Special issue paper

An evidence-based approach to improving the quality of resource-oriented well-being interventions at work

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Although there is much research on the links between work and well-being, there is relatively little good-quality research on resource-based or other interventions such as more traditional stress management and job redesign. This paper provides guidance about how to improve the quality of intervention research. First, drawing on the logic of interventions and principles of evidence-based practice, we take the example of a relatively simple resource-oriented intervention to identify 11 key characteristics that we would expect to see in an evidence-based intervention of this type. These characteristics and their underlying principles can be used to evaluate the quality of existing intervention studies and guide the design of future interventions. Second, we discuss an evidence-based approach to reporting the process and the outcomes of interventions. Providing only limited information about an intervention means that it is difficult to replicate or use that method in practice. We describe a checklist developed in a more mature evidence-based field (medicine) that can be used to ensure that sufficient intervention details are reported. Next, we discuss the importance of reporting all the outcomes of all interventions. Last, we consider the ways in which this approach to improving interventions is not only important scientifically and practically but also ethically.

Practitioner points

- Although many resource-oriented well-being interventions are available, their effectiveness is not always known, and they may be implemented without initial diagnosis.
- An evidence-based practice approach to intervention involves using local organizational evidence as well as evidence from scientific research.
- Before implementing an intervention, it is important to gather information from the target population to ensure, for example, that there is a significant well-being problem and that it is amenable to change, as well as seeking out research evidence for the efficacy of the intervention.
- This approach is useful in terms of practice but also helps to ensure that we are working in an ethical way.

Well-being at work continues to be a major preoccupation for organizational psychology researchers and practitioners (Chen & Cooper, 2014; Danna & Griffin, 1999; Robertson &
Cooper, 2011; Sparks, Faragher, & Cooper, 2001; Zapf, 2002). Most research has focused on developing our understanding of the underlying processes through which work conditions affect employee well-being, while relatively little research has explored the design, implementation, and evaluation of well-being interventions. At the same time, only a small proportion of this intervention research is well designed.

For example, although control is regarded as a key factor and resource in employee well-being and hence a key target for interventions, a systematic review of the area (Egan et al., 2007) found only 12 controlled studies. Similarly, a recent systematic review of flexible working interventions found only 10 controlled studies (Joyce, Pabayo, Critchley, & Bambra, 2010). Additionally, a review of work-life balance interventions (Brough & O’Driscoll, 2010) concluded that ‘there is a paucity of experimental investigations’ (p. 294). This body of work on interventions is therefore not only small but of quite low quality. Taken as a whole, it has significant weaknesses (Cox, Taris, & Nielsen, 2010; Nielsen, Taris, & Cox, 2010), which means that its academic worth and practical value are quite limited.

Several approaches to improving the quality of organizational interventions and their evaluation have previously been suggested (e.g., Biron, Karanika-Murray, & Cooper, 2012; Nielsen et al., 2010; Randall, Griffiths, & Cox, 2005; Semmer, 2006). This analysis builds on this work in several ways. First, we adopt an explicitly evidence-based approach rarely applied in this field (see Briner, 1997, for an exception), which brings with it a particular logic and way of thinking about using evidence to make initial assessments (similar in some ways to psychosocial risk assessment) and decisions about interventions based on both the best available internal organizational data and external evidence from systematic reviews of scientific research. Essentially, an evidence-based approach does not start with a solution or intervention, but, rather, it starts with a thorough analysis of the problem. Second, we consider how to improve resource-oriented well-being interventions for both practice and research by providing ways of judging the extent to which interventions are designed around evidence-based principles (and could be made more so), suggesting how more information about the nature of interventions can be reported to help both practitioners and researchers, and emphasizing the importance of practical significance and relevance. Third, we suggest that an evidence-based approach to designing and reporting the results of resource-oriented well-being interventions can not only help to make our practice as researchers or practitioners more effective, but also promise to make it more ethical.

How can the quantity and, more importantly, the quality of research into resource-oriented and other well-being interventions such as traditional stress management interventions or job redesign be improved? One important way of addressing this question is to consider how other fields concerned with well-being have attempted to strengthen and assess the quality of their intervention research through the development and use of criteria, guidelines, and checklists. In fields such as medicine, occupational medicine, and clinical psychology, improving the quality of intervention research is a particular priority, given the potential of interventions to treat and prevent serious mental and physical health conditions. However, given the potential impact of our interventions on the well-being of employees and, by extension, that of their organizations, families, and communities, we should place a similar emphasis on improving the quality of interventions and studies.

What these other fields have in common is that they adopt an evidence-based approach to practice that in turn has strongly shaped the way in which research, including intervention research, is both conducted and reported. Evidence-based practice is relatively undeveloped in management and organizational psychology (e.g., Briner,
Denyer, & Rousseau, 2009; Briner & Rousseau, 2011); thus, we have much to learn about improving the quality of interventions from more evidence-based areas such as medicine.

Drawing on some of the principles and techniques of evidence-based practice, the main aim of this paper is therefore to identify ways in which the quality of resource-oriented well-being interventions can be assessed and improved. We do this by describing some of the key characteristics that we would expect to see in an evidence-based well-being intervention and the reporting of such. In other words, if we were to adopt a more evidence-based approach to the design and reporting of well-being interventions, what would it look like? We initially describe what an evidence-based approach entails and the underlying logic of resource-based interventions.

What is an evidence-based approach?
Evidence-based approaches to practice originated some 20 years ago in medicine (Evidence-Based Medicine Working Group, 1992). These methods of working have not only influenced other health-related fields such as clinical psychology (e.g., Corrigan, Steiner, McCracken, Blaser, & Barr, 2001) but have spread more widely to areas such as policy-making (Head, 2010), education (Davies, 1999), policing (Sherman, 1998), nursing (DiCenso, Cullum, & Ciliska, 1998), and management (Rousseau, 2012). The way in which evidence-based practice is applied tends to vary across fields due to differences in, for example, the nature of professional practice, the types of decisions that practitioners make, and the quantity and quality of different forms of evidence. However, the underlying principles of evidence-based practice are identical. An evidence-based approach, in any field, is essentially about:

...making decisions through the conscientious, explicit, and judicious use of four sources of information: Practitioner expertise and judgment, evidence from the local context, a critical evaluation of the best available research evidence, and the perspectives of those people who might be affected by the decision.(Briner et al., 2009, p. 19)

An evidence-based organizational psychology practitioner dealing with a reported employee well-being problem would attempt to gather different kinds of evidence from a range of sources. They would then critically appraise such evidence to determine its quality and relevance, and then use it to make a decision about what, if anything, they should do. The types of questions such a practitioner would ask to gather relevant information include:

