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Acceptance and Commitment Training in The Workplace

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Abstract

Over the past two decades, the workplace has become an important context for delivering ACT interventions. In this chapter, we summarise the evidence that has accumulated around worksite ACT-based training programmes. Although these programmes have been shown to be effective in improving employees' general mental health, their effects on job burnout and overall psychological flexibility have been less consistent. We respond to calls to provide clearer conceptualization of ACT's hypothesised influence on people's work-related well-being, by considering the functions of psychological flexibility from the perspective of resource-based theories of job characteristics, burnout, and work engagement. The chapter highlights opportunities for further workplace research and practice, including: exploring the predictive influence of psychological flexibility on the effects of job demands and job resources; the use of multidimensional measures of flexibility to investigate specific subprocesses of change in worksite ACT interventions; and the potential of cultivating flexibility as part of other organisational initiatives.

1. Introduction

Twenty years have passed since Frank Bond and David Bunce published the first controlled trial of an ACT-based intervention that was delivered to employees in the workplace (Bond & Bunce, 2000). They adapted one of ACT's earlier treatment protocols into a brief (3-session) psychological skills training program (Bond & Hayes, 2002). When compared to a work stress management intervention and a waitlist control group, the ACT program was found to be effective in reducing common symptoms of psychological distress over a 6-month evaluation period. Moreover, beneficial effects of the ACT intervention on mental health were found to be mediated via an increase in employees' willingness to experience undesirable thoughts and feelings (indicated by changes on an initial version of the Acceptance and Action Questionnaire [AAQ]).

During the ensuing period, there has been a slow yet steady stream of research evaluating ACT interventions in workplace settings; and a concomitant strand of correlational research investigating the predictive influence of psychological flexibility on various markers of employees' mental health and work-related functioning (e.g., Bond & Bunce, 2003; Bond et al., 2013; Kopperud et al., 2021; Vilardaga et al., 2011). Another thriving area of research examines ACT's utility within occupational rehabilitation programmes (e.g., Aasdahl et al., 2018; Finnes et al., 2017). Emerging organisational applications include ACT for coaching (e.g., Hill & Oliver, 2018), team-level, leader, and organisational flexibility (e.g., Bond et al., 2016; Gascoyne, 2019), and applying prosocial principles to work groups (Atkins et al., 2019). These varied and ongoing activities demonstrate that the workplace has become an important arena for conveying CBS and ACT principles to general (working) populations.

In the current chapter, we discuss ACT-based skills training programmes that are (primarily) designed to improve employees' psychological health. Such programmes have

typically adopted a delivery format similar to that used by Bond and Bunce (2000), offering ACT-based training over a small number of sessions to groups of employees (Prudenzi et al., 2021a; Rudaz et al., 2017). ACT principles and skills have also been successfully imparted to employees using online platforms, smartphone apps, and bibliotherapy formats (e.g., Hofer et al., 2018; Jeffcoat & Hayes, 2012; Ly et al., 2014).

We have three main reasons for focusing on the reported effects of these employee-focused ACT programmes. First, among the various applications of ACT in the workplace, these programmes have attracted most research attention, with a new group of controlled trials appearing in the past few years (e.g., Habibian et al., 2018; Hofer et al., 2018; Kinnunen et al., 2020; Puolakanaho et al., 2020; Waters et al., 2018). Second, despite supportive outcome findings, there remains uncertainty surrounding the efficacy of these programmes for (a) reducing job burnout and (b) improving employees' overall psychological flexibility (Gloster et al., 2020; Prudenzi et al., 2021a; Reeve et al., 2018). Third, we sense that the field is on the cusp of a new generation of research, which can capitalise on the availability of multidimensional measures of psychological flexibility to investigate more specific subprocesses of change (e.g., Francis et al., 2016; Kashdan et al., 2020; Rogge & Daks, 2021; Rolffs et al., 2018). Accordingly, this seems an opportune moment to gather the evidence and practical knowledge that has accumulated around ACT-based training programmes delivered in workplace settings.

The chapter is structured as follows. In the next section, we summarise primary findings of recent reviews of the relevant intervention research literature, which have evaluated the effectiveness of worksite ACT programmes for reducing distress, alleviating burnout, enhancing job performance, and improving employees' psychological flexibility. In the third section, we respond to calls for greater conceptual clarity surrounding ACT's potential utility for reducing work-related stress and burnout (Reeve et al., 2018; Rudaz et al.,

2017). Specifically, we consider the advantages of viewing the workplace functions of psychological flexibility (and its subprocesses) through the lens of prominent *resource-based* theories of job characteristics, burnout, and work engagement. In the final sections, we provide an overview of the practical features of these programmes, including variations in training delivery format and program content, before offering a set of suggestions to help guide the next generation of research on ACT-based training for working populations.

2. Summary of Evidence Surrounding ACT-Based Training in Workplace Settings

Prior to presenting a theoretical rationale for promoting psychological flexibility in the workplace, we offer a summary of outcomes and psychological flexibility subprocesses that have been targeted by ACT-based training for various occupational groups. For this purpose, we utilized the results reported in four reviews of the relevant workplace intervention research literature: Reeve et al.'s (2018) systematic review and meta-analysis of ACT-based training for direct care staff in mental health and intellectual disability settings; Rudaz et al.'s (2017) systematic review, which examined the effects of workplace ACT programmes for mental health professionals and trainees; Archer's (2018) broader narrative synthesis of research investigating ACT's efficacy in a range of occupational settings; and Prudenzi et al.'s (2021a) meta-analysis of ACT in group format for healthcare professionals. Taken together, the findings of these reviews provide good coverage of ACT-based training programmes that have been empirically evaluated in workplace settings over the past two decades. Based on the patterns of findings reported across these reviews, we generated five evidence statements.

2.1. Evidence statement 1: ACT-based training in the workplace reduces symptoms of psychological distress, particularly among employees with higher baseline distress

The extant body of outcome evidence provides strongest support for ACT's effectiveness in improving employees' general mental health (specifically reducing common symptoms of psychological stress and distress). This beneficial impact of ACT programmes is most pronounced and reliable among employees that begin the intervention with an elevated level of psychological distress (Archer, 2018; Reeve et al., 2018). Because many workplace studies do not exclude employees with lower distress, this latter finding has emerged from studies that analysed change among subgroups of participants with different levels of baseline distress (e.g., Brinkborg et al., 2011; Flaxman & Bond, 2010a; Reeve et al., 2018).

The validity of this first evidence statement is enhanced by the fact that numerous studies adopted the same outcome measure to assess change in employee distress: the *general health questionnaire* (GHQ). All studies reviewed by Reeve et al. (2018) included the GHQ (typically the GHQ-12) as one of the outcome measures, as did 9 of 14 studies reviewed by Archer (2018). This measure is useful for workplace settings--and congruent with ACT's transdiagnostic philosophy--because it captures various common manifestations of psychological ill-health, including anxiety-related difficulties, depressed mood, social withdrawal, reduced problem-solving effectiveness, and lack of self-confidence.

The importance of this first element of ACT's evidence base should not be underestimated. Across national and workforce surveys conducted in various industrialized countries, estimates suggest that around 1 in 6 employees may be experiencing a common mental health problem at any one time (Parsonage & Saini, 2017). Moreover, a large proportion of the financial burden of mental health problems is attributed to lost productivity among psychologically distressed or exhausted workers (Goetzel et al., 2018; Lerner et al., 2018; Parsonage & Saini, 2017). In response, there is pressure to increase the accessibility of evidence-based psychological interventions in the workplace, given that only a small percentage of distressed employees seek or gain access to individual psychotherapy (Goetzel

et al., 2018; Lerner et al., 2018). ACT has a number of characteristics that naturally support its utility as a worksite mental health promotion program, including its brief and skills-based approach, transdiagnostic philosophy, potential benefits beyond reducing stress symptoms (e.g., self-awareness, values-based living, flourishing), and suitability for delivery in group and self-help formats (Biglan et al., 2008; Flaxman et al., 2013).

