 (31%)**	**10 (14%)**	**72 (100%)**

* Other: includes response strategies other than 'A general picture' and 'Specific experiences or situations'

APPENDIX 26: Easy item psychometrics and associations with SF-12v2

Response distributions for the perceived easiness of the SF-12v2 items to answer are shown in Appendix 20.

Data completeness

An easiness scale score was only calculated for those respondents with complete data for all twelve items. In the university sample, this resulted in a sample size of 58 (90.6% of the sample of 64) and in the HIV sample, the sample was 71 (98.6% of the sample of 72).

Item analysis

The distributions of the twelve items of the easy items were examined: first, item facility; second, convergent validity.

Item facility

Item facility was investigated by examining the mean scores for each item, and standard deviations (shown in Table A26.1). None of the items attained the extreme facility score of 1 ('very easy') or 4 ('very difficult'). However, all mean scores were below two indicating that, on average, people were likely to rate the items as easy rather than difficult. Indeed, the great majority of respondents in both samples rated all items either very or fairly easy to answer.

Table A26.1: Easy item facility: University and HIV samples

Item	University sample Mean (SD)	HIV sample Mean (SD)	Range of possible response categories
Physical health			
PF02	1.38 (0.52)	1.39 (0.57)	1-4
PF04	1.44 (0.50)	1.47 (0.53)	1-4
RP02	1.95 (0.79)	1.67 (0.69)	1-4
RP03	1.90 (0.76)	1.64 (0.70)	1-4
BP02	1.54 (0.71)	1.34 (0.53)	1-4
GH01	1.67 (0.59)	1.69 (0.71)	1-4
Mental health			
VT02	1.64 (0.57)	1.40 (0.52)	1-4
SF02	1.62 (0.61)	1.54 (0.71)	1-4
RE02	1.66 (0.68)	1.64 (0.66)	1-4
RE03	1.83 (0.71)	1.75 (0.71)	1-4
MH03	1.70 (0.64)	1.45 (0.58)	1-4
MH04	1.77 (0.68)	1.50 (0.63)	1-4

The overall proportion of each easiness response category was calculated from the total number of ratings given across the twelve items. In the university sample, out of 760 ratings (64 * 12 = 768, minus 8 missing responses), the predominant responses were 'fairly easy' (368, 48.4%) and 'very easy' (324, 42.6%), with far fewer ratings of 'fairly difficult' (59, 7.8%) or 'very difficult (9, 1.2%). In the HIV sample, out of 862 ratings (72 * 12 =864, minus 2 missing responses), more than half of ratings were 'very easy' (463, 53.7%), followed by fairly easy (335, 38.9%), 'fairly difficult' (61, 7.1%) and 'very difficult' (3, 0.3%).

Reliability analysis

The performance of the items as a scale was assessed by testing internal consistency for the twelve items assessing SF-12v2 easiness. In both samples, Cronbach's alpha was at an acceptable level (university sample: $\alpha = 0.85$; HIV sample: $\alpha = 0.86$). Repeated measures analyses indicated that there was significant between item variability in easiness ratings in both the university sample ($F(11,57)=6.52$, $p<0.001$) and the HIV sample ($F(11,70)=4.65$, $p<0.001$), suggesting that the twelve SF-12v2 items were rated differently in terms of easiness by respondents. This was a necessary indication that respondents were not simply selecting a single response throughout, which may have indicated a satisficing approach to the task.

Convergent validity

Items were correlated with a scale derived by summing all twelve ratings of item easiness. In both samples, items correlated strongly with the easy item scale, above the 0.20 threshold suggested as an indicator of item discrimination (Rust and Golombok, 1999), reflecting an association between individual ratings of SF-12v2 item easiness and an overall easiness scale (Table A26.2).

Table A26.2: Tests of easiness item convergent validity: University and HIV samples

	University sample	HIV sample
	N=58	N=71
Physical health		
PF02	0.55***	0.44***
PF04	0.49***	0.63***
RP02	0.62***	0.63***
RP03	0.67***	0.70***
BP02	0.51***	0.67***
GH01	0.47***	0.50***
Mental health		
VT02	0.69***	0.62***
SF02	0.65***	0.67***
RE02	0.68***	0.73***
RE03	0.77***	0.70***
MH03	0.70***	0.60***
MH04	0.61***	0.63***

* $p<0.05$, ** $p<0.01$, *** $p<0.001$

Easy item scale distribution

The easy item scale distributions of the two samples were analysed and compared. The possible scoring range was from 12 (all items rated 'very easy') to 48 (all items rated 'very difficult').

The university distribution was centred on lower scores: the scale mean was 19.88; no one attained the scale ceiling score, and 5 (8.6%) of the respondents reached the floor score. The scale distribution was tested by dividing skewness and kurtosis statistics by their respective standard errors. The summated scale was found to be neither significantly skewed nor kurtotic. A Shapiro-Wilk test was also carried out, and the result suggested that the distribution did not deviate significantly normal. In the HIV sample, the scale mean was again low (18.42) and no respondent received the scale ceiling score of 48, while 11 (15.5%) attained the floor scale score of 12. The scale was not significant skewed but was significantly kurtotic ($ZKurt=-2.15$, $p<0.05$). A Shapiro-Wilk test was also carried out and the distribution deviated significantly from normal ($p<0.001$). These results reflect the predominance of ratings of 'very easy' among HIV respondents. However, respondents in both samples considered the SF-12v2 items easy to answer, and there was no significant difference in mean easy item scale scores between samples at the five percent level.

Analyses of individual easy ratings and SF-12v2 item responses

For each SF-12v2 item, the association between easiness ratings and the SF-12v2 response was investigated. Easiness and SF-12v2 item responses are called the 'original' coding in initial analyses. Additional analyses were also carried out excluding the ratings 'fairly difficult' or 'very difficult', which were provided by few respondents. For some analyses, the SF-12v2 items were recoded to assist in the interpretation of relationships, excluding small categories, merging extreme responses, or dichotomising the item so that a response indicating good functioning was compared with all other responses combined. As with response process analyses, dichotomisation was only carried out for those variables where there was an obvious category indicating good functioning, while other variables were only recoded to merge or exclude small, extreme response categories.

GH01

The range of responses to GH01 was limited in the university sample as the perceived health of all respondents was 'fair' or better. Nevertheless, those who perceived themselves to be healthier rated the item easier to answer (Table A26.3). There was a significant relationship between the original response and easiness ratings (Exact test: $\chi^2(6)=22.28$, $p<0.01$), with the variables strongly associated (Tau-b=0.50, $p<0.001$). This result was replicated in a series of analyses conducted with GH01 responses 'excellent' and 'very good' combined, the category 'fair' excluded, and including or excluding the few respondents who answered 'very difficult'.

The range of responses to the GH01 was wider in the HIV sample and there was an apparent U-shape relationship between rated easiness of the item and response, with those selecting the more extreme responses more likely to rate the item easier than those selecting the middle response ('Good') (Table A26.4). However, the relationship between ease and response was non-significant in analyses carried out with original and recoded GH01 and easiness ratings (combining fairly and very difficult).

Table A26.3: Ratings of item easiness to answer according to GH01 response: University sample

	Very Easy	Fairly Easy	Fairly difficult	Very difficult	N (%)
Excellent	7 (100%)	0 (0%)	0 (0%)	0 (0%)	**7 (100%)**
Very good	14 (52%)	12 (44%)	1 (4%)	0 (0%)	**27 (100%)**
Good	4 (15%)	20 (74%)	3 (11%)	0 (0%)	**27 (100%)**
Fair	0 (0%)	3 (100%)	0 (0%)	0 (0%)	**3 (100%)**
Poor	0 (0%)	0 (0%)	0 (0%)	0 (0%)	**0 (0%)**
N (%)	**25 (39%)**	**35 (55%)**	**4 (6%)**	**0 (0%)**	**64 (100%)**

Table A26.4: Ratings of item easiness to answer according to GH01 response: HIV sample

	Very Easy	Fairly easy	Fairly difficult	Very difficult	N (%)
Excellent	3 (75%)	1 (25%)	0 (0%)	0 (0%)	**4 (100%)**
Very good	7 (50%)	7 (50%)	0 (0%)	0 (0%)	**14 (100%)**
Good	9 (30%)	16 (53%)	4 (13%)	1 (3%)	**30 (100%)**
Fair	7 (44%)	7 (44%)	2 (13%)	0 (0%)	**16 (100%)**
Poor	5 (63%)	2 (25%)	1 (13%)	0 (0%)	**8 (100%)**
N (%)	**31 (43%)**	**33 (46%)**	**7 (10%)**	**1 (1%)**	**72 (100%)**

PF02

In the university sample, more of the respondents who felt that they were not physically limited rated item PF02 very easy to answer compared to the few respondents who considered themselves to be limited, although there were only five respondents in this group and none had selected the most extreme category, 'Yes, limited a lot' (Table A26.5). The associations between these variables were not significant in the original coding. Excluding the single respondent who rated the item 'Fairly difficult', the Fisher's exact test between response and ratings of easiness attained significance ($p<0.05$), as did the measure of association (Tau-b=-0.28, $p<0.05$).

