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# Measuring Workplace Wellbeing*

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**Abstract**

We propose a simple definition of workplace wellbeing that is grounded in the maturing science of subjective wellbeing. We argue that workplace wellbeing is how we feel at work and about our work. In this subjective approach, workplace wellbeing encompasses three main dimensions: i) evaluative job satisfaction, ii) the affective or emotional experience of work, as well as iii) how meaningful and purposeful work activities are. We briefly review the extensive literature on the validity and reliability of subjective wellbeing measures, and offer general principles as well as a prototype module of four survey questions for measuring workplace subjective wellbeing (WSWB). Finally, we discuss future directions for research and practice on wellbeing at work.

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# 1 Introduction

Workplace wellbeing has long been a topic of great interest to academic researchers and business practitioners alike.[1] The wellbeing of workers is highly important in its own right, but is also crucial for organizational success – a large literature has, for example, established links between workplace wellbeing and key performance outcomes such as productivity, retention, and recruitment (e.g., Bellet et al., 2023; Judge et al., 2001; Oswald et al., 2015; Ward, 2022).[2] However, a lack of clarity in defining and measuring the concept of work wellbeing has the potential to impede both its scientific progress as well as its practical implementation.

In this paper, we propose a simple and tractable definition that captures how we feel at work and about our work. We start from the position that there is already a well-established science of subjective wellbeing (SWB), which has by now coalesced around a definition that sees it comprising evaluative wellbeing, affective wellbeing, and "eudaimonia" (Clark, 2018; Diener et al., 2017). Mapping to the work context, we see workplace subjective wellbeing (WSWB) as having three main components: (i) evaluative job satisfaction, (ii) workplace emotional experience, and (iii) finding work purposeful, worthwhile, or meaningful.

The term workplace wellbeing is often either conflated with wage or is, alternatively, viewed as an amalgamation of various positive attributes of a job – such as flexibility, pay, belonging, support, satisfaction, working hours, stress, and fairness, among others.[3] However, it is unclear how to decide which elements to include in any such list, nor is it straightforward how to weight them in any measure of work wellbeing. In contrast, the subjective approach to workplace wellbeing is democratic and asks workers directly how they feel at work. After all, who else would be better positioned to judge their wellbeing?

The list approach conflates outcomes with drivers, leading to a potentially confusing and less practical understanding of wellbeing in the workplace. Empirical measures that assess the evaluative, affective, and eudaimonic dimensions of wellbeing can provide an overall picture of work wellbeing, but they do not necessarily tell us why we feel a certain way (or how to improve it). To be clear, many of the factors commonly included in discussions of

[1] For more detailed discussion of the long history of work on employee wellbeing, broadly understood, see, e.g., Judge et al. (2017); Tenney et al. (2016); Wright (2005, 2006). For early examples of work in the area, see, e.g., Hersey (1932) or Fisher and Hanna (1931).

[2] In addition to these individual-level studies, firm-level measures of wellbeing have been shown to positively correlate with financial performance, providing evidence for the potential benefits of investing in employee wellbeing (De Neve et al., 2023; Edmans, 2012; Krekel et al., 2019).

[3] For an example of this approach, see, e.g., the Worker Well-Being Questionnaire developed by the National Institute for Occupational Safety and Health (NIOSH) in the USA, which asks an extensive battery of 68 questions on various subjective and objective aspects of work (see `https://www.cdc.gov/niosh/twh/wellbq/default.html`).

workplace wellbeing—such as wages, working hours, flexibility, managerial support, and so on—are often hugely important, but are more accurately characterized as drivers of wellbeing at work. The WSWB approach does not at all minimize the importance of such factors, but rather attempts to provide a clearer framework in which to think about their relative importance. Without a clear demarcation between drivers and outcomes, it is challenging to determine which of different aspects of work more or less strongly shape worker wellbeing.

Given rising demand for workplace wellbeing and research, it is natural that debates surrounding how best to conceptualize and operationalize it will become more prominent. Our aim here is to be as practical as possible – and we certainly see no reason to re-invent the wheel. In proposing a definition of workplace wellbeing, we build on a decades-long field of research on SWB that has thought extensively about the nature of wellbeing as people experience it themselves as well as studied the validity and reliability of such measures. Moreover, within the workplace context, a great deal of research does already exist on each of the three main dimensions we identify – such that we can and should build on the extensive existing literatures on job satisfaction (e.g., Freeman, 1978; Judge et al., 2017, 2020; Wright, 2006), affect in the workplace (e.g., Barsade and Knight, 2015; Brief and Weiss, 2002; Knight et al., 2018; Weiss and Cropanzano, 1996), and work purpose as well as meaning (e.g., Ariely et al., 2008; Cassar and Meier, 2018; Gartenberg et al., 2019; Rosso et al., 2010; Wrzesniewski, 2003). However, much of this huge body of work currently exists within silos. By bringing these topics together under the umbrella of workplace wellbeing, we can move toward a more comprehensive understanding – and, in doing so, build a solid and useful evidence base that can help to inform managers and policymakers, as well as workers more generally.

Collecting workplace subjective wellbeing data is crucial for monitoring progress, identifying problems, understanding drivers, informing policy choices, and evaluating organizational and management practices. Ultimately, the goal of using such data in this way is to improve workplace wellbeing – which a growing number of companies now see as one of their objectives (HBR, 2020). Beyond companies, many countries around the world are increasingly seeing national subjective wellbeing as an important measure of success (Graham et al., 2018; Krueger and Stone, 2014). If we are serious about improving societal wellbeing, as many governments and others claim to be, then improving workplace subjective wellbeing is surely one of the most powerful ways to do so. But in order to move in this direction, it is useful to have a clear and shared understanding of what workplace wellbeing is and how it can be measured in valid and reliable ways. A great deal of progress has been made in measuring SWB in comparable and consistent ways across countries (Durand, 2018), yet there is comparatively less clarity and shared agreement on how to think about and gauge workplace wellbeing.

Nevertheless, demand is clearly growing. The UK government, for example, commissioned a large-scale report into how how employers can better support the mental wellbeing in the workplace (Stevenson and Farmer, 2017). The UK's What Works Centre for Wellbeing has recently also conducted a systematic review to try to better understand the effects of workplace health and wellbeing-related practices (Daniels et al., 2021) and, similar to the NIOSH survey noted above, also provides suggestions for a number of survey questions with a main focus on drivers of work wellbeing such as work demands, relationships and social environment, autonomy, workplace health, and so on.[4] Interest in workplace wellbeing on the part of firms is on the rise as well (HBR, 2020). A group of prominent companies recently joined academics and policymakers to help co-found the *World Wellbeing Movement*, which aims to put wellbeing at the heart of decision-making in business as well as public policy,[5] while influential ratings agencies such as *S&P Global* are now incorporating workplace wellbeing—defined in the way in which we propose and outline in this paper—into their sustainability assessments of companies.[6] Moreover, widely-used jobs platforms like *Indeed* have begun to collect and disseminate work wellbeing data—collected in a comparable and consistent way, in line with academic definitions we outline in this paper—on a very large scale, with uses for workers, job seekers, as well as companies themselves.[7]

The paper is structured as follows. We begin in Section 2 by briefly reviewing how subjective wellbeing is understood and measured across disciplines, and propose a definition of employee wellbeing that maps the key elements of SWB to the workplace context. We discuss issues surrounding the measurement of SWB in Section 3, before proposing a prototype 4-item survey module in Section 4 that aims to measure WSWB. Finally, in Section 5 we discuss potential limitations and extensions as well as directions for further research.