2.2. Evidence statement 2: ACT-based training has inconsistent effects on job burnout

Within this same body of research are examples of studies that detected salutary effects of ACT programmes in reducing the burnout syndrome (i.e., exhaustion and depersonalization; e.g., Hayes et al., 2004; Kinnunen et al., 2020; Lloyd et al., 2013). However, other studies failed to find reductions in burnout following an ACT program (e.g., Bethay et al., 2013; Clarke et al., 2015; Habibian et al., 2018). In their meta-analysis of ACT's influence on emotional exhaustion (the most commonly measured aspect of burnout), Reeve et al. (2018) found no pooled effect in favour of ACT compared to control conditions, neither at postintervention nor follow-up (with follow-up periods ranging from 6 weeks to 6 months among the reviewed studies). Reeve and colleagues concluded that this strand of research requires a clearer theoretical account of why ACT might be expected to reduce employee burnout.

From a methodological standpoint, it is noteworthy that nearly all studies testing ACT's effect on burnout have utilised the Maslach Burnout Inventory (MBI; Maslach et al., 1996). This is not surprising, as the MBI remains the most well-known and widely used measure of this construct. Nonetheless, the MBI's response format spans a broader timeframe when compared to other distress measures commonly included in these ACT studies (such as the perceived stress scale or GHQ-12), in that the timeframe for reporting burnout symptom frequency on the MBI ranges from a few times a year (or less) through to every day (Schonfeld et al., 2019). Given that controlled evaluations of ACT studies might span a few

months, it is worth considering the MBI's sensitivity for detecting change over modest time periods, especially if study samples include subgroups of employees who were experiencing infrequent burnout symptoms prior to the intervention (Reeve et al., 2018). Consistent with this observation, Prudenzi et al.'s (2021a) recent meta-analysis combined burnout measures with other measures of work-related distress, and found a pooled effect in favour of ACT over control conditions only at follow-up and not at post-intervention (suggesting ACT's influence on people's work-related functioning may take some time to emerge).

2.3. Evidence statement 3: ACT-based training elicits improvements on self-rated indicators of job performance

Because researchers (and reviewers) have focused primarily on examining ACT's impact on employees' stress, distress, and burnout, there has been less attention paid to change on measures of work-related performance that have been included in a subset of worksite intervention studies (Archer, 2018; Prudenzi et al., 2021a). Synthesising ACT's influence on job performance is challenging, as a range of different measures have been used reflecting the context of each study. Yet, when adopting a broad classification of the performance-oriented measures, the evidence indicates that ACT-based training often enhances people's (self-rated) effectiveness at work.

In his review, Archer (2018) noted that ACT significantly and positively impacted performance in all intervention studies that assessed such outcomes. Markers of work-related effectiveness have most often been included in ACT studies involving psychologists, therapists, and direct care staff. Among these studies, ACT has been shown to improve counselling self-efficacy (Pakenham, 2015), perceived quality of the therapeutic relationship (Clarke et al., 2015; Stafford-Brown & Pakenham, 2012), attitudes toward clients (Hayes et al., 2004), and utilisation of evidence-based treatments as part of therapeutic practice (Varra et al., 2008). Outside of counselling and psychotherapeutic settings, ACT has been found to

improve teaching-related efficacy among special education staff (Biglan et al., 2013) and innovation potential among employees working in the media (Bond & Bunce, 2000).

Attendance at ACT programmes has also been linked to improved scores on the MBI's *professional accomplishment* dimension. This subscale captures people's sense of competence and achievement at work, particularly in terms of having a positive influence on others and supporting the recipients of one's service. While this group of findings arguably holds relevance for ACT's impact on burnout, the MBI's professional accomplishment dimension has been psychometrically and conceptually distinguished from the other MBI dimensions, which are usually considered the core features of burnout syndrome (i.e., exhaustion and depersonalization; de Beer & Bianchi, 2019). In their review of ACT's effect on burnout among mental health professionals, Rudaz et al. (2017) found significant improvements in 3 out of 4 studies that included this performance-oriented subscale, two of which demonstrated significantly greater improvement in professional accomplishment among ACT participants relative to control conditions.

2.4. Evidence statement 4: ACT-based training has mixed effects on overall psychological flexibility

When it comes to assessing psychological flexibility, most evaluations of worksite ACT programmes have utilised the AAQ or AAQ-II (Archer, 2018; Prudenzi et al., 2021a; Reeve et al., 2018). The literature reviews display lack of agreement on the robustness of ACT's effects on employees' overall or global flexibility. Rudaz et al. (2017) and Archer (2018) concluded that employees' psychological flexibility tends to improve following ACT-based training, whereas two meta-analyses found no significant pooled effect in favour of ACT over control conditions (Prudenzi et al., 2021a; Reeve et al., 2018). Although this statement might raise questions about the efficacy of ACT in the workplace, it is important to note that uncertain effects of worksite ACT programmes on employees' flexibility have been attributed

to the traditional overreliance on the AAQ and AAQ-II (Reeve et al., 2018), or were derived
from subsuming a range of different ACT process measures within a single psychological
flexibility outcome cluster (Gloster et al., 2020; Prudenzi et al., 2021a). The picture looks
considerably more encouraging when we venture beyond overall flexibility, to consider
studies that examined the influence of worksite ACT programmes on more specific markers
of the hexaflex model's subprocesses.

**2.5. Evidence statement 5: ACT-based training elicits improvements on mindfulness
and acceptance subprocesses of psychological flexibility**

Various scales have been utilised to explore change on flexibility's subprocesses in response
to worksite ACT programmes, including ACT-specific measures (e.g., values or fusion
questionnaires) and prominent mindfulness inventories, such as the mindfulness attention and
awareness scale (MAAS; Brown & Ryan, 2003) and the five facet mindfulness questionnaire
(FFMQ; Baer et al., 2006). Studies administering such measures have revealed particularly
strong support for cognitive defusion as an influential process activated by a range of
worksite ACT programmes. Defusion has been assessed via scales assessing believability in
unhelpful (e.g., depressogenic or burnout-related) cognitions, the FFMQ's nonreactivity
subscale, and the cognitive fusion questionnaire (CFQ; Gillanders et al., 2014). A group of
worksite ACT studies observed tangible improvements in defusion, even when there were no
concurrent reductions in the frequency with which employees were reporting negative or
unhelpful psychological content (e.g., Bethay et al., 2013; Varra et al., 2008; Waters et al.,
2018). Moreover, in some cases, ACT's beneficial effects on employees' mental health and/
or work-related functioning were uniquely mediated via defusion, while controlling for the
influence of other pertinent variables, such as frequency of negative cognitions, other
mindfulness skills, or global psychological (in)flexibility (e.g., Varra et al., 2008; Waters et
al., 2018).

Second, there is reliable evidence supporting the premise that ACT programmes increase employees' willingness to experience difficult thoughts and emotions. This assertion is based on demonstrations of favourable patterns of change on specific markers of experiential acceptance (e.g., the FFMQ's accept without judgment subscale, and the white bear thought suppression inventory). Interestingly, the findings suggest that there can be a "delayed" effect of worksite ACT programmes on employees' acceptance skills, with improvements on this subprocess sometimes observed only at follow-up timepoints (rather than immediately after an ACT program; Hofer et al., 2018; McConachie et al., 2014). In addition, some results suggest the cultivation of acceptance becomes particularly influential in explaining longer-term effects of worksite programmes on employees' psychological health (Frögéli, et al., 2019; Kinnunen et al., 2020).

