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The Nomological Net of Subjective Well-Being at the Workplace

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Abstract

The following study examines the nature of subjective well-being in a working context. The purpose of this research is to find out which dimensions are most central to well-being in the workplace. Thus, a questionnaire was used to gather information about the different dimensions (i.e., work engagement, job satisfaction, life satisfaction, personality, and well-being at the workplace). The statistical analysis was done through a network analysis approach. The sample consists of 243 participants. The results show five dimensions in our network that demonstrate the strongest connection to workplace well-being: work engagement (i.e., dedication, absorption, vigor) and job satisfaction (i.e., work itself and colleagues). Therefore, the take-home message of our study is that positive work relationships (job satisfaction) relate to work engagement, and vice versa, to promote a positive intrapersonal and interpersonal well-being in a working context; supporting the construct of eudaimonic workplace well-being as well.

Keywords: Eudaimonic Workplace Well-Being, Job Satisfaction, Work Engagement, Personality, Life Satisfaction, Exploratory Study, Network Analysis, Working Context

The Nomological Net of Subjective Well-Being at the Workplace

Subjective well-being, specifically in a working context, is a multidimensional construct that encompasses an overall sense of satisfaction and well-being that an individual experiences in relation to their job and their work environment. Measuring and understanding the subjective well-being of workers can help organizations to identify potential areas of concern and take steps to improve the overall well-being of their workforce. This can lead to increased job satisfaction, improved worker engagement, and better overall performance (Garg & Singh, 2020; Wijngaards et al., 2021; Parker & Hyett, 2011). Developing clear lines of interpretation and coordination across varied disciplines is an essential first step, but so is specifying the context.

We chose based on the existing literature, various “influence factors” that suggested some type of effect on the construct of well-being. These variables and their relationships to subjective well-being will be further elaborated on in the following background section. The present study aims to gain a better understanding of subjective well-being at the workplace by using network analysis to give the reader a holistic overview of the construct of subjective well-being at work.

Background

The domain of positive psychology focuses on concepts like life satisfaction, self-esteem, and well-being, it is also known to be riddled with the issue of overlapping constructs, which suggests the presence of jingle jangle Fallacy (Schnitker et al., 2019). A ‘Jingle Fallacy’ is the inexact assumption that two quite different things are the same, simply because they have an overlapping meaning. A ‘Jangle Fallacy’ is the false assumption that two very similar things are different, simply because they have different names. So essentially different content is often labeled very similarly, and very similar content is often labeled differently (Block, 1995; Leising et al., 2021). Identifying the core dimensions underlying these well-being measures would allow for a better grasp of their specific meaning and perhaps a clearer picture to avoid jingle-jangle entanglements. For example, terms such as "happiness," "life satisfaction," and "well-being" are often used interchangeably in positive psychology research, despite differences in their definitions and measurement (Schnitker et al., 2019). Similarly, constructs such as "optimism" and "positive affect" may be used to refer to similar concepts (Schnitker et al., 2019). But semantically, it should be reconsidered using them interchangeably just because they may have a similar jingle. This can lead to difficulties in comparing and synthesizing research findings, as

well as challenges in developing clear theoretical models and practical interventions. It can also lead to confusion for practitioners and the public who may struggle to differentiate between different constructs. To address the jingle jangle fallacy, researchers in positive psychology have called for greater precision and clarity in defining and operationalizing constructs, as well as a greater focus on empirical validation and the development of comprehensive theoretical models that can integrate and explain the relationships between different constructs (Schnitker et al., 2019). By doing so, the field can move towards a more rigorous and cohesive understanding of the factors that contribute to well-being. The present study seeks to contribute to this ongoing effort by seeking to further clarify the empirical relationships between different measures of positive affect or well-being, specifically pertaining to a workplace context.

Many texts use terminologies such as employee well-being, or just workplace well-being, but do not specify what kind of well-being, or frame it in a specific context. To capture and influence an employee's overall well-being at work, it is important to develop a work-specific conceptualization of eudaimonic workplace well-being that can complement the hedonic perspective of workplace well-being. Given the amount of time and effort people put into their work, researchers and practitioners have expended considerable time and resources attempting to comprehend well-being in this context. Alas, much of the current analysis and measurement concentrates on workplace well-being from a single perspective. The focus is on what's called the hedonic perspective rather than considering the eudaimonic one, respectively. There is also the existing fallacy of assuming workplace well-being is equivalent to general well-being (Bartels et al., 2019).