# 2 Workplace wellbeing: Conceptual issues

## 2.1 The starting point: Subjective wellbeing

We propose a definition of workplace wellbeing that is rooted in subjective wellbeing. One key reason for doing so is that workplace wellbeing is inevitably seen by many—particularly in the business community—as a hopelessly vague and nebulous concept. Thus one benefit of beginning our argument in the SWB literature is that a great deal of thought and discus-

[4]See `https://whatworkswellbeing.org/resources/workplace-wellbeing-question-bank/`.

[5]See `https://worldwellbeingmovement.org/`.

[6]See `https://www.spglobal.com/esg/csa/` for more details of the ways in which worker wellbeing is now a part of the Corporate Sustainability Assessment criteria.

[7]See `https://www.indeed.com/employers/work-wellbeing` for more detail, as well as Box 1 below – in which we discuss their data collection in more detail.

sion has already taken place in terms of how to think about the structure of SWB and its component parts. Perhaps more importantly, decades of research has already gone into understanding how it can be measured in valid and reliable ways. As the OECD (2013) note, "perhaps *because* of concerns about their use, quite a lot *is* known about how subjective well-being measures behave under different measurement conditions."

Happiness has traditionally been thought of as an elusive concept that could not be measured. However, decades of research—across fields including psychology, economics, neuroscience, organizational behavior, and sociology—have shown that this is no longer the case (see Clark, 2018; Diener et al., 2017, for reviews). Before moving to the practical aspects of measurement, however, it is important to first be clear about what it is that is being measured – that is, what exactly the underlying concept is. This is always true, but is particularly important for subjective wellbeing, which might be seen as somewhat more complicated than asking someone a survey question about their age or income.

*Subjective wellbeing*, which is often also referred to more loosely as "happiness," is an umbrella term for a wider-ranging concept that refers to how we think about and feel in our lives. This is a subjective measure – that is, it is self-reported and starts from the notion that when it comes to assessing someone's wellbeing it is, ultimately, the respondent themselves who know best. Thought of in this way, SWB has three main components: evaluation, affect/experience, and "eudaimonia" (Diener, 1984; Diener et al., 1999). *Evaluative wellbeing* is a cognitive judgment, an overall assessment of how things are going, all things considered. This is often measured through metrics like self-reported life satisfaction (or the Cantril Ladder). *Affective wellbeing*, on the other hand, is the emotional experience of people's lives on a day-to-day basis – in other words, the moods and emotions they feel. Positive affect refers to the experience of emotions such as enjoyment and happiness, while negative affect includes emotions like stress, sadness, and disappointment. Finally, *eudaimonia*—which has more recently been incorporated into SWB research, to be seen as a third key element—refers to how much purpose and meaning people get out of their lives, or how worthwhile they think the things are that they do.

The concept of SWB described above is now widely used across multiple fields in the academic literature. A great deal of work has examined the question of what makes people happy – that is, has investigated the correlates and causes of various dimensions of SWB, including factors such as income, unemployment, personal relationships, health, ageing, and so on (Layard and De Neve, 2023). In addition to looking at antecedents, a significant amount of attention has also been paid to the downstream consequences of subjective wellbeing and the ways in which emotions, moods, and levels of life satisfaction may shape human decision-making and behavior (see De Neve et al., 2013, for a review).

## 2.2 Increasing relevance of SWB over time

Approaches to SWB have varied over time and across different research schools. Some have focused more stringently on affective or experienced measures of SWB (such as Kahneman and Krueger (2006) and Dolan and White (2007)), while others have focused more primarily on evaluative aspects such as life satisfaction (such as Clark et al. (2018)) and still others have chosen to direct their attention more squarely at eudaimonic aspects of SWB like purpose and flourishing (such as Huppert et al. (2009) and VanderWeele (2017)). Despite these differences, evidence and practice has converged on measuring each of the three key aspects in any SWB module of questions, and this is what is recommended by the OECD (see Figure A1 for their suggested core survey questions) and is now being implemented in practice in large-scale governmental surveys in countries like the United Kingdom (see Figure A2 for the four survey questions now asked across governmental surveys; see Dolan et al. (2011) for broader discussion of and motivation for these measures).

As we noted in the Introduction, SWB has also caught the attention of policymakers and is now being used at different levels of government around the world. For instance, the UK launched an initiative in 2010 to measure subjective wellbeing on a large scale (Hicks et al., 2013), while further countries such as France, New Zealand, Iceland, Australia, and others have moved in a similar direction (Graham et al., 2018; Krueger and Stone, 2014). The US Bureau of Labor Statistics now includes a wellbeing module in the American Time Use Survey (Krueger et al., 2009; Stone et al., 2018), while the US National Academy of Science established an expert panel on measuring subjective wellbeing (National Research Council, 2013).

The OECD (2013), an influential intergovernmental organization, provides guidelines for national statistics offices to measure subjective wellbeing. They suggest question wordings for each of the main dimensions of SWB, with the intention that these will be asked in standard national surveys in a consistent way that is comparable across countries as well as time. Over 90% of OECD countries now measure at least life satisfaction in their national surveying, with smaller though still significant numbers also measuring affective and eudaimonic aspects of wellbeing on a large scale (Durand, 2018)

## 2.3 Workplace subjective wellbeing

With the extensive existing body of research on subjective wellbeing in mind, we can now turn our attention to the specific context of the workplace. We propose what we see as a relatively simple solution to the confusion that often surrounds workplace wellbeing. We start from the general definition of SWB, and map to the work domain. Thus, workplace

Table 1: Mapping of SWB to Workplace Wellbeing

| **Subjective Wellbeing** | **Workplace Wellbeing** |
|---|---|
| Evaluative | Job satisfaction |
| Affective | Emotional experience of work |
| Eudaimonia | Work purpose & meaning |

wellbeing is how we feel at work and about our work. In this way, workplace wellbeing has three main dimensions (see Table 1). Mapping from the general literature on SWB, these dimensions are i) job satisfaction (*evaluative*), ii) the emotional experience of work (*affective*) and ii) finding work purposeful, worthwhile, or meaningful (*eudaimonia*).

None of the three aspects of WSWB we identify is new. Far from it. But our main aim in offering this taxonomy is to bring some conceptual clarity to the concept of workplace wellbeing and its structure. To move forward and develop a useful body of evidence on the topic, we must learn and build on the existing literatures on job satisfaction, affect in the workplace, and workplace purpose and meaning. Bringing these topics together under the umbrella of WSWB, the aim is to simplify the conceptual terrain of workplace wellbeing.