Third, taking a broad view across the mindfulness measures, there is support for the notion that worksite ACT programmes increase employees' present moment awareness. The findings reveal variation across different indicators of this subprocess. For instance, in some studies, workplace ACT programmes have exhibited weak effects on employees' inattentiveness and distraction, as captured by the FFMQ's acting with awareness subscale. Nonetheless, the same (and other) studies found significant improvements among ACT participants on a seperate marker of present moment awareness: the FFMQ's observing facet (Biglan et al., 2013; Pakenham, 2015; Waters et al., 2018). Changes on this mindfulness facet indicate that ACT increases employees' bodily awareness, awareness of thoughts and feelings, and capacity for contacting the present moment via the 5-senses. It is encouraging that relatively brief ACT programmes have been shown to cultivate this type of mindful awareness alongside increased acceptance/ defusion, given this particular combination of skills is considered important for improving emotional health (Lindsay & Creswell, 2017; Waters et al., 2018). These findings deserve mention, as observing items have recently been

integrated into an expanded multidimensional measure of psychological flexibility's subprocesses (Rogge & Daks, 2021).

Finally, there is surprisingly little support for the contention that ACT programmes improve employees' mental health (in part) by improving employees' valuing skills. The currently weak evidence is likely due to the small number of published worksite intervention studies that included values questionnaires (e.g., Biglan et al., 2013; Stafford-Brown & Pakenham, 2012). We consider this a promising avenue for future evaluations of ACT programmes, given the increased availability of measures that capture values-based behavioural activation subprocesses (e.g., Francis et al., 2016; Rogge & Daks, 2021; Rolffs et al., 2018; Smout et al., 2014).

2.6. Section summary

The evidence that has accumulated over the past two decades supports the use of ACT-based training in the workplace for reducing symptoms of psychological stress and distress in various occupational groups. A smaller, yet promising, strand of evidence suggests the same programmes elicit improvements to employees' self-reported effectiveness at work. Despite some positive findings, there is less conclusive evidence that these programmes reliably reduce job burnout or increase employees' overall psychological flexibility.

When discussing the less consistent findings, the cited reviews highlighted a need to go beyond overall psychological flexibility to examine the impact of worksite ACT programmes on flexibility's subprocesses. As summarised above (see evidence statement 5), there exists a convincing body of research demonstrating the efficacy of ACT-based training for targeting acceptance and mindfulness skills (specifically acceptance, defusion, and mindful awareness). The reviews also identified a need for clearer conceptualisation of ACT's influence on people's work-related functioning (such as job burnout), which accounts for the well-established influence of work environment variables (e.g., workload, supervisory

support, performance feedback, and job control; Reeve et al., 2018; Rudaz et al., 2017). In the next section, we address this issue by considering the hypothesised workplace functions of psychological flexibility through the lens of resource-based theories of employee well-being.

3. Viewing Psychological Flexibility From the Perspective of Resource-Based Theories of Work Stress, Job Burnout, and Work Engagement

ACT interventions are often delivered in group format in workplace settings to help improve employees' general psychological health. Thus, ACT's workplace applications share similarities with ACT in groups for common mental health conditions, such as moderate levels of anxiety and/ or depression (e.g., Bohlmeijer et al., 2011). Accordingly, the underlying theoretical rationale for therapeutically oriented worksite programmes is similar in many respects to ACT delivered in other community and health promotion settings.

To understand why ACT might be useful beyond improving *general* mental health in the workplace, it is informative to consider theoretical models that are designed to explain why certain job and personal characteristics are associated with work stress, motivation, burnout, and performance-related outcomes. We use this section to view psychological flexibility from the standpoint of three interrelated theoretical approaches: the goal-related context-sensitivity hypothesis (e.g., Bond et al., 2006), conservation of resources (COR) theory of job burnout (e.g., Shirom, 2003), and job demands-resources (JD-R) theory (e.g., Bakker & Demerouti, 2017). These theories exhibit a useful degree of overlap, as they all offer resource-based conceptualisations of employees' (work-related) psychological health and behavioural effectiveness.

3.1. The goal-related context-sensitivity hypothesis (Bond et al., 2006)

Bond and colleagues developed the concept of *goal-related context sensitivity* to integrate features of psychological flexibility that are theorised to influence employees' mental health, awareness and utilisation of job resources, and (performance-related) behaviour at work. This

model is based on the following assumptions. First, due to their greater willingness to experience discomforting inner experiences, psychologically flexible employees are expected to be less inclined to expend their finite attentional and energy resources on controlling, overanalysing, or avoiding negative thoughts (e.g., self-doubt), feelings (e.g., anxiety), and sensations (e.g., trembling). As a result, these individuals should have greater cognitive and energy resources available that can instead be oriented toward recognising opportunities for goal-related and values-congruent behaviour unfolding at work. Moreover, because they are less likely to avoid goal-relevant or personally valued actions, situations, or conversations that elicit undesirable psychological content, psychologically flexible employees are theorised to have a wider range of options for responding effectively to such opportunities (Bond et al., 2006, 2013). In this way, flexibility is hypothesized to be associated with an improved capacity for noticing and harnessing aspects of the work environment that can protect (and potentially improve) well-being, work engagement, and job performance (Bond et al., 2006).

A small group of studies has supported these propositions, particularly by demonstrating functional links between psychological flexibility and *job control*, which is considered an important job resource in most work design models (e.g., Bakker & Demerouti, 2017; Häusser et al., 2010). Job control refers to how much "say" employees have over when and how they complete work tasks, their level of autonomy or freedom at work, and opportunities to participate in decision-making. Job control can manifest in relatively simple issues, such as when one can take breaks during the working day, through to being consulted on, and closely involved in, the design and implementation of organisational changes that affect one's job.

Two longitudinal studies of financial customer service workers in the UK found that psychological flexibility (assessed by the AAQ) interacted with job control to predict mental

health and objectively measured performance (computer input errors) over a 1-year assessment period (Bond & Bunce, 2003), as well as the ability to learn a new computer software program (Bond & Flaxman, 2006). Specifically, the positive influences of job control on mental health, performance, and learning outcomes were significantly enhanced among employees with higher flexibility. Another study examined the role of psychological flexibility in employees' experiences of a work reorganisation intervention that was designed to increase job control (Bond et al., 2008). In this quasi-experimental study, a participatory work redesign intervention led to general increases in job control, improved mental health, and reduced absence rates among customer service employees of a financial organisation. These intervention effects were significantly moderated by employees' psychological flexibility. Compared to their less flexible counterparts, workers with greater flexibility perceived higher levels of job control as a result of the work reorganisation process; and, they were apparently also better able to harness the increased opportunities for control to improve their work-related functioning and general mental health.

These empirical demonstrations of *synergistic* effects between flexibility and job control are important to the wider field of work and organisational psychology, where there have been calls to increase knowledge about the individual characteristics and self-regulation strategies that help to maximise the benefits of job resources (Van Veldhoven et al., 2020). From a practical viewpoint, these findings suggest that work redesign intervention outcomes could be enhanced by also implementing worksite programmes that increase employees' psychological flexibility.