• What specific well-being problem has the organization identified?
• What data are available to indicate the presence of this specific problem? How good is the quality of the data?
• In what ways is this 'problem' really an issue? And for whom?
• What is known about the causes of the problem within the organization?
• What does evidence from published research suggest are the causes of the problem? How good is the quality of this evidence?
• What theoretical mechanisms or processes link cause and effect?
• What potential well-being interventions or solutions are available?
• What is the evidence from published research to show how effective such interventions are and whether they are likely to be effective in this organizational context? How good is the quality of that evidence?
• What are the possible costs and benefits of interventions?
But how are these practice-focused questions relevant to how we, as researchers, design and report well-being interventions? There are two main implications. First, when we start to design and plan the evaluation of a well-being intervention, we should ask exactly the same questions as the evidence-based practitioner, such as whether or not there is actually a well-being problem that requires or may benefit from intervention. As we will discuss later, failing to address such fundamental questions severely limits both the academic and the practical value of our intervention studies. The second implication is that when we report the results of intervention studies, we need to be aware that this is not merely about publishing another journal article: Our evidence-based organizational psychology practitioner colleagues need to obtain good-quality evidence about the effects of well-being interventions. As we will also consider later, this has quite profound implications for the way in which we report our results, such as the importance of reporting all of the outcomes (not only those that are favourable) and providing sufficient details about the intervention to allow it to be reproduced by practitioners or indeed other researchers.

The logic of resource-oriented well-being interventions at work

What is the reasoning behind resource-oriented well-being interventions? Before discussing how resources can be defined and the logic underlying resource-oriented interventions, it is important first to consider some of the broader issues relevant to all types of well-being interventions at work, such as traditional stress management interventions and job redesign. To begin with, identifying what a well-being intervention is and is not is far from straightforward. In part, this is because interventions of many different kinds, from a management training course to the restructuring of a team, have the potential to affect employee well-being, although they do not explicitly aim to do so. Even if the explicit purpose of an intervention is to improve employee well-being, however, this can still mean many different things, as discussed below. In other words, a vast number of quite different types of activity could be described as well-being interventions.

A second and related issue is that well-being is an extremely broad term, which includes many different phenomena including affect (moods and emotions), physical symptoms, and psychological conditions. For this reason, it is not surprising that almost any sort of intervention may impact on well-being in some way. This also means that no intervention will have panacea-like effects and improve every aspect or outcome of well-being. Interventions that, for example, help to reduce negative affect may have no influence on levels of positive affect. When identifying a well-being intervention, it is essential therefore to be as clear as possible about which specific aspects of well-being the intervention is designed to improve or change.

Third, there are several quite specific challenges to intervening at work in order to improve well-being. For example, well-being appears to be strongly dispositional (Diener, Oishi, & Lucas, 2003) and quite stable over time and therefore not easy to change through interventions. It may also be that some individuals have symptoms that over a certain period become chronic and which, as noted above, may be difficult to change through interventions that change job conditions (Semmer, 2006). Also, other individual differences may mean that changing job conditions in ways that are assumed to be beneficial for all employees may in fact be beneficial for only some and harmful to others.
(Parker, Jimmieson, & Amiot, 2010; Schaubroeck & Merritt, 1997). We will return to such considerations in more detail later.

Another specific challenge arises from the fact that the working environment, while a potentially very important influence on well-being, is only one of many. Non-work factors such as family demands and socio-economic status can also exert a strong influence. Hence, any workplace intervention can only, in principle, deal with one set of influences, which means that even if the intervention is effective, it is unlikely to have a very large impact.

**What are resources?**
Turning specifically now to the logic of resource-oriented interventions, we first need to define resources. Hobfoll’s conservation of resources model defines resources as ‘objects, personal characteristics, conditions, or energies that are valued by the individual or that serve as a means for attainment of these objects, personal characteristics, conditions, or energies’ (Hobfoll, 1989, p. 516). This definition of resources like others in the field is somewhat vague – indeed, the absence of a clear definition of resources has been identified by Halbesleben, Neveu, Paustian-Underdahl, and Westman (2014, p. 1335) as a ‘common criticism’ of the literature. The latter’s definition of resources as ‘anything perceived by the individual to help attain his or her goals…’ (p. 1338) is one that they also acknowledge.

...may leave some readers with a continued sense of dread – in effect, this still means that nearly anything could be a resource if someone thinks it could help him or her meet a goal(p. 1339)

In theoretical terms, this definition seems important and relevant, despite it being one that requires much elaboration and refinement. However, using this definition to identify what is and is not a resource-oriented intervention would seem to entail asking each individual in every case whether they believed that the resource targeted by the intervention was helping them to attain their goals. This in itself seems difficult enough but, given the fact that much perception is non-conscious (e.g., George, 2009), individuals may not be consciously aware of their goals nor have conscious knowledge of which resources will help them to attain those goals.

It is clear that the challenges of defining and measuring resources are complicated and far from resolved. While such challenges are clearly very important, it is beyond the scope and purposes of this paper to provide a detailed discussion of such issues (see Halbesleben et al., 2014). Given that the aims of this analysis are to examine how the quality of resource-oriented well-being interventions can be improved, it may be more fruitful to examine which phenomena have been described as resources in studies of well-being at work rather than search for a clear and comprehensive definition.

For example, de Jonge, Spoor, Sonnentag, Dormann, and van den Tooren (2012) state that ‘job resources can be broadly conceptualized as instrumental, psychosocial assets at work that can be used as strategic options for action’ (p. 322), and, in their study, they measure three types of resources: Cognitive resources, which relate to having control or autonomy; emotional resources, essentially meaning social support; and physical resources, which are described as instrumental support from colleagues and ergonomic aids. Chen, Westman, and Eden (2009) also assess three types of resources: Means efficacy (individual beliefs about the utility of available resources), social support, and perceived...
control. In a review of stress and organizations, Sonnentag and Frese (2003) describe resources that are both individual (e.g., coping skills, efficacy beliefs, and individual competencies) and environmental (e.g., job control, employee participation, and social support). In a discussion of the job demands-resources model, Bakker and Demerouti (2007, p. 312) describe resources as ‘those physical, psychological, social, or organizational aspects of the job that are either/or:

- functional in achieving work goals;
- reduce job demands and the associated physiological and psychological costs;
- stimulate personal growth, learning and development’.

The resources that they identify include job security, co-worker support, participation in decision-making, and autonomy. For this analysis, we will therefore assume that a resource-oriented well-being intervention is any intervention that aims to change aspects of the workplace or individual employees in order to increase or enhance resources as described above, which are believed to play a role in protecting or enhancing well-being in the workplace. While resources can be environmental or individual, for simplicity’s sake we will focus here on the environmental resources that have relatively straightforward effects on well-being (such as job characteristics), although the same or similar points will apply to resources that have more complex relationships to well-being.