**Job satisfaction** A comprehensive body of literature, encompassing numerous academic fields, has studied job satisfaction (e.g., Freeman, 1978; Judge and Klinger, 2008). Indeed, the research on job satisfaction has spanned over a century, resulting in multiple generations of studies (see Judge et al., 2017; Wright, 2006, for a more historical discussion). We noted above that "happiness" is sometimes used as a general or umbrella term for subjective wellbeing, although it is more accurately one (affective) component of a broader concept. A similar pattern is arguably observable in job satisfaction research, which has often seen it as a multi-component concept, which is variously seen as comprising evaluative, affective, behavioral, and attitudinal elements. In line with this, numerous multi-item scales have been proposed to measure job satisfaction, but they frequently attempt to gauge a much broader concept.

We argue that job satisfaction should be regarded as an evaluative judgment about an individual's job, which constitutes a crucial domain of their overall life. It is an overarching assessment, all things considered, about how things are going with the person's job. This is thus a cognitive aspect of workplace wellbeing and is not related to any specific moment in time. Conceptually speaking, we do not expect it to vary significantly for any given worker on a day-to-day basis, but rather move more slowly over time in a job and between jobs or workplaces.

**Workplace affect** While much of the research throughout the 20th Century on workplace wellbeing focused on job satisfaction, a more recent turn in the literature has seen a greater focus paid to affect in the workplace (Barsade and Knight, 2015; Brief and Weiss, 2002; Knight et al., 2018).[8] As we noted above, can be divided into positive and negative aspects. Positive affect at work pertains to the extent that individuals experience positive emotions in their jobs, such as enjoyment or happiness. Oswald et al. (2015) examine the extent to which positive affect has an impact on performance (see also Bellet et al., 2023; Erez and Isen, 2002), for example, while others have also focused on issues such as the interplay between affect and creativity at work (Amabile et al., 2005) or more generally on the ways in which affective experiences unfold in response to events at work (Weiss and Cropanzano, 1996).

Negative affect at work refers to the degree that workers experience negative emotions in their jobs, including stress, worry, anxiety, and anger.A substantial body of research has addressed stress, both in workplaces contexts as well as more generally (see, e.g. Lazarus and Folkman, 1984), but further work has also investigated other negative emotions in the workplace, such as anger within organizational contexts (e.g Gibson and Callister, 2010) or anxiety (e.g. Cheng and McCarthy, 2018).

**Meaning and purpose at work** There is a growing literature, across multiple disciplines, dedicated to purpose and meaning at work (see, e.g. Cassar and Meier, 2018; Gartenberg et al., 2019). Indeed, a long history of work has focused on the causes and consequences of meaning, both at work and more generally in life (Ryan and Deci, 2001; Ryff, 1989). In the workplace context, much of the recent discussion of purpose pertains to corporate purpose, which typically refers to companies' efforts to make a social impact. In terms of workplace wellbeing, however, we see it rather as the extent to which individuals themselves derive purpose and meaning from their work (for reviews, see, e.g. Dik et al., 2013). Furthermore, this concept not only encompasses the presence of meaning in work but also the degree to which work is positively meaningful and purpose-oriented (Rosso et al., 2010; Steger et al., 2012). This line of thinking also relates to work on positive organizational scholarship (POS), which has grown significantly in recent years and focuses on various aspects of thriving at work, including positive meaning and purpose (see Cameron et al., 2003; Pratt and Ashforth, 2003; Wrzesniewski, 2003).

[8]Interestingly, much of the very early work (i.e. in the 1920s and 1930s) did in fact look at moods and emotions, such that the later turn might be thought of more as a return to affect.

# 3 Workplace wellbeing: Measurement issues

In this section, we aim to do two things, each of which informs and helps to build toward a recommended survey module that we present in more detail in Section 4. First, we briefly survey the main evidence on validity and reliability, in order demonstrate in more detail what was noted in the influential Stiglitz Report noted, namely that "research has shown that it is possible to collect meaningful and reliable data on subjective well-being" (Stiglitz et al., 2009).[9]. Second, and more practically, we survey in more detail the evidence relating to the choices researchers have to make when designing wellbeing surveys, and the potential consequences these decisions have. One takeaway from the extensive literature on the validity and reliability of SWB data is that survey design is highly important and can go a long way to help overcome some of the methodological challenges involved in collecting such data. In each case, we survey the literature without pretence to completeness (for more detailed treatments, see, e.g., Diener et al., 2009a; Kahneman and Krueger, 2006; Krueger and Stone, 2014; OECD, 2013). We focus our discussion on aspects of survey design most pertinent to measuring subjective wellbeing, in the interests of brevity (**?**, see)[for an excellent overview of the many issues one may encounter in designing and running surveys more generally]stantcheva2022run.

## 3.1 Validity and reliability of SWB data

**Reliability** Reliability typically refers to the extent to which a measure is consistent. On the one hand, survey measures of SWB have shown good test-retest reliability. This has been shown to be particularly the case for evaluative measures of SWB like life satisfaction, which measure an inherently more stable construct (Krueger and Schkade, 2008), but similarly adequate reliability has nevertheless been shown for more affective aspects of wellbeing like moods and emotions, which are by nature more likely to fluctuate over time (see, e.g. Watson et al., 1988). While reliability can present itself as an issue when using individual-level data, this is less the case when looking at aggregates. Much of the literature here has focused on country-level averages, where test-retest reliability has been shown to be high (see Diener et al., 2013, for a more in-depth discussion as well as review of the literature on the validity and reliability of SWB measures more generally).

On the other hand, in addition to looking at test-retest reliability, an alternative approach is to use different measures of the same underlying concept and assess the extent to which these measure reliably tap into the same thing. Using this approach, the reliability of different

[9]The Commission was headed by Stiglitz, Sen, and Fitoussi and produced the *Report by the Commission on the Measurement of Economic Performance and Social Progress.*

SWB measures has also been demonstrated (see, e.g., Bjørnskov, 2010; Diener et al., 2009a, for research assessing the extent to which different measures of life satisfaction converge).

**Validity** The validity of a measure can be thought of as the extent to which that measure actually captures the concept that it is supposed to. This means, of course, that it is important to be clear about the concept before we can begin to consider how valid any measure of it is. Validity is inherently more difficult to assess than reliability, particularly for subjective measures. For example, when assessing the validity of a survey question asking an employee about tenure, it is relatively straightforward to determine the extent to which the question comports with reality. However, when the underlying construct is itself inherently subjective, this presents more of an issue. Work on the validity of SWB measures has thus followed various different approaches, all of which point in a positive direction.

One approach has been to assess the *face validity* of SWB measures, with one line of work finding that SWB questions are answered relatively easily by respondents, in a relatively short period of time. Moreover, respondents refuse to answer SWB questions at fairly low rates – much less so than, for example, questions on income. This suggests that SWB questions make sense to people.[10] An alternative approach is to examine *convergent validity*, with research showing that an individual's own response to SWB questions is well correlated with assessments made by their close friends and family (Schneider and Schimmack, 2009). Moreover, people's behaviors tend to align with their self-reported SWB (Kaiser and Oswald, 2022) – for example, job satisfaction predicts subsequent quits in longitudinal data (Clark et al., 1998). A more biological approach has been to look at the correlation of self-reports with activity in the brain (Urry et al., 2004) as well as cortisol (the primary stress hormone) in the bloodstream (Steptoe et al., 2005) and hypertension (Blanchflower and Oswald, 2008). Finally, research has demonstrated that SWB measures show high levels of *construct validity*. That is, such measures behave in ways that make theoretical sense. For example, unemployed people experience a large decline in life satisfaction when they lose their jobs and divorced people become very unhappy when their marriage ends before recovering a few years later (see, e.g. Clark et al., 2008, 2018). Moreover, subjective measures of wellbeing align well with more objectively-measured metrics (Oswald and Wu, 2010).