3.2. Conservation of resources (COR) theory (Hobfoll, 1989)

COR theory underpins research on a range of work and organisational psychology topics, especially burnout and employee recovery from work-related effort during nonwork time (e.g., Gorgievski & Hobfoll, 2008; Westman et al., 2004). This widely applicable motivation

and stress theory is based on the premise that humans possess a natural instinct to protect, retain, and build valued resources. Resources include objects (e.g., a salary, a home), life conditions (e.g., a satisfying job, supportive relationships), personal characteristics (e.g., personality traits, adaptive coping skills), and energies (e.g., emotional, cognitive, and physical energy). Stress is expected to arise under three conditions: when a person perceives a threat to valued resources (i.e., anticipation of resource loss), when resources are actually lost, or when investment of resources fails to "pay off", in terms of preventing further resource loss or facilitating resource gain (Hobfoll, 1989). The theory asserts that resource loss is disproportionally more salient than resource gain, and highlights the risk of resource "loss spirals", which can gather speed and strength in the face of chronic stressors if resources continue to be depleted.

The COR conceptualisation of job burnout is based on these theoretical principles, and focuses primarily on employees' *energetic* resources (Shirom, 2003). To elaborate, employees are likely to experience gradual erosion of their physical, cognitive, motivational, and emotional energies as they expend effort meeting the demands of work and coping with job stressors. Periodic recovery opportunities--such as evenings and weekends--can help interrupt the cycle of work-related energy depletion, replenish depleted resources, and enable employees to invest energy in valued nonwork resources, such as leisure activities and meaningful relationships with family or friends (Bennett et al., 2018; Westman et al., 2004). However, some experiences have the potential to impair recovery from work-related effort, including excessive overtime working, and /or entanglement in worry and rumination about work issues during nonwork time (Geurts & Sonnentag, 2006).

To provide an example of the theorised cyclical energy resource loss process, imagine an office-based employee (we'll call her "Maria"), who is already feeling very busy at work. With little explanation, Maria is rather bluntly informed by a senior manager that she must

now take on additional job demands. To ensure she can successfully meet the newly imposed demands, while maintaining her usual level of performance, Maria begins working during evenings and on some weekends. As a result, she is less able to replenish the energetic resources that have been depleted during the working week. Even when not working, Maria frequently drifts off into worrying whether she'll end up falling short of expectations; the worry is affecting her sleep quality. Because of reduced recovery time, Maria begins each new working week in a suboptimal state, which means she must invest compensatory effort just to perform her usual tasks, further increasing her sense of fatigue and perception of work overload. To make matters worse, the reluctant investment of time and energy in evening and weekend working has created tension with her family, resulting in additional worry about undermining a valued nonwork resource. If such conditions are prolonged, an energy resource loss cycle may attract momentum, so that the ability to recover from work-related effort becomes progressively more elusive. Sustained over time, such experiences might culminate in burnout, which COR theory conceptualizes as an affective "end-state" characterised by over-depletion of cognitive, physical, and emotional energies (Shirom, 2003).

The same COR principles underpin the inverted process of resource *gain spirals*. People who possess greater resources are generally considered more capable of orchestrating further resource gain, and less vulnerable to becoming caught up in problematic cycles of resource loss. Although resource gains are considered less salient than (actual or anticipated) losses, they can nonetheless unfold in a positive cyclical pattern with energy enhancement (Gorgievski & Hobfoll, 2008).

To illustrate, let's imagine a different scenario for Maria. In scenario two, Maria's senior manager invites her for a one-to-one lunch meeting, where the manager explains the reasons behind a major change that is about to impact the whole department (to do with the

implementation of a new computer system), resulting in an immediate need to increase everyone's responsibilities and change their ways of working. The manager expects there to be an increase in workload, at least over the next three months, while the new system is implemented. Maria is asked if she has any initial ideas for how this might best be managed in relation to her own work. The manager lists a number of specific project tasks that need to be completed, and asks Maria whether she has a preference for working on any of those. Maria requests to be involved in gathering feedback on people's day-to-day experiences with the new IT system, and to take the lead on collating this feedback into a usability report. The manager seems pleased with Maria's choice, and explains how this part of the project provides a great fit with Maria's talent for putting people at ease and the level of trust she has across the department. In response to this unexpected feedback, Maria feels energised and recognised by the manager. Maria finds herself viewing the imminent technological changes (and increased workload) with some trepidation, and also with a fresh sense of personal interest and determination to be successful in this new aspect of her job role. When she returns home that evening, Maria tells her partner about the meeting, revealing her sense of trepidation, excitement, and opportunity; Maria's partner tells her to "go for it", and they begin discussing how they might alternate their family responsibilities to enable Maria to put in some overtime during this period.

In the workplace, this type of resource-based energetic gain spiral is theorised to facilitate higher levels of *work engagement*, which is an affective-motivational state characterised by vigor, absorption, and dedication in one's work. In sum, COR theory recognises two processes, with cycles of energy resource investment and depletion in the face of chronic job stress (without sufficient gain or replenishment) leading to burnout, and positive cycles of energetic resource gain fostering work engagement (Gorgievski & Hobfoll, 2008).

COR theory has yet to be widely utilised in workplace studies of ACT or psychological flexibility (see Kopperud et al., 2021 for a recent exception). Nonetheless, we outline its main principles here for the following reasons. First, this theory has become a prominent model of job burnout, so is an obvious candidate for addressing the conceptual uncertainty surrounding ACT's suitability for reducing burnout syndrome (Reeve et al., 2018). Second, COR scholars have recognised the importance of individual characteristics and coping strategies that are conceptually related to psychological flexibility, including cognitive and emotional flexibility and tolerance for failure (Gorgievski & Hobfoll, 2008). Finally, as we discuss next, COR principles have informed the influential *job demands-resources* (JD-R) theory, which has begun to be adopted by researchers investigating the influence of psychological flexibility on job burnout and work engagement.

3.3. Job demands-resources (JD-R) theory (Bakker & Demerouti, 2017)

JD-R theory integrates COR principles to help explain how work design characteristics--categorised broadly as job demands and job resources--lead to employee outcomes such as burnout, engagement, and job performance. Job demands include (for example) time pressure, workload, role conflict, and emotionally demanding interactions with clients or customers. Examples of job resources can be seen in Maria's second scenario, and include autonomy in one's work (i.e., job control), constructive performance feedback, social support, opportunities for growth and professional/ personal development, and a high-quality relationship with one's supervisor (Bakker & Demerouti, 2017).

The theory is organised around two parallel processes that elicit different outcomes: 1) a *health-impairment* process linking high job demands to burnout, and 2) a *motivational* process linking availability of job resources to increased work engagement. One of the theory's propositions is that job demands are most strongly correlated with burnout, while job resources are most strongly related to engagement; and, that the availability of job resources

can help buffer (i.e., moderate) the relationship between high job demands and burnout (Bakker & Demerouti, 2017). For example, note that in both of Maria's scenarios, the demands and pressures will remain high; however, in the second scenario, the increased demands would (in theory) be less likely to raise the risk of burnout, give the protective influence of key job resources (such as participation in decision-making, and a supportive relationship with the manager).

Employees are not expected to be passive recipients of the job demands and resources that happen to be imposed upon them by management, but ideally have the potential to engage in *job crafting* behaviours. For instance, an employee might ask for additional feedback, request clarification on strategic priorities to reduce role ambiguity, or proactively seek out the types of projects and activities that have potential to increase personal growth, learning, and meaning derived from work (Bakker & Demerouti, 2017).

It is also important to note that job demands are not considered universally problematic and job resources are not universally beneficial. A distinction is made between *hindrance* job demands, which represent constraints on an employee's ability to achieve valued work goals (e.g., role conflict or excessive work overload); and *challenge* job demands, which have energy costs but also the potential to foster personal growth and skill development (e.g., time pressure, increased responsibility). Similarly, the benefits of job resources are expected to be contingent upon contextual factors (e.g., whether the available resources are useful for managing the specific job demands) and employees' personal characteristics (Van Veldhoven et al., 2020).