What then is the logic of such resource-oriented well-being interventions at work? Put crudely, the logic assumes that some feature of work is already adversely affecting the well-being of employees and that interventions to increase job-related or individual resources can help improve well-being. If this logic sounds very simple and appears vague or non-specific, this is a direct consequence of the rather general nature of the concept of well-being, and of the definition of resources and interventions already discussed, and also to some extent, because we have chosen to focus on a simple example. As we will now go on to consider, it is in part the simple and non-specific nature of their logic that determines what we need to look for in such resource-oriented intervention to determine the extent to which it is evidence-based.

An evidence-based approach to intervention design

For of this analysis, we have chosen a relatively simple example. In this case, it is assumed that employees are already suffering from the adverse effects of some aspect of their job and that increasing the resource will in some way help employees, which in turn will improve their well-being. We are aware that there are many more complex and nuanced ways of thinking about the role of resources in well-being at work, and the purpose of this analysis is not to consider how an evidence-based approach would apply to each and every possibility. Rather, it is to use a simple example to illustrate the principles underlying evidence-based interventions and how such principles lead logically to the identification of evidence-based intervention characteristics. In a later section, we discuss how these principles can be applied to more complex forms of resource change and the effects of such change.

Given the basic logic of our simple example, what features might we ideally expect to see in evidence-based resource-oriented intervention? What are some of the key characteristics that we should build into the design and planning of an intervention if we are doing so from an evidence-based practice perspective? As previously mentioned, such characteristics help improve both the practical and scientific value of interventions.
Many ‘presenting’ organizational problems, whether relating to well-being or other issues, are often vague and poorly specified. One of the central purposes of an evidence-based approach in any field is to ask critical questions and gather evidence that together help to identify what specific problems exist, if any, and their probable causes. For this reason, the focus of the first few intervention design characteristics described below is on problem identification. This is to prevent the ‘solution in search of a problem’ problem, in which interventions that are believed to be effective are deployed without first having identified a specific issue that needs to be resolved.

**Some key characteristics of evidence-based interventions**

What is presented here does not represent a complete list of such characteristics but rather some of the most important ones. Similar ideas can be found in the UK Medical Research Council’s guidance on developing and evaluating complex interventions (Craig et al., 2008), where they are presented in the form of questions or a checklist. For each question, if the answer is ‘no’, then that characteristic is not present. The fewer of these characteristics that are present, the less evidence based is the intervention. It should be noted that these characteristics are *not* preconditions for deploying an intervention but instead ways of judging the extent to which the intervention is evidence-based. In situations where there is only a little or poor-quality evidence, an intervention can still of course proceed, but it is done consciously, knowing that the evidence to support the intervention is limited. In such situations, and also where the intervention does not proceed according to plan, the evaluation of the intervention will take on much greater significance.

It is also important to consider the extent to which organizational and scientific evidence is taken into account. In evaluating the extent to which an intervention is evidence-based, it would make sense not only to judge whether or not the characteristic was present in the design of the intervention, but also the extent to which, for each characteristic, relevant evidence had been gathered and actually used. For example, it may be that an intervention appears to have many of these characteristics, but, on closer inspection, the use of organizational and/or scientific evidence may in some ways be limited. In the case of organizational evidence, we would expect to see some account of how relevant data had been sought and analysed. In the case of scientific evidence, as we discuss below, this should ideally be based on a systematic rather than a cherry-picked literature review.

Several terms used in this checklist need to be defined. By *practical significance*, we mean changes or differences in well-being that are not about statistical significance or effect size but, rather, are about the meaning of the results for stakeholder groups, including those affected by the intervention and practitioners (e.g., Aguinis et al., 2010; Sun, Pan, & Wang, 2010). For example, an intervention could produce a change in well-being that was statistically significant and showed a large effect size but that also had little meaning for participants, because the difference was not important or valued.

We have also used the term *target group*, by which we mean the group receiving the intervention. In the case of resource-oriented interventions that aim to enhance features of the job or work environment (such as control or social support, which we focus on here), the aim is to change such features for the *whole target group* of employees in that job rather than just for some employees within the group. As we will go on to discuss, this raises questions about the extent to which the group is homogeneous in respect to perceptions of the feature of the job in question or reactions to changes in that aspect of
the job. Also, depending on what the initial assessment shows, the target group may well be a department, group, or subunit rather than the whole organization.

By *reasonable quantity of good-quality evidence*, we mean that from both a scientific and organizational perspective there is enough trustworthy evidence or information to suggest that the assumptions underlying the logic of the intervention are likely to be correct. It is impossible to say exactly where the line should be drawn, but it is possible to give some guidelines. In the case of scientific evidence, this should be based, ideally, on a systematic review of the available evidence (e.g., Briner & Denyer, 2012; Gough, Oliver, & Thomas, 2012; Petticrew & Roberts, 2008). Systematic reviews are research on existing research and attempt to provide a comprehensive and critical review of the aggregated evidence relevant to answering a particular question. So, for example, if a systematic review revealed mostly poor-quality cross-sectional studies and just one or two inconclusive longitudinal studies about the effect of a job resource on well-being at work, then it would *not* seem reasonable to design an intervention to increase that job resource with the aim of increasing well-being (unless there were compelling theoretical reasons for doing so). In the case of organizational evidence, this should also be a reasonable quantity of good-quality data. For example, the results of an employee survey using a well-validated and normed measure of burnout with a good response rate should provide a good basis for judging whether or not burnout is a problem within the workforce. In any situation, deciding what is meant by a reasonable quantity of good-quality evidence depends on the question being asked and ‘the conscientious, explicit, and judicious use’ of evidence or information (Briner et al., 2009, p. 19), which is at the heart of evidence-based practice.

**Some key characteristics of relatively simple resource-oriented evidence-based interventions**

The 11 characteristics discussed below do not necessarily apply directly to all types of resource-oriented interventions but rather, as discussed earlier, are those that we would expect to see for interventions dealing with a resource that had quite straightforward links with well-being. In the next section, we will give examples of how such characteristics can be adapted to identify the extent to which more complex interventions are evidence-based.