[10]The UK Office for National Statistics found that 0-10 questions on four key SWB questions took around 30 seconds each, on average. Of course, it is worth noting that if a response time is too quick, this may signal that a question is being answered heuristically rather than indicating that it is easily comprehensible (for a broader discussion, see OECD, 2013).

## 3.2 Anatomy of survey questions on wellbeing

Although we noted above that there is by now a large body of evidence, spanning multiple decades of interdisciplinary work, that has focused on the reliability and validity of measures of SWB, much of the challenge in limiting the potential biases in such data lies in survey design. Perhaps because of concerns that subjective wellbeing or "happiness" is a difficult thing to measure, a great deal of work has been done over the past few decades in terms of how to best go about doing so. We do not attempt to go into this large literature in depth (see, e.g. Diener et al., 2009a, 2018; OECD, 2013, for more in-depth reviews). However, we want to draw out some key principles from this work that guide good practice when measuring workplace wellbeing, and inform our suggestions for prototype survey questions.

**Question wording** A key principle in any survey design is that questions should be easy to understand, place only a low cognitive burden on the responder, and unambiguously ask about the construct being measured. This reduces the chances that respondents might fall back on using heuristics or idiosyncratic response styles when answering SWB questions.[11] One way to ensure understanding is to begin any wellbeing module with an introductory text that sets the tone. Additionally, text can come between questions in order to buffer – for example, between evaluative and affective measures (see the OECD core module of prototype SWB questions for an example of this approach).

We recommend that question wordings remain constant over time (as well as across respondents). In some circumstances, this is not possible or desirable – for example, if a company is considering adding a new module of workplace wellbeing questions based on the extensive science of SWB that replace older questions on related topics. In this instance, it can be useful to use parallel samples, such that it is possible to analyze the effect of the change in wording and make it possible to construct more accurate time series that adjust for wording or other methodological changes.

**Polarity** Another aspect to bear in mind is whether the question being asked is unipolar or bipolar. On a unipolar scale, the middle of the scale corresponds to a moderate amount of whatever is being measured. On a bipolar scale, however, the mid-point instead corresponds to a neutral ground between two constructs that are opposite to each other such as happiness and sadness. The best practice in the academic literature is to ask unipolar questions which can be easily understandable to respondents. This means asking questions for both positive and negative affect separately, in order not to confuse respondents. For example, it is better

[11] By making questions easily understandable, this also increases engagement and motivation, reducing the risk that respondents will attrit or answer without giving the proper attention.

to ask about happiness on a scale that goes from "not at all happy" to "completely happy," and then asking a further question about sadness, rather than asking a question where the scale runs from "very unhappy" to "very happy."

**Reference periods** Wellbeing questions typically involve a reference period. This is important since it shapes what is actually being measured. For evaluative questions, which are designed to tap into a global cognitive judgement, the reference period is broad – typically something along the lines of "these days," "nowadays," or "overall." While the same is typically also true for eudaimonic SWB questions, the choice of reference period can be a more significant choice for affective measures. Affect is more particularly about a person's feelings, meaning that survey questions will typically refer to a particular period of time. This is because the question is asking about someone's emotional experience as they remember it, and memory is subject to a number of recall biases. A such, it is usually more reliable to ask about specific points in time, preferable in the near past.[12] For instance, the Gallup World Poll asks about emotions experienced "yesterday," in order to reduce recall biases. The Positive and Negative Affect Schedule (PANAS; Watson et al. (1988)) is typically asked in relation to "the past week," while the affective questions in the European Social Survey also refer to the past week (Huppert et al., 2009). Some surveys extend further, such as the emotional items in the The European Quality of Life Survey, which ask about the previous two weeks, while The Scale of Positive and Negative Experience (SPANE; Diener et al. (2010)) questions refer to emotional experiences "during the past 4 weeks."

**Scale length** How long should the scale be? Practices have varied over time, with the widely-used happiness question in the US General Social Survey asking respondents on a 3-point scale whether they are "very happy," "pretty happy," or "not too happy," while others have favoured longer scales such as the 11-point scale now used by many such as the ONS, German Socio-Economic Panel, and others. Ultimately there is a balance to be made here. Generally, longer scales are preferred since if the number of response categories is limited, it can become impossible to detect subtle differences among respondents – even when such differences do exist. But finding the optimal number can be more tricky. For evaluative questions, in particular, the literature has converged on 11-point scales that range from 0 to 10. Such scales allow for a wide range of responses while remaining easily understandable. While 0-10 scales are frequently used for evaluative measures, affective wellbeing is often

[12] Alternatively, one can ask about people's feelings states as they experience them (using experience sampling methods) or by using methods that seek to approximate this approach such as the day reconstruction method (DRM).

measured on shorter ones. For example, the Gallup World Poll asks respondents yes/no questions about the emotions they experienced yesterday.[13]

**Scale labelling** A further issue is whether each and every response category should be given a verbal label (e.g. very unhappy, slightly unhappy, pretty happy, quite happy, very happy) or not. In such cases, 11 is likely too many for a respondent to hold in their memory and give an accurate answer. However, for numerical scales where only the anchors are labeled (for each example where 0 means "not at all" and 10 means "completely," this becomes much less of a concern. Along these lines, recent movements have seen affective questions also being asked on the more standard 0-10 scale, such as in the ONS surveys and those that have been designed in line with the OECD (2013) recommendations. But even having decided to ask questions on a 0-10 scale while labeling only the extremes, it is still necessary to then decide how to label those extremes. Such identifiers send a signal to respondents about how they should respond. Here the best practice is to offer absolutes (such as "not at all" and "completely") since this allows for respondents to offer responses on the full scale. Moreover, such absolutes typically have an easily understandable and shared meaning across respondents (see, e.g., Diener et al., 2009c, for further discussion).[14]

**Question ordering** Question ordering effects can pose a problem when collecting SWB information (as with collecting many other measures in surveys). This is true both in terms of where in the survey the module of SWB questions is asked as well as the order in which the questions are asked within the SWB question module. Context can cause biases in question responses. Such cues can, for example, cause there to be priming effects. Equally, the survey context may lead people to respond in ways that seem socially desirable or that they think might please the interviewer.

The general best-practice approach is to try minimize any risk of question ordering effects by asking SWB questions as near to the beginning of the survey as possible, in order to avoid any contamination or interference. In particular, it is important to avoid placing the questions directly following any sorts of questions that might elicit an emotional response such as questions about political or social issues (see, e.g. Deaton and Stone, 2016). Equally, questions that might provide a heuristic for answering the workplace wellbeing questions, such as asking how the company is performing in general. In order to be certain, it is also

[13] In addition, for evaluative workplace wellbeing, the Gallup World Poll asked a question on job satisfaction with a yes/no response scale corresponding to whether the respondent was satisfied or not with their job.