Workplace Well-Being

Eudaimonic workplace well-being is distinct from general eudaimonic well-being in that it is related to one's experiences and functioning in the workplace (Bartels et al., 2019). It involves finding meaning, fulfillment, and purpose in one's work, as well as developing positive relationships with coworkers, feeling competent and effective in one's job, and having opportunities for growth and development. In contrast, general eudaimonic well-being refers to a broader sense of purpose, meaning, and fulfillment in life. It involves pursuing goals that align with one's values and strengths, developing positive relationships with others, and cultivating a sense of personal growth and self-awareness (Ryff & Keyes, 1995). While eudaimonic workplace well-being and general eudaimonic well-being share some similarities, they are

distinct in several ways. A few key differences include eudaimonic workplace well-being is specific to the workplace context, while general eudaimonic well-being applies to life as a whole. Focus also should be taken into consideration, as focuses on work-related experiences and functioning, while general eudaimonic well-being encompasses a wider range of life experiences (Bartels et al., 2019). Further factors that are important to consider such as job autonomy, social support, and opportunities for growth and development, while general eudaimonic well-being is influenced by a broader range of factors such as personal values, relationships, and self-awareness. Overall, eudaimonic workplace well-being is a distinct but related construct to general eudaimonic well-being, and it highlights the importance of promoting well-being in the workplace context.

The hedonic approach to well-being emphasizes the importance of the pursuit of pleasure, positive emotions, and subjective experiences of happiness in promoting well-being (Diener, 2000). In the context of psychological research, the hedonic approach to well-being is often operationalized through measures of affective experiences such as positive and negative emotions, life satisfaction, and happiness (Diener, 2000). Researchers often use self-report measures or physiological measures (such as heart rate or cortisol levels) to assess individuals' levels of positive affect and subjective well-being (Bartels et al., 2019). While the hedonic approach to well-being has its strengths in emphasizing the importance of positive experiences and emotions, some have argued that it may be overly focused on short-term pleasures and may neglect more enduring sources of well-being, such as meaningful work or relationships. Therefore, some researchers have advocated for a more balanced approach that incorporates both hedonic and eudaimonic well-being (Henderson & Knight, 2012).

Even though the hedonic and eudaimonic viewpoints have been shown to be theoretically and empirically distinct types of well-being (Erdogran et al., 2012), plenty of confusion results from the fact that both forms are frequently referred to as “well-being” making them seem equivalent. However, even though the hedonic perspective and eudaimonic perspective have a high correlation ($r = .70$), empirical evidence reveals that over 50% of the population scores highly on either one of the other, but not both (Keyes et al., 2002). Researchers measuring this construct using only one of two perspectives may obtain an incomplete picture because what may motivate an individual's happiness (i.e., hedonic) may differ greatly from what increases a

person's perception of well-being. As a result, research that allows the various types of well-being to be interchangeable can be problematic and should be carefully considered.

Work Engagement & Job Satisfaction

Work engagement refers to a positive, fulfilling, and motivational state of mind that employees experience when they are fully invested in and absorbed by their work (Schaufeli et al., 2002). Engaged employees are characterized by high levels of energy, enthusiasm, and focus, and they are more likely to go above and beyond what is required of them in their jobs. Work Engagement has been linked to a range of positive outcomes, such as higher job performance, better job satisfaction, and lower turnover (Schaufeli et al., 2002). Job satisfaction, on the other hand, refers to an employee's overall evaluation of their job and work experience. It is a subjective measure of how much employees like their jobs and feel that they are meeting their needs and expectations. Factors that can contribute to job satisfaction include the nature of the work itself, the quality of relationships with coworkers and supervisors, the level of pay and benefits, and opportunities for growth and development. Job satisfaction is related to a range of positive outcomes, such as higher job performance, lower absenteeism, and lower turnover as well (Bowling et al., 2018).