Response options ranging from 'No, not limited at all' to 'Yes, limited a lot' were selected in the HIV sample. An apparent curvilinear relationship was observed, with those who selected the two extreme categories were more likely to rate the item 'Very easy' compared to those who selected the middle option, 'Yes, limited a little' (Table A26.6). However, the relationship between rating of easiness and response failed to reach significance for any recoded version of either variable.

Table A26.5: Ratings of item easiness to answer according to PF02 response: University sample

	Very easy	Fairly easy	Fairly difficult	Very difficult	N (%)
Yes, limited a lot	0 (0%)	0 (0%)	0 (0%)	0 (0%)	**0 (0%)**
Yes, limited a little	1 (20%)	4 (80%)	0 (0%)	0 (0%)	**5 (100%)**
No, not limited at all	39 (67%)	18 (31%)	1 (2%)	0 (0%)	**58 (100%)**
N (%)	**40 (64%)**	**22 (35%)**	**1 (2%)**	**0 (0%)**	**63 (100%)**

Table A26.6: Ratings of item easiness to answer according to PF02 response: HIV sample

	Very Easy	Fairly easy	Fairly difficult	Very difficult	N (%)
Yes, limited a lot	9 (82%)	2 (18%)	0 (0%)	0 (0%)	**11 (100%)**
Yes, limited a little	10 (48%)	11 (52%)	0 (0%)	0 (0%)	**21 (100%)**
No, not limited at all	28 (70%)	9 (23%)	3 (8%)	0 (0%)	**40 (100%)**
N (%)	**47 (65%)**	**22 (31%)**	**3 (4%)**	**0 (0%)**	**72 (100%)**

PF04

The second physical functioning scale item, PF04, was rated in a similar fashion to the first in both samples.

In the university sample, a greater proportion of those who considered themselves 'Not at all limited' rated that the item 'Very easy' to answer in comparison to the remainder who had responded, 'Limited a little' (Fisher's Exact test, $p<0.01$; Tau-b=-0.37, $p<0.01$) (Table A26.7).

In the HIV sample, respondents who had selected the extreme PF04 responses were more likely to rate the item 'Very easy' (Table A26.8). The relationship between easiness rating and response was significant, both when including the single respondent who rated the item 'Fairly difficult' (Exact test: χ^2 (4)=9.92, $p<0.05$), and after excluding them. As the relationship between easiness and response was curvilinear, it was not identified by an ordinal test of strength of association (Tau-b). However, an association was apparent for the nominal test (Cramer's V=0.31).

Table A26.7: Ratings of item easiness to answer according to PF04 response: University sample

	Very easy	Fairly easy	Fairly difficult	Very difficult	N (%)
Yes, limited a lot	0 (0%)	0 (0%)	0 (0%)	0 (0%)	**0 (0%)**
Yes, limited a little	3 (21%)	11 (79%)	0 (0%)	0 (0%)	**14 (100%)**
No, not limited at all	33 (66%)	17 (34%)	0 (0%)	0 (0%)	**50 (100%)**
N (%)	**36 (56%)**	**28 (44%)**	**0 (0%)**	**0 (0%)**	**64 (100%)**

Table A26.8: Ratings of item easiness to answer according to PF04 response: HIV sample

	Very easy	Fairly easy	Fairly difficult	Very difficult	N (%)
Yes, limited a lot	11 (69%)	5 (31%)	0 (0%)	0 (0%)	**16 (100%)**
Yes, limited a little	8 (31%)	17 (65%)	1 (4%)	0 (0%)	**26 (100%)**
No, not limited at all	20 (67%)	10 (33%)	0 (0%)	0 (0%)	**30 (100%)**
N (%)	**39 (54%)**	**32 (44%)**	**1 (1%)**	**0 (0%)**	**72 (100%)**

RP02

There was some evidence for a non-linear, J- or U-shaped relationship between the easiness rating and response. In both samples, those who responded 'none of the time', indicating that they had not accomplished less than they would have liked during the previous four weeks because of any physical health problems, were most likely rated the item 'Very easy' to answer (university sample: Table A26.9; HIV sample: A26.10). Those respondents who selected one of the middle response options were less likely to rate the item 'Very easy', particularly in the HIV sample.

The association between the easiness and response was initially non-significant in the university sample using the original coding. Non-significant results were also obtained when extreme RP02 responses and ratings of fairly and very difficult were merged. However, the importance of the observed relationship between absence of limiting health problems and a rating of 'Very easy' was supported when RP02 was dichotomised, 'none of the time' versus all other responses combined: the association was significant and strong (Exact test: $\chi^2(3)=8.05$, $p<0.05$; Tau-b=-0.31, $p<0.01$). The result was also significant when ratings of fairly and very difficult were merged.

In the HIV sample, by way of contrast, none of the tests carried out using either the original or recoded variables was significant.

Table A26.9: Ratings of item easiness to answer according to RP02 response: University sample

	Very easy	Fairly easy	Fairly difficult	Very difficult	N (%)
All of the time	0 (0%)	0 (0%)	0 (0%)	0 (0%)	**0 (0%)**
Most of the time	1 (20%)	3 (60%)	1 (20%)	0 (0%)	**5 (100%)**
Some of the time	2 (12%)	9 (53%)	6 (35%)	0 (0%)	**17 (100%)**
A little of the time	2 (18%)	7 (64%)	1 (9%)	1 (9%)	**11 (100%)**
None of the time	14 (47%)	12 (40%)	4 (13%)	0 (0%)	**30 (100%)**
N (%)	**19 (30%)**	**31 (49%)**	**12 (19%)**	**1 (2%)**	**63 (100%)**

Table A26.10: Ratings of item easiness to answer according to RP02 response: HIV sample

	Very easy	Fairly Easy	Fairly difficult	Very difficult	N (%)
All of the time	2 (50%)	1 (25%)	1 (25%)	0 (0%)	**4 (100%)**
Most of the time	10 (53%)	8 (42%)	1 (5%)	0 (0%)	**19 (100%)**
Some of the time	8 (35%)	12 (52%)	3 (13%)	0 (0%)	**23 (100%)**
A little of the time	4 (31%)	6 (46%)	3 (23%)	0 (0%)	**13 (100%)**
None of the time	9 (69%)	3 (23%)	1 (8%)	0 (0%)	**13 (100%)**
N (%)	**33 (46%)**	**30 (41%)**	**9 (13%)**	**0 (0%)**	**72 (100%)**

RP03

The relationship between easiness rating and response in both samples was again non-linear, J- or U-shaped. Those without any experience of physical health affecting the kind of work they performed in the previous four weeks (response: 'None of the time') were more likely to rate the item 'Very easy' to answer (university sample: A26.11; HIV sample: A26.12).

In the university sample, there was a significant association between the two variables (Exact test: $\chi^2(9)= 32.25$, $p<0.01$; Tau-b=-0.36, $p<0.01$) Results were consistently significant for recodes and restrictions, including tests using a dichotomous version of RP03, whereby those who reported no limitations were more likely than others to rate the item easy to answer.

In the HIV sample, respondents who selected an RP03 option in the middle the response continuum ('A little of the time' or 'Some of the time') were less likely to rate the item 'Very easy' to answer. There was a significant relationship between the original variables (Exact test: χ^2 (12)=25.60, $p<0.01$; Cramer's V=0.34). In addition, the relationship was strong and persistent for all recodes and exclusions, including the dichotomised version of RP03.