*Key characteristic 1*: There is a practically significant and specific well-being problem in the target group

It makes little sense to conduct a well-being intervention if most of the target group is not reporting a practically significant or meaningful well-being problem. Not only does it not make sense practically or ethically, but it is only possible to conduct a scientific test of an intervention and its underlying theory in a setting in which something can, at least in principle, change. If all or most of the target group is, for example, already experiencing what might be fairly average levels of negative affect, which are not seen to be much of a problem, intervening to reduce these levels further is not only likely to be difficult but also of little value. As Bunce and Stephenson (2000, p. 198) describe for the case of stress interventions, ‘For those workers reporting low levels or no strain, little change in

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1 The ordering of the characteristics reflects the logical sequence in which the statements should be considered.
outcome variables as a consequence of the intervention can be expected'. Hence, from an evidence-based approach, there needs to be some initial screening to identify a practically significant and specific well-being problem in the target group. Of course, if such initial screening reveals large variation within the target group, then it is likely that the target group needs to be further broken down into subgroups, so that the intervention can be properly focused on those who are likely to benefit.

Not only does there need to be a well-being problem in the target group, but also this needs to be a specific well-being problem. As discussed above, well-being is complicated and multidimensional, so it is important to identify a specific well-being problem to enable us to make an informed choice about the particular resource-oriented intervention theory and what the evidence suggests is likely to influence this specific aspect of well-being.

On the other hand, a resource-oriented well-being intervention could positively affect many different aspects of well-being, not just a specific one, and thus be evaluated overall as a positive intervention in that particular study (Semmer, 2006). However, if such outcomes are not intended and not identified in advance on the basis of theory and/or evidence, it suggests something along the lines of a fishing expedition in which an intervention is deployed, many well-being outcomes are assessed, and, if there are more positive outcomes than neutral or negative, it is deemed a success. Clearly, in the longer term such an approach makes little practical, theoretical, or empirical contribution. The initial screening should thus be capable of assessing relatively specific aspects of well-being such as negative affect, and not only, for example, general affect or job satisfaction.

There needs, therefore, to be a reasonable quantity of good-quality evidence that suggests there is a practically significant and specific well-being problem in the target group. In other words, what is the problem the intervention is aiming to fix? If no significant and specific problem is identified, why intervene?

Key characteristic 2: The specific well-being problem identified is in principle amenable to change through the type of intervention proposed
There is much evidence that many aspects of well-being are strongly dispositional (Diener et al., 2003), and well-being levels may therefore change relatively little in response to changes in people’s external environments or personal resources (Diener, Lucas, & Scollon, 2006). In order to establish that the resource-oriented intervention can in principle work, there needs to be a reasonable quantity of good-quality evidence that the specific well-being problem is amenable to change through the resource-oriented intervention. As Semmer (2006) suggests, some well-being problems may only respond to personal or individual treatment. In other words, why intervene to change a specific well-being problem if it is not in principle amenable to change through the resource-oriented well-being intervention proposed?

Key characteristic 3: The resource-oriented intervention selected is capable in principle of bringing about practically significant increases in this particular resource
Resource-oriented interventions do not necessarily produce practically significant increases in levels of the particular resource or presumed active ingredient. For example, job redesign interventions that aim to increase the levels of control do not necessarily produce practically significant increases in control (Bambra, Egan, Thomas, Petticrew, & Whitehead, 2007). We would therefore need a reasonable quantity of good-quality evidence showing that the intervention can bring about meaningful increases in the level
of the resource. In other words, why use a resource-oriented intervention that cannot produce practically significant increases in the resource?

Key characteristic 4: There are no clear, strong, or obvious indicators of the causes of the well-being problem that are unrelated to the resource-oriented intervention
If a specific well-being problem is identified, such as high levels of burnout, it is important to do some initial investigations to rule out strong and direct causes that are largely unrelated to the proposed resource-oriented intervention. For example, it may be that a particular work unit is extremely understaffed and simply unable to meet the demands placed upon it. Proposing, for example, a mindfulness intervention for staff in this work unit to help reduce the levels of burnout is perhaps not only unethical and likely to be ineffective, but would also be a very poor context in which to properly test the possible effects of such an intervention on burnout, because another and completely different cause is already very strongly indicated. In other words, why deploy a resource-oriented intervention when there are strong indications that the primary and major cause of and hence solution to the well-being problem lies elsewhere? Although a mindfulness intervention may have some small effect on burnout in this situation, if the evidence strongly suggests that there is a very strong primary and direct cause, then implementing an intervention that aimed to increase a resource such as mindfulness would not represent an evidence-based approach.

Key characteristic 5: Increasing the level of this particular resource will in principle have practically significant effects on the specific well-being problem
Resource-oriented interventions may indeed produce a practically significant increase in the quantity or level of a particular resource. However, from an evidence-based perspective, we also need to have a reasonable quantity of good-quality causal evidence (and/or strong theory) that providing more of this resource can in principle have meaningful effects on the specific well-being problem. It seems plausible that providing more of various resources is likely to affect well-being, but the key question is whether or not increasing such resources is likely, in principle, to have practically significant effects. In other words, why intervene to increase a resource, unless it is likely to have practically meaningful effects on the well-being problem?

Key characteristic 6: The target group has relatively low levels of this particular resource
Intervening to increase the level of a particular resource in the target group, such as coping skills or job control, only makes sense if that group has relatively low or underdeveloped levels of coping skills or job control. This is for two main reasons. First, if members of the target group already have average or higher than average levels of the resource, the intervention is less likely to produce increases in the resource because of ceiling effects. Second, if the resource is assumed to have beneficial effects on well-being and most members of the target group already have reasonable and sufficient levels of this resource, what purpose is served by intervening to further increase this resource? In addition, as discussed below under Key characteristic 7, it could be the case that there are nonlinear relationships between the resource and well-being, such that increasing the former above a certain level has detrimental effects on the latter. Intervening to increase such a resource in a target group where most already have sufficient levels would in that
case have detrimental effects on most of the group. Again, if the assessment showed that the target group was highly heterogeneous with respect to the level of the resource, then the group would need to be further broken down in order to focus the intervention on increasing the resource of those who are likely to benefit.

This suggests that the target group should also be screened for the level of the resource the intervention aims to increase to ensure that its current level is low enough to justify the intervention. In other words, why intervene to increase a resource if employees already have sufficient levels of the resource?

*Key characteristic 7: There is a linear relationship between the resource and the specific aspect of well-being*

Intervening to increase the level of the resource only makes sense if there is a reasonable quantity of good-quality causal evidence that there is a linear relationship between increasing levels of the resource and well-being. If the relationship is curvilinear, then providing more of the resource may in fact harm rather than enhance well-being, depending on individuals’ positions on the curve.

In general, findings suggest the presence of a *Too Much of a Good Thing Effect* (e.g., Grant & Schwartz, 2011; Pierce & Aguinis, 2013), where various personal or workplace factors assumed to have a beneficial influence on certain outcomes only do so up to a point, after which their effects are neutral or actually harmful. Grant and Schwartz (2011) suggest that resources such as personal virtues, optimism, and self-efficacy show this effect. In the case of job redesign, for example, Pierce and Aguinis (2013, p. 320) state that ‘...enriching jobs has a positive impact on psychological outcomes and employee performance up to a point. After this inflection point, however, the effect approaches zero and then it becomes negative’.