Most relevant to our current purpose, the JD-R theoretical framework accommodates the influence of individual characteristics (or *personal resources*) on the health-impairment and motivational pathways. Personal resources can include various traits, states, and coping repertoires that affect how employees appraise work events, their responses when

encountering stressors, and propensity for progressing toward goals in the face of challenge and adversity (van den Heuvel et al., 2010).

An emerging body of research has investigated the role of psychological flexibility as a personal resource within this theoretical framework. Biron and van Veldhoven (2012) argued that psychological flexibility meets the functional conditions for personal resources as posited by JD-R theory: 1) aids in achieving work goals; 2) reduces the physiological and psychological costs of high job demands; and 3) stimulates personal growth, learning, and development. Biron and van Veldhoven employed a daily diary method to investigate whether psychologically flexibility (assessed with the AAQ) influenced service sector workers' strategies for managing the emotional labour demands of their work. They found that psychological flexibility significantly reduced the detrimental impact of day-level work demands on day-level emotional exhaustion, lending support to the JD-R proposition on the moderating (buffering) role of personal resources in the health-impairment process (also see Onwezen et al., 2014).

Given concerns surrounding the AAQ and AAQ-II as measures of overall flexibility (e.g., Wolgast, 2014), it is worth noting that similar patterns of findings have emerged when other flexibility scales have been adopted (e.g., Boatemaa et al., 2019; Kopperud et al., 2021; Noaves et al., 2018; Prudenzi et al., 2021b; Ruiz & Odriozola-Gonzalez, 2017; Vilardaga et al., 2011). For example, Noaves et al. (2018) utilised JD-R theory to investigate the functions of work-related psychological flexibility (using the work-related acceptance and action questionnaire; WAAQ; Bond et al., 2013) among a large sample of employees ($N = 4867$) in Brazil. Consistent with JD-R assumptions, psychological flexibility significantly attenuated the detrimental influence of work overload on job satisfaction and negative affect. Also, consistent with the hypothesised role of personal resources in the motivational pathway, they

found that psychological flexibility strengthened the functional relationship between job autonomy and work-related positive affect.

3.4. Section summary

There is useful alignment between resource-based theories of workplace well-being and ACT's model of psychological flexibility. In simple terms, integrating these theories allows us to account for employees' responses to their internal and external contexts (and the interrelations between them). Internal context refers to people's private experiences (e.g., one's thoughts and emotions that arise in response to the demands of work), whereas external context here refers particularly to psychosocial features of the working environment (e.g., workload, job control, and supervisory support).

As we have outlined in this section, there is a common trend in both the CBS and occupational health literatures toward conceptualising synergistic influences between people's responses to these internal and external contexts. In the CBS field, such synergy is evident in Frank Bond's model of *organisational* flexibility, which delineates various ways that the functions of psychologically flexible subprocesses might manifest (and be cultivated) at an organisational level (see Bond et al., 2016). Similarly, in the occupational health literature, JD-R theory has recently been expanded to clarify how high job strain can (over time) lead to burnout by (a) triggering the use of maladaptive self-regulation strategies (such as avoidance and coping inflexibility), and (b) impairing employees' propensity to use more adaptive self-regulation strategies (such as recovery and job crafting; see Bakker & de Vries, 2021). These multilevel theoretical models create opportunities for research into the roles of psychological flexibility and its subprocesses for reducing the harmful impacts of job stressors, and for enhancing the personal and organisational benefits gained through effective leadership and motivating job characteristics.

There is encouraging consistency across the cross-sectional, longitudinal, dyadic, and daily survey research we have cited in this section, despite being conducted across different countries, involving people from a range of occupations, and using different measures of job demands, job resources, and psychological flexibility. Taken together, the findings of this group of studies suggest that employees with higher flexibility possess a cognitive-behavioural repertoire that enables them to: find the daily demands of work less exhausting, remain effective even in the face of very high job demands, notice and take advantage of positive aspects of the work design environment, and gain a degree of protection from stress and burnout.

Beyond the theoretical utility, there is a powerful *practical* argument for testing the influence of psychological flexibility and its subprocess within work design frameworks, such as the JD-R model: unlike more stable individual characteristics that also meet the criteria for personal resources (e.g., adaptive personality traits), psychological flexibility is conceptualised as a malleable and skills-based capacity that can be targeted for improvement via ACT's well-established intervention technology. This could, in turn, elevate the profile of ACT in the workplace as a viable approach for strengthening employees' and leaders' ability to manage job demands and capitalise on job resources, and enhancing responses to work redesign, work-life balance, and job crafting interventions.

4. Content and Format of ACT-Based Training Programmes

There is considerable variability in the way that ACT has been adapted for delivery in workplace settings. This is evident in terms of (a) the wide range of program durations and delivery formats, and (b) the nature and sequencing of the specific strategies deployed (e.g., whether the training involves minimal or extensive practice in formal mindfulness meditation). In this section, we provide an overview of these practical features, drawing from the worksite ACT interventions that have been subject to empirical evaluation.

 4.1. Delivery format

Among the interventions delivered in-person to groups of employees, ACT-based training has

been administered over 3 x 3 hour sessions (Bond & Bunce, 2000; Flaxman & Bond, 2010a),

4 x 3 hour sessions (Brinkborg et al., 2011; Stafford-Brown & Pakenham, 2012), 6 x 2 hour

sessions (Frögéli, et al., 2016), 8 x 2 hour sessions (Kinnunen et al., 2020; Puolakanaho et al.,

2020), two full days of training (Clarke et al., 2015; Gaupp et al., 2020), and in a one-day

workshop format (Hayes et al., 2004; Varra et al., 2008; Waters et al., 2018), in some cases

supplemented by an additional half-day session a few weeks later (McConachie et al., 2014;

Noone & Hastings, 2009, 2010). Until recently, there have been few indications that duration

or number of training sessions has a strong influence on outcomes achieved (Archer, 2018).

However, Prudenzi et al.'s (2021a) recent meta-analysis suggests that longer ACT

programmes may produce larger improvements in employees' general mental health.

 Time commitment can be a salient issue for practitioners and organisations when

considering offering ACT programmes to staff during working hours. Where possible,

delivering ACT over a series of weekly sessions remains attractive from a skills progression

point of view; yet the multiple session format could represent a barrier in some organisations

(e.g., where staff cannot be easily or repeatedly released during work time for training

attendance). Hence, evidence that ACT has the potential to be delivered effectively in various

formats may increase its perceived suitability across different workplace settings.

 The amount of contact time required may be contingent upon the aims and ethos of

the program. If the aim is to improve general mental health among employees who are

experiencing (or at risk of) clinically relevant burnout or distress, we would usually suggest a

requirement of around 8 to 10 hours of contact time (e.g., 3 x 3 hour sessions or 4 x 2 hour

sessions) to ensure skills transfer. Ideally this would involve a sequence of sessions so that

skills can be practiced between sessions, and any challenges or concerns can be elicited,

validated, and discussed. However, if the aim is to deliver ACT to help more general employee groups learn how to clarify personal values and increase values-based action in their work and personal lives, then more focused and briefer ACT interventions may be suitable (Archer, 2018). Unfortunately, we do not yet have sufficient evidence to communicate to practitioners that one delivery format is superior to any other, or how much ACT training is likely to be enough to elicit durable improvements in employees' psychological well-being and/ or behavioural effectiveness.

Workplace implementation challenges are influencing interest in the potential of web-based, smartphone app, and other self-help methods for imparting ACT skills to working populations (Hofer et al., 2018; Kaipainen et al., 2017; Ly et al., 2014; Petersen et al., 2021). As Hofer et al. (2018) noted, employees' ability to access an ACT program has traditionally been "at the mercy of good fortune" (p. 190), according to whether they happen to work for an organisation that offers (in-person) ACT-based training to staff. Most of the published evidence has been obtained from staff working in healthcare, education, and government settings, presumably because these are the types of organisations with links to ACT practitioners and researchers. Hofer and colleagues reached a more diverse range of employees (at least in terms of occupation) by administering ACT via a self-help book and online platform.