Table A26.11: Ratings of item easiness to answer according to RP03 response: University sample

	Very easy	Fairly easy	Fairly difficult	Very difficult	N (%)
All of the time	0 (0%)	0 (0%)	0 (0%)	0 (0%)	**0 (0%)**
Most of the time	0 (0%)	2 (67%)	0 (0%)	1 (33%)	**3 (100%)**
Some of the time	1 (9%)	8 (73%)	2 (18%)	0 (0%)	**11 (100%)**
A little of the time	1 (8%)	9 (69%)	3 (23%)	0 (0%)	**13 (100%)**
None of the time	17 (49%)	14 (40%)	4 (11%)	0 (0%)	**35 (100%)**
N (%)	**19 (31%)**	**33 (53%)**	**9 (15%)**	**1 (2%)**	**62 (100%)**

Table A26.12: Ratings of item easiness to answer according to RP03 response: HIV sample

	Very easy	Fairly easy	Fairly difficult	Very difficult	N (%)
All of the time	4 (50%)	3 (38%)	1 (13%)	0 (0%)	**8 (100%)**
Most of the time	6 (60%)	4 (40%)	0 (0%)	0 (0%)	**10 (100%)**
Some of the time	7 (28%)	17 (68%)	1 (4%)	0 (0%)	**25 (100%)**
A little of the time	3 (30%)	3 (30%)	3 (30%)	1 (10%)	**10 (100%)**
None of the time	14 (74%)	4 (21%)	1 (5%)	0 (0%)	**19 (100%)**
N (%)	**34 (47%)**	**31 (43%)**	**6 (8%)**	**1 (1%)**	**72 (100%)**

RE02

The relationship between response to the item on whether emotional problems had led the respondent to accomplish less than they would have liked during the past four weeks (RE02) and ratings of item easiness appeared to be U-shaped (university sample: Table 27.13; HIV sample: A26.14). In both samples, those who responded 'None of the time' were most likely to rate the item 'Very easy' to answer. In addition, respondents who answered at the other extreme were also more likely to provide a rating of 'Very easy', whereas those who selected the middle options ('Some of the time' and the adjacent response, 'A little of the time') were less likely to rated the item easy.

In the university sample, the relationship between item easiness and response was significant when the original coding was used (Exact test $\chi^2(8)=18.05$, $p<0.05$; Cramer's $V=0.39$). Results were consistently significant for all recodes, including the dichotomous RE02, and regardless of whether those rating the item difficult were included or excluded.

In the HIV sample, however, despite the curvilinear relationship between the two variables, none of the tests was significant.

Table A26.13: Ratings of item easiness to answer according to RE02 response: University sample

	Very easy	Fairly easy	Fairly difficult	Very difficult	N (%)
All of the time	1 (50%)	1 (50%)	0 (0%)	0 (0%)	**2 (100%)**
Most of the time	3 (75%)	1 (25%)	0 (0%)	0 (0%)	**4 (100%)**
Some of the time	3 (17%)	13 (72%)	2 (11%)	0 (0%)	**18 (100%)**
A little of the time	8 (35%)	13 (57%)	2 (9%)	0 (0%)	**23 (100%)**
None of the time	12 (86%)	2 (14%)	0 (0%)	0 (0%)	**14 (100%)**
N (%)	**27 (44%)**	**30 (49%)**	**4 (7%)**	**0 (0%)**	**61 (100%)**

Table A26.14: Ratings of item easiness to answer according to RE02 response: HIV sample

	Very easy	Fairly easy	Fairly difficult	Very difficult	N (%)
All of the time	4 (67%)	2 (33%)	0 (0%)	0 (0%)	**6 (100%)**
Most of the time	6 (43%)	7 (50%)	1 (7%)	0 (0%)	**14 (100%)**
Some of the time	10 (37%)	13 (48%)	4 (15%)	0 (0%)	**27 (100%)**
A little of the time	4 (31%)	7 (54%)	2 (15%)	0 (0%)	**13 (100%)**
None of the time	9 (75%)	3 (25%)	0 (0%)	0 (0%)	**12 (100%)**
N (%)	**33 (46%)**	**32 (44%)**	**7 (10%)**	**0 (0%)**	**72 (100%)**

RE03

Different relationships between easiness ratings and response were observed for the two samples for item RE03.

In the university sample, the relationship between item easiness and RE03 response was J-shaped (Table A26.15): a greater proportion of those without limitations rated the item 'Very easy' to answer compared to other responses, which were more commonly rated 'Fairly easy' or 'Fairly difficult'. There was a significant relationship between the original easiness rating and response (Exact test: $\chi^2(6)=24.06$, $p<0.01$; Tau-b=-0.51, $p<0.001$). Analyses using the dichotomised version of item RE03, resulted in a significant relationship between item easiness and response, indicating that significantly more of those who indicated that they were limited 'None of the time' rated the item 'Very easy' to answer. Significant results were replicated with all recodes and restrictions.

In the HIV sample, there was some evidence for a U-shaped relationship between ratings of easiness and response. Fewer of the respondents who selected the non-extreme response options ('Some of the time' and 'A little of the time') rated the item 'Very easy' and more rated it difficult to answer (Table A26.16). However, there was no significant relationship between rating of easiness and response.

Table A26.15: Ratings of item easiness to answer according to RE03 response: University sample

	Very easy	Fairly easy	Fairly difficult	Very difficult	N (%)
All of the time	0 (0%)	0 (0%)	0 (0%)	0 (0%)	**0 (0%)**
Most of the time	0 (0%)	2 (100%)	0 (0%)	0 (0%)	**2 (100%)**
Some of the time	0 (0%)	7 (78%)	2 (22%)	0 (0%)	**9 (100%)**
A little of the time	4 (16%)	15 (60%)	6 (24%)	0 (0%)	**25 (100%)**
None of the time	17 (65%)	9 (35%)	0 (0%)	0 (0%)	**26 (100%)**
N (%)	**21 (34%)**	**33 (53%)**	**8 (13%)**	**0 (0%)**	**62 (100%)**

Table A26.16: Ratings of item easiness to answer according to RE03 response: HIV sample

	Very easy	Fairly easy	Fairly difficult	Very difficult	N (%)
All of the time	2 (50%)	2 (50%)	0 (0%)	0 (0%)	**4 (100%)**
Most of the time	7 (64%)	2 (18%)	2 (18%)	0 (0%)	**11 (100%)**
Some of the time	7 (35%)	9 (45%)	4 (20%)	0 (0%)	**20 (100%)**
A little of the time	4 (22%)	10 (56%)	4 (22%)	0 (0%)	**18 (100%)**
None of the time	9 (47%)	9 (47%)	1 (5%)	0 (0%)	**19 (100%)**
N (%)	**29 (40%)**	**32 (44%)**	**11 (15%)**	**0 (0%)**	**72 (100%)**

BP02

There was an apparent non-linear, U-shaped relationship between ratings of easiness and response in the two samples (university sample: A26.17; HIV sample: A26.18). In the university sample, the majority of respondents who selected the extreme response 'Not at all' considered it 'Very easy' to answer in comparison to those who gave responses from more central points of the response distribution, and the majority of the six respondents who answered 'Quite a bit' did likewise. None of the tests carried out using original or recoded variables was significant.

In the HIV sample, most respondents considered the item 'Very easy' to answer, regardless of their response to the item (with the exception of item 'A little bit'). However, there was also some evidence of a curvilinear relationship, with a greater proportion of those selecting both extreme response categories rating the item 'Very easy' (although only four respondents selected the option 'Extremely'). None of the relationships tested was significant.

Table A26.17: Ratings of item easiness to answer according to BP02 response: University sample

	Very easy	Fairly easy	Fairly difficult	Very difficult	N (%)
Not at all	22 (65%)	10 (29%)	1 (3%)	1 (3%)	**34 (100%)**
A little bit	8 (42%)	9 (47%)	1 (5%)	1 (5%)	**19 (100%)**
Moderately	1 (33%)	2 (67%)	0 (0%)	0 (0%)	**3 (100%)**
Quite a bit	4 (67%)	2 (33%)	0 (0%)	0 (%)	**6 (100%)**
Extremely	0 (0%)	1 (100%)	0 (0%)	0 (0%)	**1 (100%)**
N (%)	**35 (56%)**	**24 (38%)**	**2 (3%)**	**2 (3%)**	**63 (100%)**

Table A26.18: Ratings of item easiness to answer according to BP02 response: HIV sample

	Very easy	Fairly easy	Fairly difficult	Very difficult	N (%)
Not at all	22 (82%)	5 (19%)	0 (0%)	0 (0%)	**27 (100%)**
A little bit	7 (44%)	8 (50%)	1 (6%)	0 (0%)	**16 (100%)**
Moderately	7 (64%)	3 (27%)	1 (9%)	0 (0%)	**11 (100%)**
Quite a bit	8 (67%)	4 (33%)	0 (0%)	0 (0%)	**12 (100%)**
Extremely	4 (100%)	0 (0%)	0 (0%)	0 (0%)	**4 (100%)**
N (%)	**48 (69%)**	**20 (29%)**	**2 (3%)**	**0 (0%)**	**70 (100%)**

MH03

In both samples, respondent ratings of easiness in relation to item MH03 (how calm and peaceful they had felt during the previous four weeks) showed a U-shaped distribution, with the majority of those who answered 'All of the time' and 'None of the time selecting 'Very easy' (university sample: Table A26.19; HIV sample: Table A26.20). However, few respondents selected the extreme responses to item MH03, and the resulting tests of association between original variables were not significant in either sample. Although the U-shape was still apparent when the extreme MH03 responses were merged, when tested the association was non-significant in the two samples, regardless of whether those who responded 'fairly difficult' were included or excluded.