The idea that there may be nonlinear relationships between work conditions and outcomes is encapsulated in Warr’s (1987) Vitamin Model. Specifically, this model suggests that resources such as opportunity for control, environmental clarity, and interpersonal contact have this same inverted-U-shaped relationship with well-being, and have beneficial effects only up to a certain level, beyond which they begin to harm well-being. Hence, intervening to increase resources will not necessarily have positive results if individuals are approaching an inflection point where more of the resource will be detrimental to well-being. In other words, there is no point in increasing levels of the resource if it is likely that increases, given current levels, will have detrimental effects.

*Key characteristic 8: There are no practically significant individual differences in response to increasing this particular resource*

It is quite possible, and, in some cases, likely, that individuals respond differently to increases in a particular resource. This means that providing more of a resource may not be beneficial to all members of the target group: Some may indeed benefit, but others may experience no change, and yet others may in fact be harmed. There therefore needs to be a reasonable quantity of good-quality causal evidence that there are no important individual differences in reactions to increases in the resource.

Some studies (e.g., Day & Jreige, 2002; Jimmieson, 2000) have shown that individual differences may moderate the relationship between resources and well-being. In other words, why intervene if it is likely that the intervention may benefit, have no effect on, and harm different individuals in the target group?
Key characteristic 9: An explicit and well-articulated theoretical mechanism explaining how increasing the resource affects the specific aspect of well-being

Evidence-based approaches are not only about evidence but also about underlying mechanisms and theories. In an evidence-based intervention, we would expect to see a clearly stated theoretical account of how increasing the resource affects some specific aspect of well-being. In addition to general criteria for judging theory (e.g., Whetten, 1989) and checklists for judging the extent to which an intervention study is theory-based (Michie & Prestwich, 2010), there should also be a reasonable quality of good-quality causal evidence providing at least some support for the theoretical mechanisms proposed. Such empirical support may come from work settings but also from experiments or non-work settings. In other words, why intervene unless we can explicitly articulate how and why the intervention will have the proposed effects?

Key characteristic 10: An explicit and well-articulated account of the role of time in increasing both the resource and possible subsequent changes in the specific aspect of well-being

For design, evaluation, and theoretical reasons, we would expect an evidence-based approach to interventions to be explicit about and provide a rationale for how long the intervention is likely to take to bring about relevant increases in the resource and, in turn, how long it is likely to take for increases in the resources to affect well-being. We might also expect similar considerations when specifying time lags in longitudinal studies whether or not they are about interventions. Often, however, as observed by Zapf, Dormann, and Frese (1996, p. 154), it can be the case that ‘organizational reasons were much more important for choosing a particular time lag than theoretical considerations. There were only a few publications that discussed the time lag problem in detail’. The rationale for both the process and when changes are likely to occur could be based on strong and well-articulated theory (see Mitchell & James, 2001), previous evidence, or a combination of the two. In other words, why intervene (and how can we design its evaluation) without an account of when changes are likely to occur?

Key characteristic 11: The target group is split into three subgroups: Intervention, alternative intervention, and non-intervention

Although this characteristic may seem obvious, from an evidence-based perspective the effects of a resource-oriented intervention need to be compared with both an alternative non-resource-oriented intervention or an existing intervention and a non-intervention control group. It is important to know not only whether the intervention ‘works’ in terms of improving well-being, but also that it works better than other interventions already in use and is better than doing nothing.

Some characteristics of more complex resource-oriented evidence-based interventions

As stated earlier, the 11 characteristics presented above are those that we would expect to find in an evidence-based intervention in which there was a fairly straightforward relationship between a feature of work, employees’ well-being, and increasing a particular resource such that doing so would help employees to deal more effectively with or manage a work feature and thus improve well-being.

As we also discussed above, this is a very simple case chosen purely for illustrative purposes. Many theories about the roles of resources in well-being are considerably more
complex and sophisticated. However, this does not mean that the same or very similar characteristics do not apply to more complex resource-oriented interventions.

For any intervention, such as the one we presented above, researchers and practitioners are making a number of sometimes-implicit assumptions or using a logic model about the relationships between the phenomena of interest. These assumptions are extremely important because they inform and drive the intervention design – the more accurate these assumptions are, the more likely it is that the intervention will have the intended result. An evidence-based approach, as we have illustrated, entails making these assumptions explicit and examining the quantity and quality of evidence for each. In general terms, the more of these assumptions are found to have a reasonable quantity of good-quality evidence supporting them, the more evidence-based the intervention can be judged to be.

So what are the underlying assumptions behind more complex resource-oriented interventions? Given the very broad definition of resources described earlier, the assumptions underlying resource interventions are potentially limitless. It is therefore not possible to provide evidence-based characteristics for every imaginable type of resource-oriented intervention. Neither is it desirable: Rather than unthinkingly applying one set of characteristics to every situation, researchers and practitioners need to consider for themselves and for each particular case what their assumptions are and what evidence supports these assumptions. While the specific characteristics will vary somewhat depending on the intervention, the underlying principles of evidence-based interventions are exactly the same. In order to illustrate this, we identify a number of examples of features of more complex resource intervention situations and the way in which we can start to similarly explore their underlying assumptions and then develop characteristics that will help to identify the extent to which an intervention based on these assumptions is evidence-based.

One such example\(^2\) can be found in the idea that some types of resource-oriented interventions may not be aiming to increase a resource (as in our illustrative case) but rather are aiming to buffer against depletion of the resource that has positive effects on well-being. In this case, the slightly different underlying assumptions for which evidence needs to be sought include:

- The presence of the resource at current levels is at the present time having a beneficial or protective effect on well-being;
- significant depletion of the resource is likely to occur in this situation;
- decreasing levels of the resource causes decreases in well-being; and
- the proposed intervention will buffer (prevent depletion of) the resource.

In exactly the same way as in our more simple case, the evidence for each of these assumptions (and the others on which the intervention is based) would be examined in order to identify the extent to which the intervention is evidence-based. If none of these assumptions is supported by evidence, then why intervene to buffer against resource depletion?

Another example concerns the idea that resources are dynamic and therefore fluctuate. Halbesleben et al. (2014) summarize several potential trajectories that resources may take over time. They posit that, for instance, some may decrease gradually, while others may increase sharply but then quickly become stable. Clearly, this notion of dynamic and fluctuating resources is not considered in the straightforward example we

\(^2\)We are grateful to the editors for suggesting this example.
used. But what are the implications of such trajectories for the design of evidence-based resource-oriented interventions?