[14] Vague labels such as "quite" or "slightly" happy can cause problems by introducing ambiguity, and should thus be avoided. Indeed, even within the English-speaking world, the word "quite" has very different meanings.

possible to ask transition questions that attempt to refocus attention, though care should be taken when doing so, so as not to introduce further biases.

Within SWB question modules, the overall evidence suggest that it is best to start from the general and move to the more particular. In practice this means starting with a question on evaluative wellbeing and moving to more specific questions about affective experiences.

# 4 A recommended survey module

In this section, we offer four prototype questions that can be considered to measure the core aspects of WSWB. We present this as a survey module in Table 2, such that it can be placed in a straightforward way into existing surveys.

To measure workplace wellbeing in a comprehensive way, it is crucial to assess each of the three components we identified earlier: job satisfaction, workplace affect, and meaning and purpose at work. Adopting a similar approach to the OECD's recommendations for measuring SWB, we propose a set of core survey questions that can be used to assess workplace wellbeing across different contexts and organizations. These questions can be adapted and supplemented with additional items depending on the specific goals of the research or assessment.[15]

## 4.1 Job satisfaction

In Table A1, we summarize the question wordings for single-item job satisfaction from some of the most widely-known and commonly-used surveys, such as the major household panel surveys in the UK, Germany, and Australia as well as in the International Social Survey Programme. A general pattern is evident here, and we see no reason to deviate significantly from such questions. We suggest asking respondents "*Overall, how satisfied are you with your job?*" In line with best practice suggested by the OECD (see Figure A1) and what has been implemented in major surveys such as those carried out by the UK Office for National Statistics (ONS, see Figure A2), we designed our prototype questions such that they are all on a comparable scale that is easily understandable to respondents. It is an 11-point scale from 0 to 10 that allows respondents to provide meaningful variation in the different measures of workplace wellbeing, while not being overly burdensome. We provide anchors at the two ends of the scale rather than labeling each interval (since this would mean having to use a

[15] For a larger repository of some of the subjective wellbeing questions that are commonly used in surveys, see `https://www.hsph.harvard.edu/health-happiness/repository-of-positive-psychological-well-being-scales/` by the Lee Kum Sheung Center for Health and Happiness at Harvard University.

Table 2: Survey Module on Workplace Subjective Wellbeing (WSWB)

| *For each of these questions please give an answer on a scale from 0 to 10, where 0 is "not at all" and 10 is "completely."* | |
|---|---|
| Overall, how satisfied are you with your job? | [0-10] |
| Overall, how purposeful and meaningful do you find your work? | [0-10] |
| How happy did you feel while at work during the past week? | [0-10] |
| How stressed did you feel while at work during the past week? | [0-10] |

shorter scale while also introducing difficulties in having to label intervals with potentially vague wordings such as quite or slightly), and use labels that are absolutes/extremes, such that the scale provides the full range of possible experiences and evaluations.

## 4.2 Meaning and purpose

Many have argued that any notion of subjective wellbeing should include aspects of purpose and meaning (see also Ryff, 1989; Seligman, 2011; White and Dolan, 2009); however, such eudaimonic aspects of SWB have a shorter history of measurement in major surveys, meaning that there is thus less to choose from in terms of model questions to work from (see Steger et al., 2012, for a broader discussion, with a focus on the workplace context). Rather than asking directly about purpose and meaning, the ONS asks respondents about the extent to which they feel that the things they do in life are worthwhile (see Figure A2). A similar format is also suggested by the OECD (see Figure A1) and is comparable to a question in the European Social survey that asks respondents the extent to which they feel what they do in life is valuable and worthwhile (Huppert et al., 2009). In the growing literature on corporate purpose, Gartenberg et al. (2019) make use, for example, of a multi-item scale that taps into various aspects of workplace purpose, including the extent to which their work has meaning and they feel they are contributing to the community. These questions refer the respondents agreement with the statements: "My work has special meaning: this is 'not just a job," "When I look at what we accomplish, I feel a sense of pride;" "I feel good about the ways we contribute to the community," and "I'm proud to tell others I work here." Along similar lines, a recent addition to the Gallup World Poll also asks respondents whether their work significantly improves the lives of others outside the household or not.

In survey questions designed to measure PERMA (Positive Emotion, Engagement, Relationships, Meaning, and Accomplishments), Seligman (2011) suggests asking respondents about the extent to which they lead "a purposeful and meaningful life." Along these lines,

in the Psychological Well-Being Scale (Diener et al., 2009c), respondents are asked a battery of questions related to eudaimonia, including the extent to which which they agree or disagree with the statement "*I lead a purposeful and meaningful life.*" The American Time Use Survey wellbeing module, which asks respondents about how they were feeling during the different activities they did the prior day, also poses an eudaimonic question, which asks respondents how meaningful to them they felt what they were doing was (see Figure A3). We see such questions as being the most directly translatable to the workplace context, and, based on this work, we thus suggest asking respondents "Overall, how purposeful and meaningful do you find your work?"

## 4.3 Workplace affect

Given its nature, any survey question about affect is asking inherently about a period of time, and thus the reference period is of much more importance than in the evaluative and eudaimonic questions. Here, we ask about the prior working week. This one-week period was selected to provide an adequate sample of feelings, as opposed to focusing on a short time that may not be representative of the lived experience of work. Nevertheless, the previous week can typically be easily recalled by respondents, meaning that the questions are more likely to be based on experience rather than a respondents's general assessment of their job. Thus, there is a trade-off between memory accuracy and sampling adequacy.

Although major surveys like the Gallup World Poll ask about emotions experienced "yesterday," we chose a slightly longer period to ensure there is a greater likelihood it would include working days. As noted above, there is a balance to be made here, but the question is nevertheless in line with well-tested affect questions used in surveys such as the European Social Survey, and is indeed shorter than the 'the past 4 weeks" in survey instruments such as the SPANE. One could, of course, ask about the "previous work day," but this has the potential to confuse respondents unnecessarily. Nevertheless, any of the affect questions we suggest can be adapted to ask about other reference periods such as "yesterday" (as in the ONS and OECD questions), "the past month," "most of the time," or even "generally," depending on the circumstance and user needs.

No single question can capture affective wellbeing. Following the literature, we recommend measuring positive and negative affect separately. In the interest of brevity, and following others (such as the ONS), we suggest one emotion for each. Clearly, this is imperfect. In an ideal world, one would be able to survey multiple negative and positive emotions, in order to gain a broader picture. However, we recognize that survey time and space is typically at a premium, and we thus suggest two prototype questions that can be seen as

"core" aspects of workplace wellbeing. Where time and space permits, further affective items can and obviously should be included.

In terms of positive affect, happiness is the affective state that is most frequently asked about in major surveys. We see no reason to deviate when it comes to the workplace setting, and so ask "How happy did you feel while at work during the past week?."[16] Further and related emotional states that can be asked about, should space and time permit, would include things like enjoyment, energy, and contentment. [17]

Negative affect is potentially more difficult, however, and a single item is more problematic to choose. The ONS in the UK opts for anxiety, whereas the OECD asks about both depression and worry (to capture both high and low arousal negative affective states). In the context of the workplace, stress is a key negative emotion of interest – and we thus opt for its inclusion in the core measures. Again, however, additional negative emotions can and should be asked about where space permits, in order to gain a fuller picture of workplace negative affect. These might include sadness, depression, worry, anxiety, and so on.