Table A26.19: Ratings of item easiness to answer according to MH03 response: University sample

	Very easy	Fairly easy	Fairly difficult	Very difficult	N (%)
All of the time	2 (67%)	1 (33%)	0 (0%)	0 (0%)	**3 (100%)**
Most of the time	11 (39%)	14 (50%)	3 (11%)	0 (0%)	**28 (100%)**
Some of the time	4 (24%)	11 (65%)	2 (12%)	0 (0%)	**17 (100%)**
A little of the time	4 (36%)	6 (55%)	1 (9%)	0 (0%)	**11 (100%)**
None of the time	4 (100%)	0 (0%)	0 (0%)	0 (0%)	**4 (100%)**
N (%)	**25 (40%)**	**32 (51%)**	**6 (10%)**	**0 (0%)**	**63 (100%)**

Table A26.20: Ratings of item easiness to answer according to MH03 response: HIV sample

	Very easy	Fairly easy	Fairly difficult	Very difficult	N (%)
All of the time	4 (100%)	0 (0%)	0 (0%)	0 (0%)	**4 (100%)**
Most of the time	9 (56%)	7 (44%)	0 (0%)	0 (0%)	**16 (100%)**
Some of the time	10 (50%)	9 (45%)	1 (5%)	0 (0%)	**20 (100%)**
A little of the time	12 (55%)	9 (41%)	1 (5%)	0 (0%)	**22 (100%**
None of the time	7 (78%)	1 (11%)	1 (11%)	0 (0%)	**9 (100%)**
N (%)	**42 (59%)**	**26 (27%)**	**3 (4%)**	**0 (0%)**	**71 (100%)**

VT02

The relationship between easiness ratings and response seemed to differ between the two samples for item VT02. In the university sample, there was an apparent U-shaped relationship between easiness and response (Table A26.21): those who selected the middle option, 'Some of the time' were less likely to rate the item 'Very easy' to answer (except for the single respondent who selected 'None of the time'). However, none of the associations between the two variables was significant, whether using original or recoded versions of VT02, or including or excluding ratings of 'Fairly difficult'.

In the HIV sample, by contrast, there was the suggestion of a linear relationship, whereby those with less energy were more likely to rate the item 'Very easy' (Table A26.22). However, the majority of respondents considered the VT02 item 'Very easy' to answer, regardless of response (except the single respondent who selected 'All of the time'), and there was no significant relationship between easiness rating and response.

Table A26.21: Ratings of item easiness to answer according to VT02 response: University sample

	Very easy	Fairly easy	Fairly difficult	Very difficult	N (%)
All of the time	1 (50%)	1 (50%)	0 (0%)	0 (0%)	**2 (100%)**
Most of the time	12 (46%)	14 (54%)	0 (0%)	0 (0%)	**26 (100%)**
Some of the time	6 (26%)	15 (65%)	2 (9%)	0 (0%)	**23 (100%)**
A little of the time	7 (58%)	4 (33%)	1 (8%)	0 (0%)	**12 (100%)**
None of the time	0 (0%)	1 (100%)	0 (0%)	0 (0%)	**1 (100%)**
N (%)	**26 (41%)**	**35 (55%)**	**3 (5%)**	**0 (0%)**	**64 (100%)**

Table A26.22: Ratings of item easiness to answer according to VT02 response: HIV sample

	Very easy	Fairly easy	Fairly difficult	Very difficult	N (%)
All of the time	0 (0%)	1 (100%)	0 (0%)	0 (0%)	**1 (100%)**
Most of the time	11 (58%)	7 (37%)	1 (5%)	0 (0%)	**19 (100%)**
Some of the time	13 (59%)	9 (41%)	0 (0%)	0 (0%)	**22 (100%)**
A little of the time	12 (67%)	6 (33%)	0 (0%)	0 (0%)	**18 (100%)**
None of the time	8 (67%)	4 (33%)	0 (0%)	0 (0%)	**12 (100%)**
N (%)	**44 (61%)**	**27 (38%)**	**1 (1%)**	**0 (0%)**	**72 (100%)**

MH04

In both samples, there was an apparent U-shaped relationship between ratings of item easiness and response to the item on feeling downhearted and depressed during the previous month (MH04), with a greater proportion those respondents who provided extreme responses indicating that the item was 'Very easy' to answer (university sample: Table A26.23; HIV sample: Table A26.24). In the university sample, the relationship between the two original variables was significant ($\chi^2(12)=22.39$, $p<0.05$; Cramer's V=0.34), whether those who considered the item difficult to answer were included or not. When analyses were rerun with extreme the categories of MH04 merged, however, the result was non-significant. Finally, analyses using the dichotomous version of MH04 ('None of the time' versus other responses combined) were significant, reflecting the large number of respondents who selected this response, the majority of whom rated the item 'Very easy' to answer.

In the HIV sample, the relationship between easiness rating and response was notably curvilinear. Nevertheless, the majority of respondents in every response category (except 'A little of the time') rated the item 'Very easy', and there was no significant relationship between easiness rating and response.

Table A26.23: Ratings of item easiness to answer according to MH04 response: University sample

	Very easy	Fairly easy	Fairly difficult	Very difficult	N (%)
All of the time	1 (100%)	0 (0%)	0 (0%)	0 (0%)	**1 (100%)**
Most of the time	4 (67%)	2 (33%)	0 (0%)	0 (0%)	**6 (100%)**
Some of the time	3 (23%)	7 (54%)	2 (15%)	1 (8%)	**13 (100%)**
A little of the time	5 (17%)	21 (70%)	4 (13%)	0 (0%)	**30 (100%)**
None of the time	10 (71%)	4 (29%)	0 (0%)	0 (0%)	**14 (100%)**
N (%)	**23 (36%)**	**34 (53%)**	**6 (9%)**	**1 (2%)**	**64 (100%)**

Table A26.24: Ratings of item easiness to answer according to MH04 response: HIV sample

	Very Easy	Fairly easy	Fairly difficult	Very difficult	N (%)
All of the time	6 (100%)	0 (0%)	0 (0%)	0 (0%)	**6 (100%)**
Most of the time	7 (58%)	4 (33%)	1 (8%)	0 (0%)	**12 (100%)**
Some of the time	16 (53%)	12 (40%)	2 (7%)	0 (0%)	**30 (100%)**
A little of the time	9 (47%)	8 (42%)	2 (11%)	0 (0%)	**19 (100%)**
None of the time	3 (60%)	2 (40%)	0 (0%)	0 (0%)	**5 (100%)**
N (%)	**41 (57%)**	**26 (36%)**	**5 (7%)**	**0 (0%)**	**72 (100%)**

SF02

In both samples, there was again evidence of a non-linear, J- or U-shaped relationship between ratings of easiness and response to an item on health limitations affecting social activities in the previous four weeks. Those who responded 'None of the time' were most likely rated the item 'Very easy' to answer (university sample: Table A26.25; HIV sample: Table A26.26). Considerably fewer respondents felt that their health interfered 'All of the time', although a large proportion of this group also considered the item 'Very easy' to answer, particularly in the HIV sample. However, in both samples, the relationship between easiness and response was non-significant in any analyses, including using a dichotomous SF02 item, with 'none of the time' compared to all other responses.