Despite advantages in terms of convenience, reduced costs, and accessibility, it should be noted that technology-administered methods omit group processes that are harnessed by trainers when ACT is delivered "live" to groups of staff (e.g., to support the normalisation of undesirable psychological content, or to facilitate group role plays of ACT metaphors). Whether such variations in delivery format influence ACT's effects on employees' psychological flexibility or its subprocesses is a question ready to be addressed by the next generation of intervention research.

4.2. Workplace ACT program content

Despite sharing some common features, exercises, and metaphors, it is rare to find two workplace ACT programmes that have exactly the same content or sequence of techniques. Although this technical heterogeneity might pose a challenge for study replication, and when synthesising this strand of ACT research, it is congruent with the CBS movement's emphasis on processes over protocols. From a practical perspective, ACT's technical flexibility enables a useful degree of tailoring of workplace program content to the organisational context, intervention aims, or occupational group.

While perusing the reported content of workplace programmes, we identified five broad categories of ACT-based training protocol delivered to employees over the past 20 years. There is plenty of overlap between the protocols, given they are all explicitly based on ACT's principles and practices. Nonetheless, we organise them into five categories to (a) provide readers with an overview of groups of studies that examined effects of relatively similar program content (or were at least inspired by the same ACT protocols), and (b) communicate the different ways that ACT's messages and skills have been imparted to employees, depending on context and intervention aims.

A first group of studies evaluated in-person interventions that were based on, or explicitly adapted from, Frank Bond's original translation of ACT into a 3-session skills training program for the workplace (Bond, 2005; Bond & Bunce, 2000; Bond & Hayes, 2002). Ensuing collaborations between Bond, Flaxman, and Lloyd led to various modifications of this approach, extended its application to staff in other organisations, and produced further studies demonstrating ACT's effectiveness for improving employees' mental health (Flaxman & Bond, 2006, 2010a, 2010b, 2010c; Lloyd et al., 2013, 2017). In Sweden, Fredrik Livheim and his colleagues also adapted Bond's protocol into a widely applicable stress management intervention, which has been shown to reduce stress among

social workers (Brinkborg et al., 2011) and informed an effective ACT intervention for trainee nurses (Frögéli et al., 2016; 2019).

These earlier workplace protocols have continued to evolve, integrating innovations in ACT practice, and responding to feedback from participants and trainers. Bond's training approach informed a subsequent ACT protocol that is explicitly organised around the experiential links between mindfulness and valuing skills (Flaxman et al., 2013); and was more recently further modified into a 4-session training program organised around open, aware, and active skills, and which utilises an adaptation of the ACT matrix (Flaxman et al., 2019). Similarly, Livheim's protocol developed into a structured mindfulness and acceptance program, which has been widely disseminated to working populations using a train-the-trainer approach (Livheim et al., 2018).

A second set of studies tailored Bond's training approach specifically for staff working in intellectual disability settings. A number of these studies evaluated variants of a protocol described by Noone and Hastings (2009, 2010). In this occupational setting, the training has often been delivered in a full-day workshop followed by another (e.g., half-day) workshop a few weeks later, and cultivates ACT's processes in relation to specific challenges arising from supporting clients with intellectual disabilities (e.g., Bethay et al., 2013; McConachie et al., 2014).

A third set of studies evaluated ACT workshops and courses for clinical psychology trainees, therapists, and counsellors (e.g., Hayes et al., 2004; Luoma & Viladarga, 2013; Pakenham, 2015; Stafford-Brown & Pakenham, 2012; Varra et al., 2008). This group of studies evaluated various formats, ranging from one-day workshops to a 12-week ACT course embedded within a postgraduate curriculum. Despite this variation, these therapist-focused interventions tend to be characterised by their pursuit of concurrent personal and professional aims: (1) improving therapists' psychological flexibility and well-being (e.g.,

reducing burnout), *while at the same time* (2) developing therapists' ACT knowledge and capacity to use ACT with their clients, and/ or (3) enhancing therapeutic practice (e.g., by improving the therapeutic alliance or increasing willingness to adopt evidence-based practice). As a result, some of these programmes include a greater number of ACT practices and metaphors compared to other worksite applications, and in some cases provide opportunities for participants to practice ACT-based case conceptualisation and therapeutic stance (e.g., Pakenham, 2015). The underlying ethos of such programmes is that therapists need to develop psychologically flexibility in their own lives before applying ACT with clients (Luoma & Vilardaga, 2013).

A fourth group of studies evaluated the effects of embedding ACT's principles and practices within the structured (8-week) mindfulness training framework developed by Williams and Penman (2011; Kinnunen et al., 2020; Puolakanho et al., 2020). This type of program retains the main mindfulness meditation practices (i.e., body scan, mindfulness of breath, sounds and thoughts meditation), and introduces values exercises in each session, with participants invited to engage in values-based actions as part of the daily home practices. Accordingly, Kinnunen et al. (2020) describe this as a mindfulness, acceptance, and values-based intervention approach.

The final group of researched protocols falls within the "self-help" category of ACT for working populations. This includes structured bibliotherapy interventions administered to employees using ACT self-help books (e.g., Jeffcoat & Hayes, 2012; Hofer et al., 2018), and ACT-based smartphone applications for employees and managers (Ly et al., 2014).

4.3. Section summary

This overview of the format and technical composition of workplace programmes leads us to the following observations. First, almost all studies have examined "full" ACT programmes, in that the protocols impart a combination of mindfulness and acceptance and values-based

behavioural activation skills. There have been few published dismantling or component-focused studies in this area (see Engle & Follette, 2018 for an exception). Among the full ACT programmes, the sequence of training practices can vary. For example, some protocols introduce values exercises from the outset (e.g., Flaxman et al., 2013, 2019), while others introduce values after initial work on presenting acceptance as the alternative to internal control (e.g., Bond & Hayes, 2002; Frögéli et al., 2016).

Second, some protocols include other psychoeducational and skills components in addition to widely recognisable ACT practices. For instance, Frögéli's intervention included psychoeducation on the human stress response, work-life balance, sleep, and exercise, and utilised role plays for developing communication and assertiveness skills. Similarly, Bethay's et al.'s (2013) program for intellectual disability staff included a session dedicated to integrating ACT skills with applied behavioural analysis. Rather than treating these "additional" components as separate from ACT's (sub)processes, in practice they are likely to be harnessed in the service of cultivating psychological flexibility (Archer, 2018; Hayes et al., 2004).

Our third observation concerns the extent to which the training content is oriented toward work-related topics and applications. That is, some programmes invite employees to reflect on stress-related issues relevant to their job role, while others have more generic ACT content (i.e., they cultivate ACT skills without placing particular emphasis on work over other areas of life). The degree to which the content is work-related or generic (or both) likely depends on whether ACT is delivered to a homogeneous occupational group, in which participants share similar job characteristics and stressors (e.g., Bethay et al., 2013; Noone & Hastings, 2009). If the program is being delivered to a diverse group of participants (in terms of job role), a more generic ACT program may be called for.