# 5 Discussion

We propose a definition of employee wellbeing that is mapped to the workplace context from the maturing science of subjective wellbeing. Workplace subjective wellbeing is how we think about and feel at work, and can be broken down into evaluative, affective, and eudaimonic components. We suggest survey questions in line with decades of literature on how best to measure subjective wellbeing in surveys in reliable and valid ways.

**A democratic measure of workplace wellbeing** Our subjective approach to workplace wellbeing differs from accounts that either i) list factors thought to be positive for workplaces or ii) that are based entirely on pay as a broad proxy. The workplace subjective wellbeing approach is democratic in that it empowers workers to themselves define and assess their wellbeing. It asks them directly how they feel at work. Who else would be in a better position to assess their wellbeing at work? This approach also allows the relative weighting of workplace factors to be decided by workers themselves. We can measure the three wellbeing outcomes outlined in this paper, and then seek to analyze what it is about different workplaces and jobs that best explains variation in wellbeing.

[16] This is similar to a survey question used in Bellet et al. (2023), which asked "Overall, how happy did you feel this week?"

[17] An alternative may be to follow a recent addition to the Gallup World Poll, which asks "Do you enjoy the work you do in your job every day, or not?"

### Box 1: Measurement of Workplace Wellbeing by *Indeed*

*Indeed*, a large online job search platform, has enabled the measurement of employee wellbeing across millions of workers in tens of thousands of firms in the USA and beyond – making it, to our knowledge, the largest such study of workplace wellbeing. Adopting the logic outlined in this paper, the platform asks about job satisfaction, purpose, one positive emotion, and one negative emotion. The existing survey architecture at *Indeed* asks respondents to react to positively-written statements on a 5-point scale of "strongly disagree" to "strongly agree." The four wellbeing survey questions align with this, but follow the logic of asking about evaluative workplace wellbeing, eudaimonic workplace wellbeing, and emotional experience. In line with best practices discussed in Section 3, the statements are strongly-worded such that respondents have a full scale to be able answer on.

The statements asked are (see Figure A4 for a screenshot of the survey):

- *Overall, I am completely satisfied with my job.*
- *My work has a clear sense of purpose.*
- *I feel happy at work most of the time.*
- *I feel stressed at work most of the time.*

Since data collection began in late 2019, *Indeed* has collected over 15 million survey responses in the USA alone, and data collection is now also ramping up in many other countries, such as India, Brazil, Canada, and the UK. For each company, the platform calculates a *Work Wellbeing Score*, which encompasses all four dimensions of subjective wellbeing. The individual scores on these dimensions are also calculated, and all of this information is made available to job seekers on the platform. In the USA, around 95,000 companies have responses from 10 or more employees, thus meeting the threshold and allowing for scores to be displayed. This means meaningful between-firm comparisons can be made across all four workplace wellbeing items for a large cross-section of US firms.

This information, which is consistently measured and is comparable across companies, is useful for job seekers who want to know what it is like to work at different companies (see Ward, 2022, for a field experiment showing that job seekers respond behaviorally to the provision of this information on the platform in terms of which companies to apply to). But it is also an invaluable resource for academic researchers as well as HR practitioners and other business executives. The data covers all four elements of wellbeing, and it is measured consistently across companies.

**The uses of workplace wellbeing data** This information about the relative importance of different workplace factors can play an important role in helping managers make decisions about how to allocate scarce resources in ways that are conducive to worker wellbeing. Indeed, there are a number of uses for workplace wellbeing data. It can be useful in the first instance for firms to collect regular data on the wellbeing of workers in order to monitor progress and highlight where and when there may be problems. The data can also play a key role in helping to understand the drivers of wellbeing, and in doing so can provide useful information to managers about where to direct their efforts to improve it. In addition to this role of informing policy priorities, the regular collection of worker wellbeing data can allow for evaluation of changes in managerial and organizational policies.

Ultimately, the goal is to improve workplace subjective wellbeing. A key component of this will be to experiment with different ways to improve on these measures of workplace wellbeing. This sounds like a major task – and it is. But it is not insurmountable, especially since there are large existing literatures on all of the workplace wellbeing measures we discuss. By bringing these topics together under the umbrella of workplace subjective wellbeing, we can create a more comprehensive understanding. Ultimately, we hope to be able to collectively build a body of evidence that can be implemented in practice, with the aim of improving workplace wellbeing, both for its own sake as well as for the potential organizational benefits that come along with it.

**Practical implications** Many companies already conduct regular surveys of their workers and measure things like engagement and job satisfaction. We recommend that the four simple survey items we outline in Table 2 are added to within-firm surveys as well as to any academic field work that takes place in the context of the workplace.[18] Workplace subjective wellbeing questions may be added to such surveys, particularly given that we are proposing only four items. As noted above, it would be beneficial to go more in-depth, if possible, but an important goal here is to ensure that these measures are consistent and comparable across workers and companies. Ultimately, the hope would be to have a statistic that is routinely reported in quarterly or annual accounts. Along these lines, *S&P Global* are now beginning to include workplace wellbeing—thought of as evaluative, affective, and eudaimonic—as a key item in their Corporate Sustainability Assessment (CSA), suggesting that firms will increasingly need to measure workplace wellbeing.

[18] In the United Kingdom, the Office for National Statistics decided as a general policy to simply add the four general SWB items to the majority of surveys they carry out. See `https://www.ons.gov.uk/peoplepopulationandcommunity/wellbeing/methodologies/surveysusingthe4officefornationalstatisticspersonalwellbeingquestions` for a list of surveys where the four questions appear.

How often should firms measure wellbeing? An effective approach to measuring workplace wellbeing involves a combination of regular assessments and targeted measurements in response to specific events or feedback. Companies could, for example, consider conducting quarterly, biannual, or annual assessments to balance obtaining timely feedback and avoiding survey fatigue. These assessments allow for monitoring of general trends and identification of any arising issues. Ideally, the 4-item module can be implemented, and is designed to be usable in a straightforward manner; however, it may make sense to ask evaluative and eudaimonic questions on a less frequent basis than affect, which we would expect to change more frequently over time and be more amenable to pulse surveys. More generally, it is also important to measure employee wellbeing following major organizational changes, such as mergers, acquisitions, or leadership transitions, as well as after implementing new policies or initiatives that may affect wellbeing (indeed, measuring wellbeing as a key outcome in relation to policy changes should be a priority, as we argue above). Lastly, organizations should be prepared to assess wellbeing in response to employee feedback that suggests the need for intervention. By adopting a consistent and flexible approach to measuring wellbeing, companies can effectively monitor trends, identify areas for improvement, and evaluate the impact of their interventions on employee wellbeing.

Employee surveys run by companies provide what might be called an inside-out picture of subjective workplace wellbeing. But an alternative, complementary strategy is instead more outside-in. This strategy is to rely on third-party platforms where workers may be more comfortable sharing information. Platforms that collect crowdsourced data, such as *Glassdoor* and *Indeed* now provide a wealth of information about what it is actually like to work at different companies (Ward, 2022). While these sites originally focused on crowdsourcing salary information, they now measure many more aspects of the lived experience of workers at different companies. As we describe in more detail in Box 1, Indeed lead the way in this regard by measuring workplace wellbeing—in terms of its evaluative, affective, and eudaimonic dimensions—on its platform.