Table A26.25: Ratings of item easiness to answer according to SF02 response: University sample

	Very easy	Fairly easy	Fairly difficult	Very difficult	N (%)
All of the time	1 (50%)	1 (50%)	0 (0%)	0 (0%)	**2 (100%)**
Most of the time	3 (43%)	3 (43%)	1 (14%)	0 (0%)	**7 (100%)**
Some of the time	4 (40%)	5 (50%)	1 (10%)	0 (0%)	**10 (100%)**
A little of the time	4 (29%)	8 (57%)	2 (14%)	0 (0%)	**14 (100%)**
None of the time	16 (53%)	14 (47%)	0 (0%)	0 (0%)	**30 (100%)**
N (%)	**28 (44%)**	**31 (49%)**	**4 (6%)**	**0 (0%)**	**63 (100%)**

Table A26.26: Ratings of item easiness to answer according to SF02: HIV sample

	Very Easy	Fairly easy	Fairly difficult	Very difficult	N (%)
All of the time	4 (80%)	1 (20%)	0 (0%)	0 (0%)	**5 (100%)**
Most of the time	6 (40%)	8 (53%)	1 (7%)	0 (0%)	**15 (100%)**
Some of the time	13 (52%)	9 (36%)	3 (12%)	0 (0%)	**25 (100%)**
A little of the time	6 (46%)	5 (39%)	1 (8%)	1 (8%)	**13 (100%)**
None of the time	12 (86%)	1 (7%)	1 (7%)	0 (0%)	**14 (100%)**
N (%)	**41 (57%)**	**24 (33%)**	**6 (8%)**	**1 (1%)**	**72 (100%)**

APPENDIX 27: Useful item psychometrics and associations with SF-12v2

Response distributions for the perceived usefulness of the SF-12v2 items for measuring respondents' health are shown in Appendix 20.

Data completeness

A score was only calculated for those respondents with complete data for all twelve items, resulting in a sample size of 57 (89.1% of the sample of 64) for the usefulness item scale for the university sample and 70 (97.2% of the sample of 72) for the HIV sample.

Item analysis

The distributions of the twelve items of the SF-12v2 were examined: first, item facility; and second, testing item convergent validity.

Item facility

The mean scores of each item, facility, and standard deviations are shown in Table A27.1. None of the items attained the extreme facility score of 1 or 4 (where 1 refers to 'very useful' and 4 to 'not at all useful'). In the university sample, all facility scores were within the range 1.92 – 2.27, indicating that, on average, people were likely to rate the items as useful rather than not useful. A Similar pattern was observed in the HIV sample (range 1.63 – 2.08). The facility scores for all items were lower in the HIV sample, indicating that items were more commonly rated useful among these respondents.

Table A27.1: Useful item facility: University and HIV samples

Item	University sample Mean	HIV sample Mean	Range of possible response categories
Physical health			
PF02	2.21 (0.72)	1.99 (0.83)	1-4
PF04	2.14 (0.71)	1.88 (0.77)	1-4
RP02	2.22 (0.77)	1.86 (0.76)	1-4
RP03	2.13 (0.71)	1.89 (0.72)	1-4
BP02	2.16 (0.75)	1.71 (0.73)	1-4
GH01	2.27 (0.79)	2.08 (0.78)	1-4
Mental health			
VT02	1.92 (0.74)	1.65 (0.74)	1-4
SF02	2.02 (0.73)	1.74 (0.75)	1-4
RE02	2.03 (0.61)	1.72 (0.77)	1-4
RE03	2.23 (0.69)	2.08 (0.80)	1-4
MH03	2.02 (0.73)	1.79 (0.88)	1-4
MH04	2.08 (0.72)	1.63 (0.78)	1-4

The overall proportion of each usefulness response category was calculated from the total number of ratings given across the twelve items. These findings were reflected in the general pattern of ratings of usefulness for all twelve SF-12v2 items, In the university sample, out of 755 ratings (64 * 12 = 768, minus 13 missing responses),

'fairly useful' comprised more than half of the ratings given (423, 56.0%), followed by 'not that useful' (173, 22.9%), very useful (134, 17.7%), with fewest ratings of 'not at all useful' (9, 1.2%). In the HIV sample, out of 861 ratings (72 * 12 = 864, minus 3 missing responses), 'fairly useful' was again the predominant response (373, 43.3%), followed by 'very useful' (326, 37.9%), 'not that useful' (140, 16.3%) and 'not at all useful' (22, 2.6%). It is clear that HIV respondents were more likely to rate these items useful than those from the university sample.

Reliability analysis

Internal consistency was calculated for the twelve items assessing SF-12v2 usefulness. For both studies, internal consistency was acceptable (university sample: α=0.88; HIV sample: α=0.93). Repeated measures analyses indicated that there was significant between item variability in usefulness ratings (university sample: $F(11,56)=2.55$, $p<0.01$; HIV sample: $F(11,69)=6.21$, $p<0.001$), suggesting that the twelve items were rated differently in terms of usefulness by respondents, providing evidence that ratings were meaningful rather than resulting from satisficing.

Convergent validity

The twelve items used to rate the perceived usefulness of each SF-12v2 item were summed to produce a single scale. Correlations between SF-12v2 item usefulness ratings and the usefulness item scale are shown in Table A27.2. Items correlated strongly with the scale, above the 0.20 threshold suggested as an indicator of item discrimination (Rust and Golombok, 1999), reflecting an association between individual ratings of SF-12v2 item usefulness and an overall usefulness scale.

Table A27.2: Tests of usefulness item convergent validity: University and HIV samples

	University sample	HIV sample
	N=57	N=70
Physical health		
PF02	0.70***	0.61**
PF04	0.65***	0.79**
RP02	0.69***	0.81**
RP03	0.74***	0.75**
BP02	0.52***	0.75**
GH01	0.73***	0.65**
Mental health		
SF02	0.72***	0.82**
VT02	0.73***	0.75**
RE02	0.69***	0.80**
RE03	0.55***	0.78**
MH03	0.63***	0.78**
MH04	0.63***	0.79**

* $p<0.05$, ** $p<0.01$, *** $p<0.001$

Usefulness item scale distribution

The usefulness item scale distributions of the two samples were analysed and compared. The possible scoring range was from 12 (all items rated 'very useful') to 48 (all items rated 'not at all useful').

A wide range of scores was observed in the university sample, with outliers at each end of the distribution, indicating the varied ratings of usefulness between items. No respondent attained the floor score and only 2 (3.5%) respondents reached the ceiling score (all items rated 'very useful'). The scale distribution was tested by dividing skewness and kurtosis statistics by their respective standard errors. The summated scale was found to be neither significantly skewed nor kurtotic. However, the result of a Shapiro-Wilk test suggested that the distribution deviated from normal, due to extreme outliers ($p<0.05$). In the HIV sample, the scoring distribution was again wide; no-one attained the ceiling scale score and 7.14% of the respondents had the floor scale score. Test results indicated the scale was significantly skewed towards a low score ('very useful') ($ZSkew=3.37$, $p<0.001$) and kurtotic ($ZKurt=2.63$, $p<0.01$). The Shapiro-Wilk test also indicated that the usefulness scale distribution deviated from normal ($p<0.001$). The mean score for item usefulness was higher in the university sample compared to the HIV sample, reflecting fewer items being rated useful among university respondents. This difference was statistically significant ($t(125)=2.86$, $p<0.01$).

Analyses of individual usefulness ratings and SF-12v2 item responses

The relationship between SF-12v2 responses and ratings of usefulness were investigated for each item. Usefulness and SF-12v2 item responses are called the 'original' coding in initial analyses. Additional analyses were also carried out in which ratings of perceived lack of usefulness are produced from the merging of the categories 'Not that useful' and 'Not at all useful'. For some analyses, the SF-12v2 items were recoded to assist in the interpretation of relationships, excluding small categories, merging extreme responses, or dichotomising the item so that a response indicating good functioning was compared with all other responses combined. As with other analyses, dichotomisation was only carried out for those variables where there was an obvious category indicating good functioning, while other variables were only recoded to merge or exclude small, extreme response categories.

GH01

In neither sample was there a clear relationship between usefulness and self-perceived general health (university sample: Table A27.3; HIV sample: Table A27.4). Ratings varied considerably within most GH01 responses, and the relationship between the two variables was non-significant in both samples for original codings, analyses using merged extreme GH01 categories, or combining 'Not that useful' with 'Not at all useful'.