Anecdotally, when delivering ACT to improve mental health among diverse staff in large organisations (e.g., a hospital), we tend to *deemphasise* the notion that the program is about dealing with job-related stress. Instead, we present the intervention as an opportunity to learn a set of psychological and behavioural skills that can help us relate more effectively to "the human condition." We have sensed this messaging sometimes helps to sidestep initial (and understandable) cynicism among some attendees, for instance that the training is being implemented "by management" to improve performance, reduce absence costs, or tackle staff unrest about unpopular organisational initiatives. In settings where these do not appear to be the reasons for offering the intervention, our intention is to communicate to participants that the ACT program is a personal resource "for you", with encouragement throughout to utilise the skills in all areas of life.

Similar observations can be found in the wider occupational health psychology literature, where interventions that are implemented for "performance reasons" may have little impact on employees' psychological health when compared to interventions that are dedicated to promoting staff well-being (Nielsen & Randall, 2013). We are not presenting these alternatives as "right" and "wrong" ways of implementing ACT-based training in the workplace. Indeed, in some cases, ACT skills will be imparted explicitly in the service of enhancing performance and other organisational outcomes (e.g., as part of leadership training or coaching initiatives; Archer, 2018). We highlight these issues to reiterate the value of being sensitive to context, aims, and audience when designing and offering such programmes.

Our final program-level observation concerns the experience of trainers who deliver ACT programmes to working populations. Workplace programmes have been delivered by highly experienced ACT therapists (e.g., Varra et al., 2008), by relative novices, students, or trainee psychologists (e.g., Brinkborg et al., 2011; Frögéli et al., 2016), and by pairing

novices with more experienced therapists. Brinkborg et al. (2011) tested whether therapist experience impacted the effects of ACT-based training delivered to social workers, and found no differences in outcome between staff groups trained by masters-level students (who had been trained to deliver ACT) and groups trained by licenced psychologists. They concluded that this type of ACT skills training has the potential to be delivered effectively by relatively inexperienced psychologists.

There are emerging signs that train-the-trainer initiatives are increasing the reach of ACT-based programmes to working populations. Such initiatives involve transferring ACT delivery knowledge and skills to in-house practitioners, so that organisations do not always have to rely on external (and potentially expensive) trainers. Livheim has been particularly successful in transferring ACT delivery expertise to a considerable number of practitioners (Flaxman et al., 2013; Livheim et al., 2018). In the UK, Flaxman and colleagues have transferred delivery expertise to numerous staff support teams, particularly in healthcare settings, who have then successfully cascaded ACT-based training to staff within their own organisations (Jennings et al., 2017; Waters et al., 2018).

Similar to the way that ACT is delivered to trainee psychologists and therapists (e.g., Pakenham, 2015), train-the-trainer initiatives benefit from including: experiential and conceptual elements; opportunities for co-facilitation with more experienced ACT practitioners (with observation and feedback); sufficient time for new practitioners to apply ACT in their own lives; and preparation for the types of challenges that can arise in workplace training programmes (e.g., how to respond should a participant become visibly upset while engaging in an ACT exercise, or when group conversations keep veering away from the training to organisational-level issues). Comprehensive and well-designed train-the-trainer programmes should help to extend the reach of ACT to a greater range of

organisations and staff groups, while ensuring the training continues to be cascaded in a safe, effective, and ACT-consistent way.

5. Future Directions

In this penultimate section, we highlight potentially fruitful avenues for future research on these programmes. Rather than looking too far into the future, we bring our focus to a set of recommendations that we sense are achievable now, pending some modest improvements to study design. Our intention is to motivate and guide the next generation of ACT researchers interested in applying and evaluating ACT-based skills training among working populations.

5.1. The next generation of randomised controlled trials of workplace ACT programmes

There are examples of well-designed RCTs evaluating ACT-based training for employees (e.g., Bond & Bunce, 2000; Brinkborg et al., 2011; Frögéli, et al., 2016, 2019; Hofer et al., 2018; Puolakanaho et al., 2020). However, reviewers have suggested that the overall methodological quality of the workplace ACT literature needs to be improved (Prudenzi et al., 2021a; Reeve et al., 2018). The reviewers discussed specific recommendations for improving trial quality ratings, and we will not repeat them all here. Instead, we offer the following suggestions to help guide future research on the utility of these programmes.

Our first and most obvious recommendation is for researchers in this field to utilise the recently developed multidimensional measures of psychological flexibility (e.g., Francis et al., 2016; Kashdan et al., 2020; Rogge & Daks, 2021; Rolffs et al., 2018). The adoption of such measures has clear potential to enhance knowledge about the most influential subprocesses of change when ACT is applied with working populations, while also providing guidance to intervention designers seeking to maximise the efficiency and impact of these programmes. Alongside the multidimensional measures, the field would benefit from additional studies examining effects on (and through) *work-related* psychological flexibility (i.e., using the WAAQ; Bond et al., 2013). In contrast to the AAQ-II (which is strongly

related to distress outcomes), the WAAQ has exhibited stronger associations with work engagement and other performance-oriented outcomes (Ruiz & Odriozola-González, 2017; Xu et al., 2018). Although there exists a growing body of promising correlational research using the WAAQ, there remain few intervention studies examining the degree to which cultivating flexibility specifically in the work domain contributes to the positive effects of ACT-based training.

Second, when selecting outcome variables, we recommend the routine inclusion of positive markers of employees' general and job-related well-being. Reflecting a broader shift in the well-being literature, there have been calls for researchers to go beyond assessing employees' affective state to capture *eudaimonic* aspects of well-being (e.g., sense of meaning and purpose, interpersonal connection, personal growth, and self-acceptance; Bartels et al., 2019). Given that ACT explicitly targets such experiences, ACT interventions seem pertinent to this trend. However, because researchers tend to prioritise distress measures, this potential is yet to be fully realised (Archer, 2018; Prudenzi et al., 2021a). We therefore recommend that more traditional outcome measures (e.g., burnout and perceived stress) are supplemented with measures of (for example) work engagement, subjective vitality, meaning and purpose in one's work, and other indicators of psychosocial flourishing. If these sorts of experiences are found to be reliably cultivated via ACT-based training, it could result in these programmes reaching a greater proportion of the workforce, beyond employees who attend (or are recruited) because they are looking to address symptoms of burnout or distress.

Third, we recommend increasing the number of measurement occasions, and (where possible) extending controlled follow-up period beyond three months. For example, whereas many studies in this area include a maximum of three time points (i.e., pre, post, follow-up), researchers could consider administering measures to ACT (and control) participants every month for several months. This type of design may help to reveal whether some subprocesses

are strengthened sooner than others, and would support more widespread application of data-analytic approaches for modelling longitudinal change processes (e.g., latent growth modelling). Moreover, increasing the number and frequency time points would support more rigorous testing of mediators of change (Stockton et al., 2019).

Fourth, this field would benefit from additional comparisons of ACT-based training programmes with active intervention conditions. ACT has generally performed well against various control conditions (Prudenzi et al., 2021a). However, there is a need for further research comparing ACT to other established psychological interventions applied in the workplace, such as CBT-based stress management/ resilience training, psychological capital interventions, or mindfulness-based programmes (e.g., MBSR). It is not necessarily about proving ACT is superior, but rather investigating whether subprocesses of change are specific to ACT or are equally targeted by other approaches (Flaxman & Bond, 2010b; Stockton et al., 2019). Comparative research could also take the form of dismantling studies of ACT among working populations, to compare the efficacy of individual ACT elements (or modules) with one another and with whole programmes (Petersen et al., 2021).

Fifth, most reviews of this literature recommend going beyond self-report measures to include organisational outcomes, such as sickness absence rates, patient safety (in healthcare settings), or supervisory performance ratings. Such data can enable researchers to estimate cost-effectiveness and return on investment (Finnes et al., 2017). Given a point made earlier, it may be important to consider what is communicated to potential participants if a research team is asking permission to access absence or performance records (in that it might communicate the program is not about staff well-being but about the bottom line). Nonetheless, demonstrating effects on objective organisational outcomes, perhaps achieved via improvements in staff well-being, would represent powerful evidence of ACT's utility in workplace settings.