**Limitations and future research** There are a number of limitations to collecting wellbeing data, as we noted in our discussion of surveys methodology. Moving forwards, a great deal more research can and should be carried out on the measurement of SWB in the workplace (as well as more generally). Over time, this will refine our survey techniques and increase the quality of data. In addition, SWB data collection methods that are not based on surveys are likely to become more prevalent, offering further ways for researchers and practitioners to better understand workplace wellbeing – and, in doing so, hopefully work to improve it. For instance, a growing body of research is beginning to leverage alternative

forms of data collection, along the three key dimensions that are routinely studied in the academic literature, for example using natural language processing techniques (Kjell et al., 2023).

Our goal is to be brief yet also comprehensive in terms of what is being measured. In order to make the four items as simple as possible, and in doing so maximize the chances they will be adopted widely, we decided to ask them each with the same response scale of "not at all" to "completely". This is in line with ONS questions, but differs somewhat from the OECD's core questions when it comes to affect given that we measure intensity rather than frequency of affect – that is, how happy you felt at work last week rather than how often you felt happiness. Empirical work on this topic suggests that asking about the frequency of emotions does lead to marginally more accurate results when comparing between experienced sampling data and retrospective recalls (see Diener et al., 2018; Thomas and Diener, 1990, for broader discussion). Moreover, frequency-based measures are slightly more strongly associated with overall subjective wellbeing (Diener et al., 2009b). The two affective outcomes that we include in our wellbeing module can be adapted in a straightforward manner to become frequency-based questions, such that the workplace wellbeing module flows more like the OECD's example. The trade-off is that, in doing so, there is a need to then break up the questions with an intervening text that explains the change in response scale. This may have its own benefits in terms of reducing common method bias, but also brings complication and may make it less straightforward to implement.

We suggest a one-week reference period for the two affective questions, for both practical and theoretical reasons. First, a one-week timeframe balances the need for capturing a representative snapshot of employees' emotions, while at the same time minimizing recall bias (which is more likely with longer reference periods). This period is long enough to capture a range of work-related experiences and emotions, including daily fluctuations and potential variations across workdays. Moreover, it is short enough to reduce the risk of memory biases. Second, a one-week reference period aligns with the standard work week, providing a natural and easily understandable time frame for people to reference when answering. Third, while a more general question on emotional experience may be appealing, when using large samples a shorter reference period like one week is sufficient for obtaining a comprehensive and accurate overall picture of employee wellbeing, as the aggregated data will capture the general trends and patterns in workplace emotions. Finally, using a one-week reference period facilitates comparisons across different workplaces and industries, as it is likely to capture emotions and experiences relevant to the majority of work settings. Nevertheless, the questions are designed such that they can be changed with relative ease to instead refer to either shorter or longer time frames, depending on the use case.

In translating subjective wellbeing questions to the workplace context, it is relatively straightforward to do so based on the existing literature for affect and evaluation. For eudaimonia this is a less simple task, since there is less consensus on how to ask about eudaimonia in general and it is a multi-faceted component of wellbeing that may be difficult to capture in a single item question. Indeed, organizations wanting to delve deeper into the eudaimonic aspect of workplace wellbeing will likely want to expand their questions, in the same way as we discussed above in relation to positive and negative emotions. In terms of general SWB, the ONS and OECD suggest asking about the extent to which the things people do in life are worthwhile. It is possible to adjust this to the work context, but instead we chose to follow Diener et al. (2009c) and Seligman (2011) in asking about how meaningful and purposeful people's jobs are. However, further research should investigate the different ways in which people respond to such questions, particularly in relation to the workplace.

# 6 Conclusion

The concept of workplace wellbeing is garnering increasing attention among both academic researchers and business practitioners. However, there remains a need for clarity about what workplace wellbeing is and how it can be measured in a consistent and reliable way. In this paper, we have proposed what we see as a straightforward framework for understanding workplace wellbeing. Our intention is not to reinvent the wheel; instead, we build on existing knowledge of the structure and measurement of subjective wellbeing. WSWB encompasses how people think about and feel at their work, based on the three primary elements of subjective wellbeing: evaluative wellbeing, affect at work, and purpose/meaning. This definition is grounded in decades of research on subjective wellbeing and benefits from the extensive existing academic literature on each of the three component parts. However, these aspects are often studied in isolation. By bringing them together under the umbrella of workplace wellbeing, we gain more conceptual clarity. Importantly, focusing on subjective wellbeing as a workplace outcome enables us to avoid conflating ends and means, which is crucial when attempting—as many firms, governments, and academics now are—to create sound and usable evidence-based guidance for understanding and improving workplace wellbeing.

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# Appendix

Figure A1: OECD Guidelines for Measuring Subjective Wellbeing

**Box B.1. Core questions**

*The following question asks how satisfied you feel, on a scale from 0 to 10. Zero means you feel "not at all satisfied" and 10 means you feel "completely satisfied".*

A1. Overall, how satisfied are you with life as a whole these days? [0-10]

*The following question asks how worthwhile you feel the things you do in your life are, on a scale from 0 to 10. Zero means you feel the things you do in your life are "not at all worthwhile", and 10 means "completely worthwhile".*

A2. Overall, to what extent do you feel the things you do in your life are worthwhile? [0-10]

*The following questions ask about how you felt yesterday on a scale from 0 to 10. Zero means you did not experience the feeling "at all" yesterday while 10 means you experienced the feeling "all of the time" yesterday. I will now read out a list of ways you might have felt yesterday.*

A3. How about happy? [0-10]

A4. How about worried? [0-10]

A5. How about depressed? [0-10]

*Source: Excerpt taken from OECD (2013): Guidelines on Measuring Subjective Wellbeing, see* `https://www.oecd.org/wise/oecd-guidelines-on-measuring-subjective-well-being-9789264191655-en.htm` *for further details.*

Figure A2: Recommendations by the UK Office For National Statistics for Measuring Subjective Wellbeing

**Next I would like to ask you four questions about your feelings on aspects of your life. There are no right or wrong answers. For each of these questions I'd like you to give an answer on a scale of 0 to 10, where 0 is "not at all" and 10 is "completely".**