Table A27.3: Ratings of item usefulness to answer according to GH01 response: University sample

	Very useful	Fairly useful	Not that useful	Not at all useful	TOTAL
Excellent	2 (29%)	5 (71%)	0 (0%)	0 (0%)	**7 (100%)**
Very good	5 (19%)	10 (37%)	10 (37%)	2 (7%)	**27 (100%)**
Good	2 (8%)	15 (58%)	7 (27%)	2 (8%)	**26 (100%)**
Fair	0 (0%)	2 (67%)	1 (33%)	0 (0%)	**3 (100%)**
Poor	0 (0%)	0 (0%)	0 (0%)	0 (0%)	**0 (0%)**
TOTAL	**9 (14%)**	**32 (51%)**	**18 (29%)**	**4 (6%)**	**63 (100%)**

Table A27.4: Ratings of item usefulness to answer according to GH01 response: HIV sample

	Very useful	Fairly useful	Not that useful	Not at all useful	TOTAL
Excellent	2 (50%)	0 (0%)	2 (50%)	0 (0%)	**4 (100%)**
Very good	3 (21%)	9 (64%)	2 (14%)	0 (0%)	**14 (100%)**
Good	6 (20%)	15 (50%)	8 (27%)	1 (3%)	**30 (100%)**
Fair	4 (25%)	4 (25%)	8 (50%)	0 (0%)	**16 (100%)**
Poor	3 (38%)	3 (38%)	2 (25%)	0 (0%)	**8 (100%)**
TOTAL	**18 (25%)**	**31 (43%)**	**22 (31%)**	**1 (1%)**	**72 (100%)**

PF02

Patterns of scoring for usefulness and response varied between the samples for item PF02, and there was variability in ratings if usefulness in both samples.

In the university sample, responses to PF02 were restricted to two responses, and a larger proportion of those who responded 'Yes, limited a little' compared to 'No, not limited at all' rated the item 'Very useful' (Table A27.5). However, ratings of usefulness varied for both responses and none of the tests association carried out with original or recoded variables proved significant.

In the HIV sample, respondents who considered that they were limited a lot were most likely to rate the item 'Very useful', followed by those who considered themselves not limited at all, suggesting a J- or U-shaped relationship (Table A27.6). However, a greater proportion of respondents from these groups were also more likely to rate the item not that or not at all useful, and the relationship between the two variables was non-significant.

Table A27.5: Ratings of item usefulness to answer according to PF02 response: University sample

	Very useful	Fairly useful	Not that useful	Not at all useful	TOTAL
Yes, limited a lot	0 (0%)	0 (0%)	0 (0%)	0 (0%)	**0 (0%)**
Yes, limited a little	2 (40%)	2 (40%)	1 (20%)	0 (0%)	**5 (100%)**
No, not limited at all	7 (12%)	32 (55%)	17 (29%)	2 (3%)	**58 (100%)**
TOTAL	**9 (14%)**	**34 (54%)**	**18 (29%)**	**2 (3%)**	**63 (100%)**

Table A27.6: Ratings of item usefulness to answer according to PF02 response: HIV sample

	Very useful	Fairly useful	Not that useful	Not at all useful	TOTAL
Yes, limited a lot	5 (46%)	3 (27%)	1 (9%)	2 (18%)	**11 (100%)**
Yes, limited a little	5 (24%)	12 (57%)	4 (19%)	0 (0%)	**21 (100%)**
No, not limited at all	12 (30%)	17 (43%)	10 (25%)	1 (3%)	**40 (100%)**
TOTAL	**22 (31%)**	**32 (44%)**	**15 (21%)**	**3 (4%)**	**72 (100%)**

PF04

The association between usefulness and response to item PF04 differed according to sample, with a clearer relationship in the HIV sample.

In the university sample, ratings of usefulness were very similar, regardless of whether respondents felt they were limited or not (Table A27.7), and there was no significant relationship between usefulness and response for original or recoded variables.

In contrast, in the HIV sample, more of those respondents who considered themselves 'limited a lot' rated the item 'Very useful' compared to the other two response groups. (Table A27.8). However, similar proportions of respondents from each group considered the item not that or not at all useful and there was no significant relationship between response and usefulness ratings.

Table A27.7: Ratings of item usefulness to answer according to PF04 response: University sample

	Very useful	Fairly useful	Not that useful	Not at all useful	TOTAL
Yes, limited a lot	0 (0%)	0 (0%)	0 (0%)	0 (0%)	**0 (0%)**
Yes, limited a little	2 (14%)	9 (64%)	3 (21%)	0 (0%)	**14 (100%)**
No, not limited at all	7 (14%)	31 (62%)	9 (18%)	3 (6%)	**50 (100%)**
TOTAL	**9 (14%)**	**40 (63%)**	**12 (19%)**	**3 (5%)**	**64 (100%)**

Table A27.8: Ratings of item usefulness to answer according to PF04 response: HIV sample

	Very useful	Fairly useful	Not that useful	Not at all useful	TOTAL
Yes, limited a lot	8 (50%)	5 (31%)	2 (13%)	1 (6%)	**16 (100%)**
Yes, limited a little	8 (31%)	13 (50%)	5 (19%)	0 (0%)	**26 (100%)**
No, not limited at all	9 (30%)	14 (47%)	7 (23%)	0 (0%)	**30 (100%)**
TOTAL	**25 (35%)**	**32 (44%)**	**14 (19%)**	**1 (1%)**	**72 (100%)**

RP02

In both samples, answers provided by respondents about whether they had accomplished less than they would have liked during the previous four weeks because of any physical health problem appeared unrelated to usefulness, with a wide range of ratings for most RP02 response (university sample: Table A27.9; HIV sample: Table A27.10). Tests of association in both samples were not significant.

Table A27.9: Ratings of item usefulness to answer according to RP02 response: University sample

	Very useful	Fairly useful	Not that useful	Not at all useful	TOTAL
All of the time	0 (0%)	0 (0%)	0 (0%)	0 (0%)	**0 (0%)**
Most of the time	1 (20%)	2 (40%)	1 (20%)	1 (20%)	**5 (100%)**
Some of the time	3 (18%)	8 (47%)	6 (35%)	0 (0%)	**17 (100%)**
A little of the time	1 (9%)	3 (27%)	7 (64%)	0 (0%)	**11 (100%)**
None of the time	6 (20%)	16 (53%)	7 (23%)	1 (3%)	**30 (100%)**
TOTAL	**11 (18%)**	**29 (46%)**	**21 (33%)**	**2 (3%)**	**63 (100%)**

Table A27.10: Ratings of item usefulness to answer according to RP02 response: HIV sample

	Very useful	Fairly useful	Not that useful	Not at all useful	TOTAL
All of the time	2 (50%)	1 (25%)	1 (25%)	0 (0%)	**4 (100%)**
Most of the time	7 (37%)	7 (37%)	3 (16%)	2 (11%)	**19 (100%)**
Some of the time	6 (26%)	14 (61%)	3 (13%)	0 (0%)	**23 (100%)**
A little of the time	5 (39%)	6 (46%)	2 (15%)	0 (0%)	**13 (100%)**
None of the time	4 (31%)	8 (62%)	1 (8%)	0 (0%)	**13 (100%)**
TOTAL	**24 (33%)**	**36 (50%)**	**10 (14%)**	**2 (3%)**	**72 (100%)**

RP03

In both samples, those who believed their physical health had affected the kind of work they performed in the previous four weeks more of the time were more likely to rate the item 'Very useful', suggesting a J-shape relationship (university sample: Table A27.11; HIV sample: Table A27.12). However, once again, there was considerable within-response variation in ratings of usefulness and the relationship with response was non-significant in both samples.

Table A27.11: Ratings of item usefulness to answer according to RP03 response: University sample

	Very useful	Fairly useful	Not that useful	Not at all useful	TOTAL
All of the time	0 (0%)	0 (0%)	0 (0%)	0 (0%)	**0 (0%)**
Most of the time	0 (0%)	2 (67%)	1 (33%)	0 (0%)	**3 (100%)**
Some of the time	4 (36%)	6 (55%)	1 (9%)	0 (0%)	**11 (100%)**
A little of the time	1 (8%)	6 (46%)	6 (46%)	0 (0%)	**13 (100%)**
None of the time	5 (14%)	22 (63%)	6 (17%)	2 (6%)	**35 (100%)**
TOTAL	**10 (16%)**	**36 (58%)**	**14 (23%)**	**2 (3%)**	**62 (100%)**

Table A27.12: Ratings of item usefulness to answer according to RP03 response: HIV sample

	Very useful	Fairly Useful	Not that useful	Not at all useful	TOTAL
All of the time	4 (50%)	3 (38%)	0 (0%)	1 (13%)	**8 (100%)**
Most of the time	5 (50%)	5 (50%)	0 (0%)	0 (0%)	**10 (100%)**
Some of the time	5 (20%)	15 (60%)	5 (20%)	0 (0%)	**25 (100%)**
A little of the time	0 (0%)	9 (90%)	1 (10%)	0 (0%)	**10 (100%)**
None of the time	7 (37%)	8 (42%)	3 (16%)	1 (5%)	**19 (100%)**
TOTAL	**21 (29%)**	**40 (56%)**	**9 (13%)**	**2 (3%)**	**72 (100%)**

RE02

Ratings of item usefulness differed according to whether the respondent considered that emotional problems had led them to accomplish less, and there were divergent patterns in the two samples.