As in our previous example, exactly the same principles apply: Examine the assumptions underlying the intervention and consider the evidence for each. It is entirely plausible that a particular resource may fluctuate according to one of the trajectories described, and hence, any resource-oriented intervention would have to take account of this trajectory. However, this is also an assumption and, for the intervention to be evidence-based, we would still expect there to be a reasonable quantity of good-quality evidence from previous research that the resource is indeed likely to follow the assumed trajectory.

It is worth noting that although many of these more complex resource processes seem plausible, if not theoretically likely, there is actually quite limited evidence about how they work and even less evidence about how to design interventions to affect such resources. ‘The dynamics of most processes at the workplace in terms of effective management of resources have remained largely hidden to date’ (Gorgievski, Halbesleben, & Bakker, 2011, p. 4).

In short, although our example did not reflect the potential complexity of resource-oriented interventions and their effects on well-being, the same principles of evidence-based practice apply equally to any well-being intervention.

**Using these key characteristics**

We are very aware of the practical constraints in conducting fieldwork. The purpose of setting out and using such characteristics is not therefore to suggest that all resource-oriented well-being interventions can and must have all these characteristics. Far from it. Rather, they are intended to serve the purpose of improving the quality of interventions by reminding us of what an ideally designed intervention would look like, and they can be used in two ways. First, they can be used as a checklist for evaluating the quality of published well-being interventions at work. As mentioned above (e.g., Briner & Denyer, 2012; Gough et al., 2012; Petticrew & Roberts, 2008), systematic reviews are essential tools of evidence-based practice. These are in essence pieces of research on existing research, as they aim to answer a specific question using explicit and replicable methods to search, find, critically appraise, and summarize the best available evidence relevant to answering that question. Critically appraising each piece of evidence requires that a standard set of criteria, such as those described in the key characteristics checklist, are applied to each study to evaluate its relevance, validity, and reliability in relation to the specific question posed. This is a vital part of conducting systematic reviews, as it enables us to make judgments about the quality of the studies and the trustworthiness of the findings, so that we can place more weight on findings from better quality studies. From an evidence-based practice perspective, it is important to use the best available evidence and be explicit about its reliability.

Second, these characteristics can be used by researchers and, to some extent, by practitioners to guide the design of interventions and to help address issues such as whether or not an intervention is even necessary, what kind of resource-oriented intervention may be effective, and what the possible harms or side effects may be. In this sense, these characteristics have some parallels with psychosocial risk assessment, although they make fewer assumptions about the risks that psychosocial hazards lead to harm (see Rick & Briner, 2000).
There are many practical obstacles to using these characteristics to guide intervention design. For example, there may be an absence of good-quality evidence about the precise nature of the well-being problem, or it may be impossible to include a proper control group. So what to do? Every situation will have its own particular potential solutions. However, there are some more general strategies that may help. First, when initially identifying and negotiating with an organization, these characteristics can be explained to gatekeepers and stakeholders as desirable not only for the researchers but also for the organization. After all, the more evidence-based the intervention is, the more likely it is to lead to the organization’s desired outcome. The more the organization understands this and why and how the intervention design matters, the more likely they are to find ways to help make it happen. Second, by bearing in mind the range of such evidence-based characteristics, it is possible while developing and negotiating the intervention to ensure as many as possible can be fulfilled. So while including some of these characteristics may turn out to be impossible, more effort can be focused on ensuring others are present. Last, it is important for any researcher to know when to walk away from a research opportunity: Not all intervention opportunities are worth taking, especially if they lead to the collection of data that in the end will be of very limited scientific and practical value. As mentioned above, there is not only a general shortage of intervention research, but also a particular lack of really good-quality research. For the sake of the field, it is desirable to have fewer but better quality intervention studies, and considering such design characteristics may help researchers to know where to draw the line. Last, it seems that the most successful intervention studies arise from long-term relationships between researchers and organizations. The development of such relationships can be facilitated by mutual understanding of what each party wants from the collaboration, and such characteristics represent one powerful way of expressing the purpose of the collaboration and how it can best work for mutual benefit.

An evidence-based approach to reporting intervention studies

Thus far, we have discussed how the design of resource-oriented well-being interventions can be improved by adopting certain design characteristics derived from an evidence-based perspective. However, from this same perspective, the design of interventions is only one area that needs attention. Equally important is the reporting of intervention studies and their results. First, practitioners and researchers need to be provided with sufficient details of the intervention to be able to use it in practice or to conduct replications and, more generally, make sense of the results. Second, all the effects of all the interventions should be reported, including those that are null, unintended, and negative. Each of these will be discussed in turn.

Reporting sufficient details of the intervention

As mentioned, both practitioners and academics in organizational psychology have been slow to consider or incorporate the principles of evidence-based practice. However, other fields that take evidence-based practice more seriously, such as medicine and public health, have paid considerable attention to developing checklists and guidelines to help ensure that all the relevant details of interventions are reported. While these areas may seem very different from organizational psychology or occupational health psychology, they often focus on exactly the same type of complex psychosocial interventions, such as community-based health promotion, represented by resource-oriented well-being...
interventions in the workplace. The need to provide more details of the intervention has also been recognized by Semmer (2006), who argues that the evaluation and reporting of stress interventions ‘requires the careful documentation of as much information as possible in a systematic fashion’ (p. 523). This is precisely the purpose of reporting checklists and guidelines produced in other fields. Similarly, Nielsen and Randall (2013) suggest that organizational-level occupational health interventions need to focus more on the processes involved, and they devise a checklist for reporting such information. Hence, we potentially have much to learn from other fields where colleagues have been trying to find ways of dealing with the absence of important information in the reporting of interventions for some time (Table 1).

Building on earlier attempts to develop standards for the reporting of medical trials and interventions, the Template for Intervention Description and Replication (TIDieR) checklist and guide aims to overcome these problems. It states,

> Without a complete published description of the intervention, other researchers cannot replicate or build on research findings. For effective interventions, clinicians, patients, and other decision makers are left unclear about how to reliably implement the intervention. (Hoffmann et al., 2014, p. 348)

There are exact parallels here for those interested in resource-oriented well-being interventions at work. How then can researchers replicate or make sense of intervention results without a detailed understanding of the intervention? And for those interventions that appear to be effective, how can organizational psychologists and other practitioners make decisions about whether and how to use the intervention without detailed information about what it entails? In other words, what is their practical value without such information?