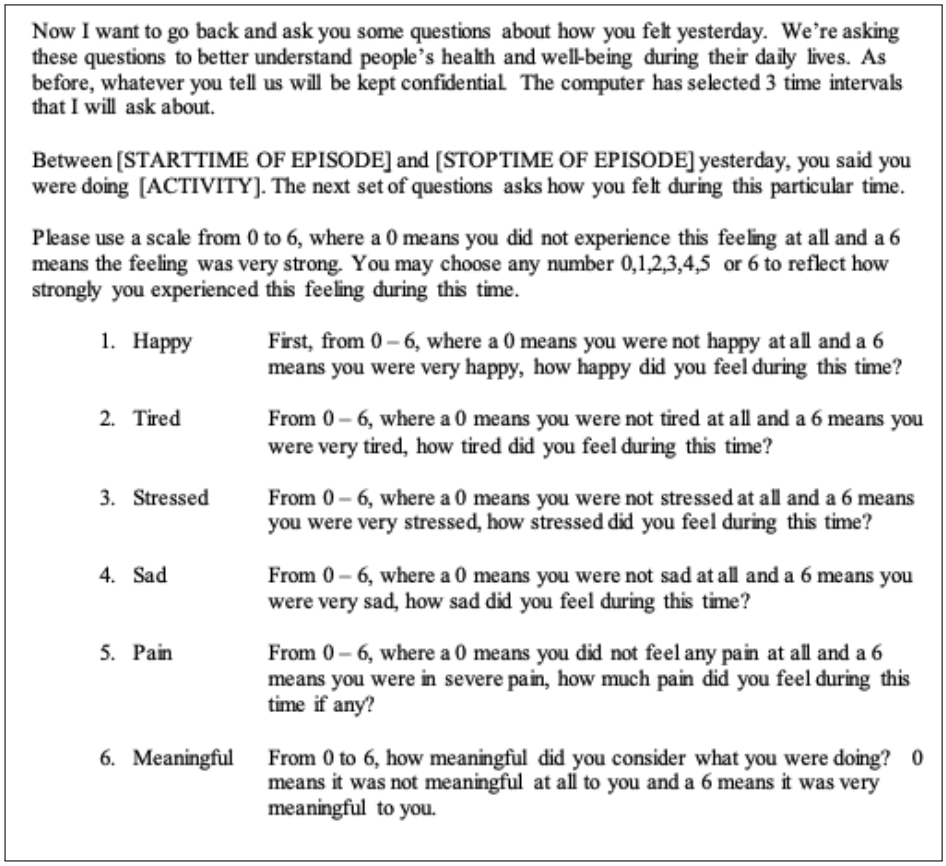
| Measure | Question |
|---|---|
| Life Satisfaction | Overall, how satisfied are you with your life nowadays? |
| Worthwhile | Overall, to what extent do you feel that the things you do in your life are worthwhile? |
| Happiness | Overall, how happy did you feel yesterday? |
| Anxiety | On a scale where 0 is "not at all anxious" and 10 is "completely anxious", overall, how anxious did you feel yesterday? |

*Source: Office for National Statistics. See* `https://www.ons.gov.uk/peoplepopulationandcommunity/wellbeing/` *for more details and a list of governmental surveys that the questions are currently asked in.*

Table A1: Examples of Job Satisfaction Questions in Major Surveys

| Dataset | Question Wording | Response |
|---|---|---|
| BHPS | "*All things considered, how satisfied or dissatisfied are you with your job?*" | 1 to 7 |
| SOEP | "*How satisfied are you today with the following areas of your life? With your job?*" | 0 to 10 |
| HILDA | "*All things considered, how satisfied are you with your job?*" | 0 to 10 |
| Gallup World Poll | "*Are you satisfied or dissatisfied with your job?*" | Yes/No |
| ISSP | "*All things considered, how satisfied are you with your job?*" | 1 to 7 |

Figure A3: Wellbeing Module in American Time Use Survey



Now I want to go back and ask you some questions about how you felt yesterday. We're asking these questions to better understand people's health and well-being during their daily lives. As before, whatever you tell us will be kept confidential. The computer has selected 3 time intervals that I will ask about.

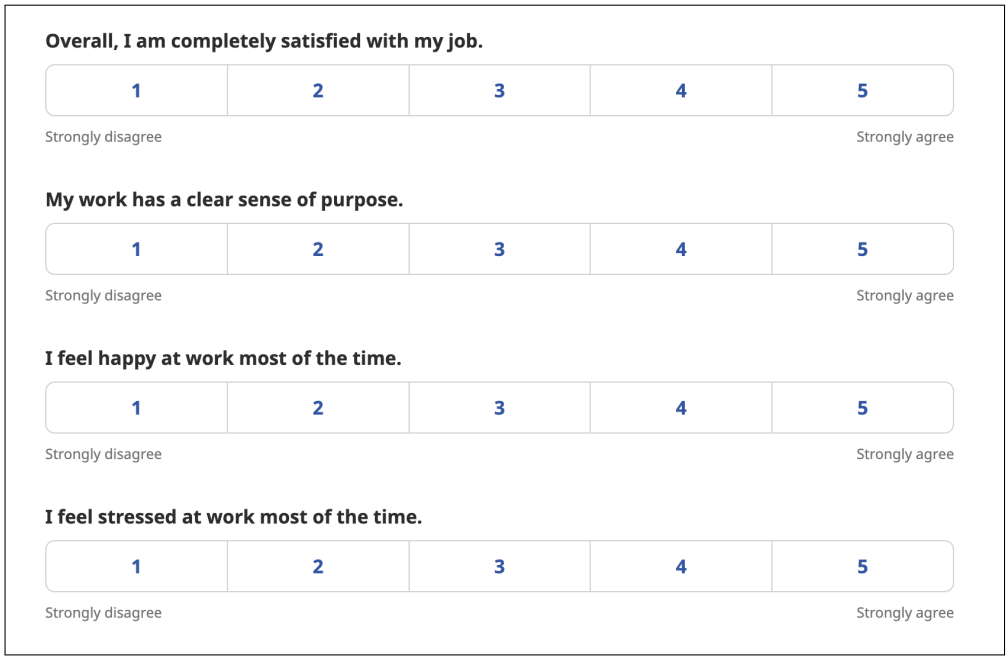
Between [STARTTIME OF EPISODE] and [STOPTIME OF EPISODE] yesterday, you said you were doing [ACTIVITY]. The next set of questions asks how you felt during this particular time.

Please use a scale from 0 to 6, where a 0 means you did not experience this feeling at all and a 6 means the feeling was very strong. You may choose any number 0,1,2,3,4,5 or 6 to reflect how strongly you experienced this feeling during this time.

| | |
|---|---|
| 1. Happy | First, from 0 – 6, where a 0 means you were not happy at all and a 6 means you were very happy, how happy did you feel during this time? |
| 2. Tired | From 0 – 6, where a 0 means you were not tired at all and a 6 means you were very tired, how tired did you feel during this time? |
| 3. Stressed | From 0 – 6, where a 0 means you were not stressed at all and a 6 means you were very stressed, how stressed did you feel during this time? |
| 4. Sad | From 0 – 6, where a 0 means you were not sad at all and a 6 means you were very sad, how sad did you feel during this time? |
| 5. Pain | From 0 – 6, where a 0 means you did not feel any pain at all and a 6 means you were in severe pain, how much pain did you feel during this time if any? |
| 6. Meaningful | From 0 to 6, how meaningful did you consider what you were doing? 0 means it was not meaningful at all to you and a 6 means it was very meaningful to you. |

*Source: Bureau of Labor Statistics. See* `https://www.bls.gov/tus/modules/wbdatafiles.htm`.

Figure A4: Indeed Crowdsourced Survey of Workplace Wellbeing




*Source: Screenshot of Indeed survey. For more details see* `https://www.indeed.com/employers/work-happiness`. *The survey was first introduced in October 2019 and currently has more than 15 million responses worldwide.*