In the university sample, a notable proportion of those responding 'None of the time' rated the item to be 'Very useful' (Table A27.13).

In contrast, in the HIV sample, there was a J-shaped relationship between response and ratings of 'Very useful', with those who responded 'All of the time' most likely to indicate that the item was 'Very useful' (Table A27.14). The relationship between the original variables was non-significant in both samples. However, when extreme RE02 categories and ratings 'Not that useful' and 'Not at all useful' were merged, the results were significant (Exact tests: university sample: χ^2 (4)=10.54, $p<0.05$; Tau-b=0.00, $p>0.05$; HIV sample: χ^2 (4)=10.58, $p<0.05$; Tau-b=0.30, $p>0.01$). However, despite the significant results, there was a range of ratings of usefulness among respondents in most response categories.

Table A27.13: Ratings of item usefulness to answer according to RE02 response: University sample

	Very useful	Fairly useful	Not that useful	Not at all useful	TOTAL
All of the time	0 (0%)	2 (100%)	0 (0%)	0 (0%)	**2 (100%)**
Most of the time	0 (0%)	3 (75%)	1 (25%)	0 (0%)	**4 (100%)**
Some of the time	1 (6%)	17 (94%)	0 (0%)	0 (0%)	**18 (100%)**
A little of the time	4 (17%)	12 (52%)	6 (26%)	1 (4%)	**23 (100%)**
None of the time	4 (29%)	8 (57%)	2 (14%)	0 (0%)	**14 (100%)**
TOTAL	**9 (15%)**	**42 (69%)**	**9 (15%)**	**1 (2%)**	**61 (100%)**

Table A27.14: Ratings of item usefulness to answer according to RE02 response: HIV sample

	Very useful	Fairly useful	Not that useful	Not at all useful	TOTAL
All of the time	5 (83%)	1 (17%)	0 (0%)	0 (0%)	**6 (100%)**
Most of the time	9 (64%)	3 (21%)	1 (7%)	1 (7%)	**14 (100%)**
Some of the time	11 (41%)	14 (52%)	2 (7%)	0 (0%)	**27 (100%)**
A little of the time	4 (31%)	5 (39%)	4 (31%)	0 (0%)	**13 (100%)**
None of the time	3 (25%)	7 (58%)	1 (8%)	1 (8%)	**12 (100%)**
TOTAL	**32 (44%)**	**30 (42%)**	**8 (11%)**	**2 (3%)**	**72 (100%)**

RE03

The relationship between usefulness rating and response differed between the two samples.

In the university sample, ratings of usefulness varied within RE03 responses (Table A27.15), and there was no significant relationship between usefulness rating and response.

In the HIV sample, there was an J-shaped relationship: the majority of those responding all and most of the time rated the item very or fairly useful while respondents who provided the other answers were more likely to rate the item not that or not very useful (Table A27.16). However, despite this, the relationship between usefulness and response was non-significant for original or recoded analyses.

Table A27.15: Ratings of item usefulness to answer according to RE03 response: University sample

	Very useful	Fairly useful	Not that useful	Not at all useful	TOTAL
All of the time	0 (0%)	0 (0%)	0 (0%)	0 (0%)	**0 (0%)**
Most of the time	0 (0%)	1 (50%)	1 (50%)	0 (0%)	**2 (100%)**
Some of the time	1 (11%)	8 (89%)	0 (0%)	0 (0%)	**9 (100%)**
A little of the time	4 (16%)	13 (52%)	8 (32%)	0 (0%)	**25 (100%)**
None of the time	2 (8%)	14 (54%)	8 (31%)	2 (8%)	**26 (100%)**
TOTAL	**7 (11%)**	**36 (58%)**	**17 (27%)**	**2 (3%)**	**62 (100%)**

Table A27.16: Ratings of item usefulness to answer according to RE03 response: HIV sample

	Very useful	Fairly useful	Not that useful	Not at all useful	TOTAL
All of the time	2 (50%)	2 (50%)	0 (0%)	0 (0%)	**4 (100%)**
Most of the time	5 (46%)	5 (46%)	0 (0%)	1 (9%)	**11 (100%)**
Some of the time	4 (20%)	10 (50%)	6 (30%)	0 (0%)	**20 (100%)**
A little of the time	3 (17%)	7 (39%)	8 (44%)	0 (0%)	**18 (100%)**
None of the time	3 (16%)	11 (58%)	3 (16%)	2 (11%)	**19 (100%)**
TOTAL	**17 (24%)**	**35 (49%)**	**17 (24%)**	**3 (4%)**	**72 (100%)**

BP02

In the university sample, usefulness ratings varied and there was no significant relationship between usefulness and response (Table A27.17).

In contrast, in the HIV sample a large proportion of those who reported that pain interfered with their performance 'Quite a bit' or 'Extremely' rated the item 'Very useful' compared to smaller proportions among other respondents who gave other answers (Table A27.18). There was no significant relationship between the original response and usefulness ratings. However, analyses using recoded variables, merging extreme BP02 responses and 'Not that useful and 'Not at all useful' resulted in a significant association between usefulness and response (Exact test: χ^2 (4)=11.78, $p<0.05$; Cramer's V=0.29), demonstrating a J-shaped relationship whereby those who responded affirmative to BP02 were more likely to rate the item useful.

Table A27.17: Ratings of item usefulness to answer according to BP02 response: University sample

	Very useful	Fairly useful	Not that useful	Not at all useful	TOTAL
Not at all	5 (15%)	18 (53%)	8 (24%)	3 (9%)	**34 (100%)**
A little bit	3 (16%)	11 (58%)	5 (26%)	0 (0%)	**19 (100%)**
Moderately	1 (33%)	2 (67%)	0 (0%)	0 (0%)	**3 (100%)**
Quite a bit	1 (17%)	4 (67%)	1 (17%)	0 (0%)	**6 (100%)**
Extremely	0 (0%)	1 (100%)	0 (0%)	0 (0%)	**1 (100%)**
TOTAL	**10 (16%)**	**36 (57%)**	**14 (22%)**	**3 (5%)**	**63 (100%)**

Table A27.18: Ratings of item usefulness to answer according to BP02 response: HIV sample

	Very useful	Fairly useful	Not that useful	Not at all useful	TOTAL
Not at all	10 (39%)	13 (50%)	3 (12%)	(0%)	**26 (100%)**
A little bit	3 (19%)	11 (69%)	2 (13%)	0 (0%)	**16 (100%)**
Moderately	4 (36%)	4 (36%)	3 (27%)	0 (0%)	**11 (100%)**
Quite a bit	9 (75%)	2 (17%)	0 (0%)	1 (8%)	**12 (100%)**
Extremely	3 (75%)	1 (25%)	0 (0%)	0 (0%)	**4 (100%)**
TOTAL	**29 (42%)**	**31 (45%)**	**8 (12%)**	**1 (1%)**	**69 (100%)**

MH03

When asked how calm and peaceful they had felt during the previous four weeks, ratings of usefulness varied considerably within and between responses. However, in both samples, a greater proportion of respondents who answered 'None of the time' or 'A little of the time' rated the item 'Very useful' in comparison to others, suggesting a J-shaped relationship between the variables (university sample: Table A27.19; HIV sample: Table A27.20).

In the university sample, the relationship just failed to reach significance at the five percent level (but did so at the eight percent level). However, all other analyses involving recode variables were significant, including the relationship between the original MH03 variable and a version of the usefulness variable in which 'Not that useful' and 'Not al all useful' were combined (Exact test: $\chi^2(8)=16.00$, $p<0.05$). Since the relationship between usefulness and response was not linear, an ordinal test of the strength of the relationship was non-significant. However, a strong association was apparent for the nominal test (Cramer's V=0.36).

In the HIV sample, the association between the original variables was also significant (Exact test: χ^2 (12)=22.87, $p<0.05$; Cramer's V: 0.33), as were all other analyses using recoded variables.