Sixth, in terms of demographics, female participants working in public sector (e.g., healthcare, social work, and educational) organisations have been overrepresented in workplace ACT intervention research. Accordingly, it would be useful to see additional studies evaluating ACT's applications in different (e.g., corporate or manufacturing) industry settings, along with investigations of whether male employees in some settings might be less inclined to volunteer for this type of training. Although much of the research has been conducted in Western countries, there are recent examples of ACT being delivered to frontline staff groups in other parts of the world, including Sierra Leone, Uganda, and Iran. We hope to see further evaluations of ACT for staff groups in a wider range of countries, along with accounts of any cultural-specific adaptations to the training content and research measures.

Finally, there is scope for further research focusing on the influence of baseline characteristics on the effectiveness of ACT in the workplace. This area of research is prone to a "dilution" effect, in that workplace studies may include participants who are psychologically healthy alongside those who enter the training with moderate or higher levels of distress (Brinkborg et al., 2011; Flaxman & Bond, 2010a). More recent studies have addressed this issue at the design stage, by only including participants who are scoring above a predefined threshold on burnout or stress measures (e.g., Hofer et al., 2018; Puolakanaho et al., 2020). However, this keeps the focus on ACT as a primarily therapeutic intervention, without considering whether a different pattern may be found on other markers of employee well-being or behavioural change.

5.2. Other evaluation methods

Although the RCT remains the most influential design for intervention evaluation, it is important to acknowledge that maintaining a (potentially untreated) control group of employees for several weeks or months is not always possible in workplace settings (Nielsen

& Miraglia, 2017; Waters et al., 2018). It is therefore worth considering alternative designs that can generate valuable data on people's experiences of ACT-based training. For instance, Reeve et al. (2021) recently adopted a single-case experimental design, varying the sequence of ACT modules across different individuals. They were able to address a number of empirical questions, including the degree to which ACT modules reduced burnout and increased work engagement, and the extent to which change in these outcomes was associated with improvements in values-based behaviour. Analysing data obtained from this this type of study is not an easy option, but demonstrates how detailed exploration of workplace interventions can be performed even in the absence of a large sample or control group.

Another option is to utilise a higher density of measurement of both outcomes and processes (e.g., across several work days) to capture patterns of change unfolding immediately after an ACT intervention. We have most often seen this type of design used in the workplace mindfulness literature (e.g., Hülsheger et al., 2015), and it seems particularly well-suited to examining proximal changes elicited by relatively brief (e.g., self-help) applications of ACT for employees.

Even in the absence of a control group, researchers can track change in ways that offer more precise information on the subprocesses that are targeted when ACT is applied in the workplace. For example, brief versions of subprocess measures could be administered to employees on a weekly basis (e.g., once per week), capturing a period during and after implementation of ACT-based training, ideally for a period of several consecutive weeks. Such data can reveal trajectories of change in discrete subprocesses, and change on subprocesses could in turn be associated with outcome change. This type of design is more common in the clinical literature (based on data collected from clients in each consecutive

session), but holds untapped potential for enhancing our understanding the effects of worksite ACT interventions.

Finally, we have focused on quantitative methods, but there is clearly scope for further qualitative (and mixed methods) research on these workplace programmes (e.g., Wardley et al., 2014). Qualitative investigations could address a wide range of research questions, by gathering ACT participants' accounts of (for example) what they sense has changed in how they respond to challenges at work and home, which aspects of the training had most impact (and why), and also any concerns related to participating in the program. Such data is likely to provide a valuable sources of information on the active ingredients of change, while also offering more practical insights, such as what it is like to attend this type of training alongside colleagues.

5.3. Implementation and ethical considerations

Prior to concluding the chapter, we wish to communicate a broader ethical issue surrounding the use of ACT-based training to improve employees' psychological health and well-being. The training programmes we have focused on are classified as "individual-focused" interventions in the occupational health literature (Bunce, 1997). That is, they seek to provide employees with personal skills and resources to help them respond more effectively/ healthily to work and life stressors, and to any difficult thoughts and emotions that may arise. The onus is on changing the individual employee, and not the organisation, management style, or design of work. Yet, we know from decades of research that there can be potent sources of stress residing in the psychosocial work environment, including excessive job demands coupled with a lack of job control (i.e., job strain), inadequate workplace support, organisational injustice, and a chronic imbalance between effort and rewards (Sara et al., 2018). Most ACT programmes are not designed to address these risk factors, and participants

may therefore complete an ACT intervention only to return to an unhealthy work environment.

We do not raise this issue to undermine the use of ACT in workplace settings. In our experience, individual-focused ACT programmes are very popular among the workforces that receive them, and interest is often spread via word-of-mouth from colleagues who have already attended. However, it pays to be mindful about these background factors, which may be influencing attendance at an ACT program, and may be discussed by participants during the sessions.

It is usually recommended that organisations adopt a comprehensive staff well-being strategy, with a combination of initiatives functioning at primary, secondary and tertiary levels of prevention (Flaxman & Bond, 2010a). Primary interventions typically involve work redesign and/ or modifications to the management of work, for example to increase employees' level of autonomy and control over how to meet their job demands, and/ or to improve supervisory support. When delivered to employees with relatively modest levels of distress (but who may be at risk of developing a common mental health problem), ACT would be deemed to operate at a secondary level of prevention; but ACT can also have tertiary level impact, due to its well-established therapeutic benefits for those already experiencing a clinically relevant of distress (Brinkborg et al., 2011; Flaxman & Bond, 2010a; Kinnunen et al., 2020; Waters et al., 2018).

These considerations also highlight the potential benefits of integrating ACT's principles and processes with other organisational initiatives. This might involve: providing individual-oriented ACT skills training as a natural adjunct to interventions designed to increase organisational flexibility (Bond et al., 2016; Gascoyne, 2019); embedding the cultivation of ACT's subprocesses within mainstream learning and development curricula, such as leadership and coaching programmes (Archer, 2018; Pingo et al., 2019); or adopting

an ACT-based approach when designing and delivering work redesign, job crafting, and recovery-promoting interventions. In this way, ACT can become more seamlessly positioned within a multilevel approach to workplace health and well-being.

6. Conclusion

In view of the intervention research that has accumulated over the past 20 years, it seems appropriate to conclude that ACT has been successfully translated into accessible, popular, diverse, and effective training programmes suitable for workplace settings. The evidence most clearly supports the use of ACT-based training as part of worksite mental health promotion, given multiple demonstrations of programme efficacy in reducing common symptoms of psychological stress and distress.

Thus far, only a relatively modest literature has sought to conceptualise and test the utility of integrating psychological flexibility within established theories of workplace well-being, such as JD-R theory. Thus, we hope to see further longitudinal, daily survey, dyadic (leader-employee), and experiential sampling studies exploring the functions of psychological flexibility as a personal resource (or self-regulation repertoire) within work design frameworks. Moreover, the recent development of various multidimensional measures provides tools for conducting closer examinations of the specific skills that are cultivated when ACT is translated into staff training interventions.

We narrowed our focus to review the increasingly popular ACT-based training programmes, which have tended to be therapeutically oriented, in that they seek to improve employees' mental health. Nonetheless, we have also touched upon numerous avenues for implementing and evaluating other theoretically consistent workplace applications, including the promotion of organisational flexibility, and cultivating employees' and leaders' psychological flexibility as part of other workplace initiatives. Collectively, these traditional

and innovative applications hold considerable promise for extending the reach of CBS and

ACT programmes to increasingly greater proportions of the global workforce.

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