While the TIDieR intervention reporting checklist presented in Table 2 may appear too detailed for use in this context, all the questions it asks are directly relevant to

### Table 1. A checklist of key characteristics of evidence-based interventions

<table>
<thead>
<tr>
<th></th>
<th>Description</th>
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<tbody>
<tr>
<td>1</td>
<td>There is a practically significant and specific well-being problem in the target group</td>
</tr>
<tr>
<td>2</td>
<td>The specific well-being problem identified is in principle amenable to change through the type of intervention proposed</td>
</tr>
<tr>
<td>3</td>
<td>The resource-oriented intervention selected is capable in principle of bringing about practically significant increases in this particular resource</td>
</tr>
<tr>
<td>4</td>
<td>There are no clear, strong, or obvious indicators of the causes of the well-being problem that are unrelated to the resource-oriented intervention?</td>
</tr>
<tr>
<td>5</td>
<td>Increasing the level of this particular resource will in principle have practically significant effects on the specific well-being problem</td>
</tr>
<tr>
<td>6</td>
<td>The target group has relatively low levels of this particular resource</td>
</tr>
<tr>
<td>7</td>
<td>There is a linear relationship between the resource and the specific aspect of well-being</td>
</tr>
<tr>
<td>8</td>
<td>There are no practically significant individual differences in response to increasing this particular resource</td>
</tr>
<tr>
<td>9</td>
<td>An explicit and well-articulated theoretical mechanism explaining how increasing the resource affects the specific aspect of well-being</td>
</tr>
<tr>
<td>10</td>
<td>An explicit and well-articulated account of the role of time in increasing both the resource and possible subsequent changes in the specific aspect of well-being</td>
</tr>
<tr>
<td>11</td>
<td>The target group is split into three subgroups: Intervention, alternative intervention, and non-intervention</td>
</tr>
</tbody>
</table>
reporting resource-oriented interventions. What is the rationale or theory for the intervention? What was actually done in the intervention? What was the procedure? How was it delivered? Where and when did it take place? Was intervention fidelity assessed?

In a systematic review of interventions to increase employee control, Egan et al. (2007, p. 952) also evaluated how well and in how much detail each study reported the intervention its implementation:

...in many of the original papers the reporting of the interventions was generally poor or difficult to assess, even with the help of implementation evaluation tools. There is a lack of evidence that the interventions were actually implemented in full, or at all...we have tried to summarise reported details of intervention implementation, but many papers offered few clues about this.

In a later review of four systematic reviews on the health effects of organizational-level interventions, it is stated that ‘In most cases, authors of included studies presented brief and anecdotal reports of implementation’ (Egan, Bambra, Petticrew, & Whitehead, 2009, p. 7.).

While we have not analysed in any systematic way the reporting of published resource-oriented intervention studies, it is clear that in our field the details presented are usually quite scant, and there are no explicit or standardized reporting requirements such as TIDieR and others that exist in medicine and related fields. In a quick scan of a number of key papers reporting resource-oriented intervention studies (DeJoy, Wilson, Vandenberg, McGrath-Higgins, & Griffin-Blake, 2010; Giannopoulos & Vella-Brodrick, 2011; Huppert &

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**Table 2.** TIDieR intervention reporting checklist (Hoffmann et al., 2014)

- **Item 1. Brief name:** Provide the name or a phrase that describes the intervention
- **Item 2. Why:** Describe any rationale, theory, or goal of the elements essential to the intervention
- **Item 3. What (materials):** Describe any physical or informational materials used in the intervention, including those provided to participants or used in intervention delivery or in training of intervention providers. Provide information on where the materials can be accessed (for example, online appendix, URL)
- **Item 4. What (procedures):** Describe each of the procedures, activities, and/or processes used in the intervention, including any enabling or support activities
- **Item 5. Who provided:** For each category of intervention provider (for example, psychologist, nursing assistant), describe their expertise, background and any specific training given
- **Item 6. How:** Describe the modes of delivery (such as face to face or by some other mechanism, such as internet or telephone) of the intervention and whether it was provided individually or in a group
- **Item 7. Where:** Describe the type(s) of location(s) where the intervention occurred, including any necessary infrastructure or relevant features
- **Item 8. When and how much:** Describe the number of times the intervention was delivered and over what period of time including the number of sessions, their schedule, and their duration, intensity or dose
- **Item 9. Tailoring:** If the intervention was planned to be personalised, titrated or adapted, then describe what, why, when, and how
- **Item 10. Modifications:** If the intervention was modified during the course of the study, describe the changes (what, why, when, and how)
- **Item 11. How well (planned):** If intervention adherence or fidelity was assessed, describe how and by whom, and if any strategies were used to maintain or improve fidelity, describe them
- **Item 12. How well (actual):** If intervention adherence or fidelity was assessed, describe the extent to which the intervention was delivered as planned
Johnson, 2010; Montano, Hoven, & Siegrist, 2014; Seligman, Steen, Park, & Peterson, 2005; Shadish & Cook, 2009; Vanhove, Herian, Perez, Harms, & Lester, 2015), none used any type of reporting standards. We would argue that there are compelling scientific and ethical reasons (see below) for adopting a set of reporting standards for any organizational well-being intervention, given their potential to both enhance and possibly harm well-being. In the past, there were practical constraints around providing such detailed information, because of page length limits in printing the article. However, online publishing has removed such constraints (e.g., Michie, Fixsen, Grimshaw, & Eccles, 2009), which means that full information can be provided as Supporting information.

**Reporting all the results of all intervention studies**

As has been well documented, there are clear publication biases in many fields including organizational psychology (e.g., Kepes & McDaniel, 2013) towards publishing mostly positive results and against publishing null or negative results. Various explanations for this phenomenon have been suggested. Perhaps the most convincing is that researchers are now compelled to keep publishing in order to maintain and develop their academic careers. The main purpose of publishing scientific findings has therefore shifted from developing our scientific understanding of the world to enhancing researchers’ careers. Given that journals and their reviewers are more likely in principle to reject papers that present null or negative results, papers containing such findings are less likely to be submitted for publication, less likely to be published, and more likely to remain hidden (also known as the file-drawer problem). Hence, for any particular research question or hypothesis, it is likely that most of the published findings are positive, leaving a hidden and unknown quantity of unpublished null or negative findings. This leads to a body of published research that is unlikely to be representative of all the research conducted on any particular question, as it will be positively skewed. While such biases are extremely troubling in any area of research, we would again argue that in the context of well-being interventions publication bias is troubling not only scientifically but also ethically (again, see below). This is because a bias of this kind may lead to the widespread use of interventions that appear effective only because only positive findings have been published, leaving us ignorant as to their actual effectiveness and their potential harm or side effects.