Table A27.19: Ratings of item usefulness to answer according to MH03 response: University sample

	Very useful	Fairly useful	Not that useful	Not at all useful	TOTAL
All of the time	1 (33%)	1 (33%)	1 (33%)	0 (0%)	**3 (100%)**
Most of the time	4 (14%)	19 (68%)	3 (11%)	2 (7%)	**28 (100%)**
Some of the time	1 (6%)	12 (71%)	4 (24%)	0 (0%)	**17 (100%)**
A little of the time	5 (46%)	3 (27%)	3 (27%)	0 (0%)	**11 (100%)**
None of the time	3 (75%)	1 (25%)	0 (0%)	0 (0%)	**4 (100%)**
TOTAL	**14 (22%)**	**36 (57%)**	**11 (18%)**	**2 (3%)**	**63 (100%)**

Table A27.20: Ratings of item usefulness to answer according to MH03 response: HIV sample

	Very useful	Fairly useful	Not that useful	Not at all useful	TOTAL
All of the time	2 (50%)	2 (50%)	0 (0%)	0 (0%)	**4 (100%)**
Most of the time	3 (19%)	9 (56%)	3 (19%)	1 (6%)	**16 (100%)**
Some of the time	6 (30%)	10 (50%)	4 (20%)	0 (0%)	**20 (100%)**
A little of the time	15 (68%)	2 (9%)	4 (18%)	1 (5%)	**22 (100%)**
None of the time	7 (78%)	0 (0%)	1 (11%)	1 (11%)	**9 (100%)**
TOTAL	**33 (47%)**	**23 (32%)**	**12 (17%)**	**3 (4%)**	**71 (100%)**

VT02

In relation to an item asking whether respondents considered that had had a lot of energy in the previous four weeks (VT02), there was once again a range of ratings of usefulness across response options. In both samples, there was the suggestion of a J-shaped relationship, whereby those who only had a lot of energy 'A little of the time' were more likely to rate the item useful (except for the few respondents who answered 'All of the time') (university sample: Table A27:21; HIV sample: Table A27.22).

In the university sample, the relationship between the original usefulness and response variables just failed to reach significance at the five percent level (but did so at six percent). When the analysis was repeated with the response options 'Not that useful' and 'Not at all useful' merged, the relationship attained significance ($\chi^2(8)=18.20$, $p<0.05$; Cramer's $V=0.38$).

In the HIV sample, the relationship between the original coding of the variables just failed to reach significance at five percent (but did so at six percent). However, an analysis remerging the responses of those who rated the item as not useful attained significance ($\chi^2(8)=12.71$, $p<0.05$; Cramer's $V=0.31$).

Table A27.21: Ratings of item usefulness to answer according to VT02 response: University sample

	Very useful	Fairly useful	Not that useful	Not at all useful	TOTAL
All of the time	2 (100%)	0 (0%)	0 (0%)	0 (0%)	**2 (100%)**
Most of the time	5 (19%)	18 (69%)	2 (8%)	1 (4%)	**26 (100%)**
Some of the time	6 (26%)	9 (39%)	8 (35%)	0 (0%)	**23 (100%)**
A little of the time	6 (50%)	5 (42%)	1 (8%)	0 (0%)	**12 (100%)**
None of the time	0 (0%)	0 (0%)	1 (100%)	0 (0%)	**1 (100%)**
TOTAL	**19 (30%)**	**32 (50%)**	**12 (19%)**	**1 (2%)**	**64 (100%)**

Table A27.22: Ratings of item usefulness to answer according to VT02 response: HIV sample

	Very useful	Fairly useful	Not that useful	Not at all useful	TOTAL
All of the time	1 (100%)	0 (0%)	0 (0%)	0 (0%)	**1 (100%)**
Most of the time	5 (26%)	10 (53%)	4 (21%)	0 (0%)	**19 (100%)**
Some of the time	8 (36%)	11 (50%)	3 (14%)	0 (0%)	**22 (100%)**
A little of the time	13 (72%)	5 (28%)	0 (0%)	0 (0%)	**18 (100%)**
None of the time	8 (67%)	2 (17%)	1 (8%)	1 (8%)	**12 (100%)**
TOTAL	**35 (49%)**	**28 (39%)**	**8 (11%)**	**1 (1%)**	**72 (100%)**

MH04

In both samples, there was some evidence of a J-shaped relationship between usefulness and response, whereby those respondents who reported feeling most downhearted and depressed in the previous four weeks were more likely to rate the item useful than other respondents, with, conversely, respondents who reported these feelings less often more likely to rate the item 'not that useful' or 'not at all useful' (university sample: Table A27.23; HIV sample A27.24).

In the university sample, there was a significant relationship between original response and usefulness rating ($\chi^2(12)=20.45$, $p<0.05$; Cramer's $V=0.33$), repeated with the merged variables.

In the HIV sample, there was similarly a significant association between original variables $\chi^2(12)=29.30$, $p<0.01$; Cramer's $V=0.37$) as well as recoded variables.

Table A27.23: Ratings of item usefulness to answer according to MH04 response: University sample

	Very useful	Fairly useful	Not that useful	Not at all useful	TOTAL
All of the time	0 (0%)	1 (100%)	0 (0%)	0 (0%)	**1 (100%)**
Most of the time	2 (33%)	4 (67%)	0 (0%)	0 (0%)	**6 (100%)**
Some of the time	6 (46%)	6 (46%)	1 (8%)	0 (0%)	**13 (100%)**
A little of the time	1 (3%)	17 (57%)	12 (40%)	0 (0%)	**30 (100%)**
None of the time	4 (29%)	6 (43%)	3 (21%)	1 (7%)	**14 (100%)**
TOTAL	**23 (36%)**	**34 (53%)**	**6 (9%)**	**1 (2%)**	**64 (100%)**

Table A27.24: Ratings of item usefulness to answer according to MH04 response: HIV sample

	Very useful	Fairly useful	Not that useful	Not at all useful	TOTAL
All of the time	3 (50%)	2 (33%)	0 (0%)	1 (17%)	**6 (100%)**
Most of the time	11 (92%)	1 (8%)	0 (0%)	0 (0%)	**12 (100%)**
Some of the time	17 (57%)	8 (27%)	5 (17%)	0 (0%)	**30 (100%)**
A little of the time	6 (32%)	12 (63%)	0 (0%)	1 (5%)	**19 (100%)**
None of the time	1 (20%)	2 (40%)	2 (40%)	0 (0%)	**5 (100%)**
TOTAL	**38 (53%)**	**25 (35%)**	**7 (10%)**	**2 (3%)**	**72 (100%)**

SF02

Respondent ratings of usefulness varied in relation to whether their health limitations affected social activities in the previous four weeks, with a greater proportion of those experiencing limitations rating the item 'Very useful' compared to the other responses, suggesting a J-shaped relationship in both samples (university sample: Table A27.25; HIV sample: Table A27.26).

In the university sample, the initial relationship between usefulness and response was non-significant. However, an analysis carried out after the categories 'Not that useful' and 'Not at all useful' were merged attained significance ($\chi^2(8)=16.63$, $p<0.05$; Cramer's $V=0.36$).

In the HIV sample, the association between the original variables was significant ($\chi^2(12)=23.58$, $p<0.05$; Cramer's $V=0.33$).

Table A27.25: Ratings of item usefulness to answer according to SF02 response: University sample

	Very useful	Fairly useful	Not that useful	Not at all useful	TOTAL
All of the time	1 (50%)	0 (0%)	1 (50%)	0 (0%)	**2 (100%)**
Most of the time	2 (29%)	5 (71%)	0 (0%)	0 (0%)	**7 (100%)**
Some of the time	4 (40%)	5 (50%)	1 (10%)	0 (0%)	**10 (100%)**
A little of the time	0 (0%)	7 (50%)	6 (43%)	1 (7%)	**14 (100%)**
None of the time	7 (23%)	19 (63%)	3 (10%)	1 (3%)	**30 (100%)**
TOTAL	**14 (22%)**	**36 (57%)**	**11 (18%)**	**2 (3%)**	**63 (100%)**

Table A27.26: Ratings of item usefulness to answer according to SF02 response: HIV sample

	Very useful	Fairly useful	Not that useful	Not at all useful	TOTAL
All of the time	4 (80%)	0 (0%)	0 (0%)	1 (20%)	**5 (100%)**
Most of the time	9 (60%)	5 (33%)	1 (7%)	0 (0%)	**15 (100%)**
Some of the time	9 (36%)	13 (52%)	3 (12%)	0 (0%)	**25 (100%)**
A little of the time	5 (39%)	6 (46%)	2 (15%)	0 (0%)	**13 (100%)**
None of the time	4 (29%)	6 (43%)	4 (29%)	0 (0%)	**14 (100%)**
TOTAL	**31 (43%)**	**30 (42%)**	**10 (14%)**	**1 (1%)**	**72 (100%)**