But what are the implications of this for the way in which we report the results of well-being intervention studies? First, it means that if researchers measure a range of outcomes (e.g., positive affect, physical symptoms, self-efficacy, state engagement, intention to quit, positive emotions, team cohesion, organizational citizenship behaviour, supervisor ratings of performance, job satisfaction) both before and after the intervention, they are more likely to report only those outcomes that show improvement. For each intervention study reported, we may mostly only ever find out about those outcomes that improved and not about others that remained the same or deteriorated. From an evidence-based perspective, it is therefore important to allow and indeed encourage researchers to publish all the findings from an intervention study; as mentioned above, this is made much easier through online publishing. Second, publication bias may mean that intervention studies with no or few positive results are not published or reported at all, although there are a few important and notable exceptions in this field. These include several case studies of organizational stress interventions reporting null and negative results and arguing that we need to learn from failures as well as successes (Aust, Rugulies, Finken, & Jensen, 2010; Biron, Gatrell, & Cooper, 2010; Nielsen, Fredslund, Christensen, & Albertsen, 2006).
But how can we ensure that papers under review are judged on their potential contribution rather than on the direction of the findings? One way of doing this is to initiate a review process in which authors submit details of a proposed study or the manuscript of completed study without the results and discussion. If the proposed study or partial manuscript is accepted, then the journal commits to publishing the study whatever the results. This process has been adopted, for example, by the journal, *Attention, Perception and Psychophysics* in their Registered Reports and Replications section. Such a process means that the merits or otherwise of an intervention study would not be judged by editors or reviewers on the basis of its findings but rather on the basis of its rationale, design, and method.

A second implication is that well-being intervention studies that have no positive results at all are likely to never be published, which, again, will bias the findings we have available. In some areas of medical research, this had led to various campaigns to ensure that all medical trials are published, irrespective, again, of their results (e.g., http://www.alltrials.net), and to similar campaigns (e.g., http://www.senseaboutscience.org), which advocate for a higher degree of transparency as to how research is compiled and disseminated. The hope with this approach is that the general public will become aware of their right to evidence (e.g., http://www.askforevidence.com).

From an evidence-based perspective, the way in which we report well-being interventions is just as important as their design. There is little point in having excellent intervention study designs and then failing to report sufficient details of what the intervention actually was or reporting only the positive findings. Similarly, there is little point in providing sufficient details of the intervention and reporting all of the findings, if the study design was itself weak and not capable in principle of producing valid or reliable results.

**Discussion and conclusions**

The main purpose of this paper was to identify ways in which the quality of resource-oriented well-being interventions could be assessed and improved. We have done this in part by drawing on the general principles underlying evidence-based practice and in part by examining developments in other fields, particularly medicine, where much more thought has been given as to how intervention design and reporting can be improved. One of the main ways this has been done in other fields is through the development of criteria, guidelines, and checklists. We have adopted this approach in developing our own checklist of some of the key characteristics that we would expect to see in the design of an evidence-based well-being intervention. This checklist can be used to assess the quality of intervention studies and also to help to develop and design interventions and to identify appropriate organizational contexts and populations.

In addition to improving intervention studies through their design, we considered how changing the way in which we report the results of intervention studies also plays a crucial role. We presented and discussed the ‘TIDieR’ intervention reporting checklist, which aims to help ensure that sufficient details of an intervention are reported to make a study scientifically and practically useful. We also discussed the implications of publication bias and argued that reporting mostly positive results and not reporting negative or null results was particularly problematic in the case of well-being interventions. We also suggested some ways in which publication bias could be overcome. It should be noted that these suggestions for improving both the design and reporting of intervention studies apply
equally well to other types of well-being intervention at work, such as traditional stress management interventions and job redesign.

We are aware that well-being intervention researchers are likely to view the design characteristics and the reporting checklists as somewhat unrealistic and unachievable. We agree that they represent challenging goals, but they are goals that make sense scientifically and also practically from an evidence-based perspective. Indeed, similar suggestions have already been made and are beginning to be adopted in other areas. It is important to bear in mind that such guidelines are just that – guidelines – and should not be used uncritically or rigidly, as they inevitably require further development and need to be adapted to circumstances. They can, however, help us to evaluate the quality of the existing body of evidence and also provide benchmarks to help improve future research, even if they are not all attainable in every case and may take some time to have an impact – if they are to have any at all. Also, given our very limited resources as researchers and the potential great importance of well-being interventions, it may be more sensible to use the resources we have to conduct fewer but better quality and fully reported intervention studies (even though, as discussed, pressures to publish may act as a deterrent). It is only through improving the quality of intervention studies and the way in which they are reported that we will improve the quality and strength of the evidence-base on which future research and practice will be built.

These suggestions for improving the quality of interventions also make sense ethically. When, as researchers or practitioners, we intervene with the aim of improving the well-being of employees, this brings with it profound ethical responsibilities. We are asking organizations and employees to give their time and other resources to take part in what may be demanding, invasive, and disruptive procedures or processes. While the intention of improving well-being is laudable, good intentions are not sufficient to prevent unethical behaviour.

Returning to our checklist of key characteristics of evidence-based interventions, many of these, if absent, would cast serious doubt on the ethics of an intervention study. Consider, as an example, a well-being intervention conducted in circumstances in which there is no clear evidence that:

- there is a practically significant and specific well-being problem in the target group (Key characteristic 1 absent);
- the specific well-being problem identified is in principle amenable to change (Key characteristic 2 absent);
- the resource-oriented intervention is capable in principle of bringing about practically significant increases in this particular resource (Key characteristic 3 absent); and
- increasing the level of this particular resource will in principle have practically significant effects on the specific well-being problem (Key characteristic 4 absent).

By any standards, and in any context, a researcher who conducted and studied an intervention in these circumstances would need to answer some serious ethical questions. Why intervene to improve well-being, if there is no clearly identified well-being problem? Why try to improve a well-being problem if there is no evidence it can improved? Why use an intervention to increase a particular resource if it is not known whether that intervention can bring about increase? Why try to increase this resource if it is not known whether it will in principle have effects on the well-being problem?

The American Psychological Association’s Ethical Principles of Psychologists and Code of Conduct (2002) states that when obtaining consent, participants must be informed of, for example, ‘potential risks, discomfort, or adverse effects’ of the proposed
intervention and ‘any prospective research benefits’ (Standard 8.02, p. 10). Similarly, the British Psychological Society’s Code of Human Research Ethics (2010) states that psychologists need to consider the ‘potential risks of harm’ and avoid ‘doing harm to research participants’ (Standard 2.2, p. 10). This means that, as discussed above, not only must we have a reasonable quantity of good-quality evidence that the intervention is likely to be beneficial, but we must also have evidence about potential harm, so that participants can give informed consent, and we can take steps to minimize any potential harm.

The guidance and checklists presented here for improving the quality of resource-oriented well-being interventions will not only improve the scientific standard of intervention research but also make research findings more practically useful and useable. Last, but not least, they will also help us to fulfil our ethical responsibilities.

References


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