While work engagement and job satisfaction appear to be related, they are not the same construct. An employee can be highly engaged in their work but still feel dissatisfied with certain aspects of their job, such as their pay or opportunities for advancement. Conversely, an employee may be satisfied with their job overall but not feel particularly engaged or motivated by their work (Shimazu & Schaufeli., 2009). However, both work engagement and job satisfaction are important for understanding employees' experiences at work and for promoting positive outcomes for both employees and organizations (Garg et al., 2018). A novel insight from Steel et al., (2008) found that life satisfaction should be more closely connected to subjective well-being than job satisfaction; but, the opposite effect was observed.

Life Satisfaction

According to Diener (1984), there is no single factor that determines subjective well-being. Although some factors (such as mental health, personality traits, and meaningful connections with others) appear to be vital for high subjective well-being, they do not, by themselves, guarantee it. No single situation or attribute appears to be able to bring about well-being in and of itself. However, his research has uncovered a variety of conditions that seem to

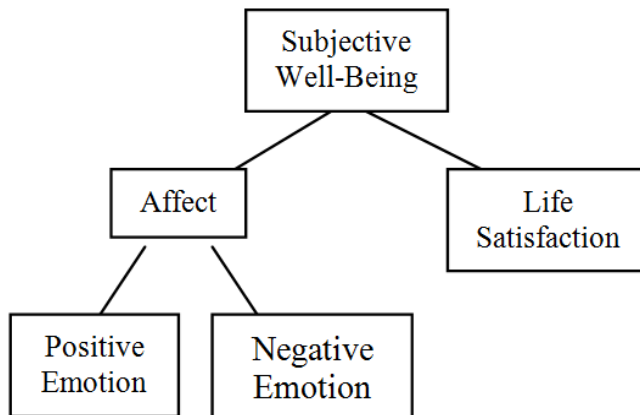
be necessary to facilitate and influence positive subjective well-being (Diener, 2009). To put it simply, the construct of “subjective well-being” encompasses how people evaluate their lives (Diener, 1984). These evaluations include not only cognitive judgments of life satisfaction and affective evaluations of mood or emotions. If an individual states that their life is satisfying and that they frequently experience pleasant affect, but also infrequently experience unpleasant affect, they are said to have high subjective well-being. Whilst life satisfaction, pleasant affect, and the lack of unpleasant affect often overlap to some degree within the same individual, these components are distinguishable (Lucas et al., 1996). A person who experiences a significant amount of pleasant affect for example, may also experience little unpleasant affect and be considered “happy,” whereas someone who experiences high levels of both effects may be labeled “highly emotional.” In parallel, a person who experiences pleasant affect not very frequently and experiences unpleasant affect often, may still consider conditions of their life (such as income and health) as excellent and would then argue they have high life satisfaction. Thus, although the constructs of pleasant affect, unpleasant affect, and life satisfaction are related, they are empirically distinguishable and therefore must be studied individually to gain a holistic picture of subjective well-being (Lucas et al., 1996).

Diener (1984) conducted extensive research on various aspects of subjective well-being, including its measurement, correlates, and determinants which pioneered the construct of a tripartite model. This extensive body of empirical work influenced and shaped the field. His tripartite model, proposed in 1984, suggests that subjective well-being (SWB) can be described through these three main components: positive affect, negative affect, and life satisfaction. Positive affect refers to the extent to which a person experiences positive emotions such as joy, happiness, and contentment. It involves the frequency and intensity of positive emotions in one's daily life. Negative affect is the extent to which a person experiences negative emotions such as sadness, anxiety, and anger. It involves the frequency and intensity of negative emotions in one's daily life. The life satisfaction component manifests as the cognitive evaluation of one's life as a whole. It involves judgments about the degree to which one's life is fulfilling, meaningful, and satisfying (Diener, 1984). In other words, people who experience high levels of positive affect and low levels of negative affect, and who report high levels of life satisfaction, are likely to have higher levels of subjective well-being. On the other hand, people who experience high levels of negative affect and low levels of positive affect, and who report low levels of life

satisfaction, are likely to have lower levels of subjective well-being. Shown below in Figure 1 is a visual of the current model described.

Figure 1

The concept of Life Satisfaction in a Subjective Well-Being Framework (Source: Diener, 1984).



Note. Subjective well-being covers two main components: one affective including negative and positive emotions, and one cognitive; namely life satisfaction.

Personality

The current project also examines personality traits as an influencing factor using the Big Five model measuring the five dimensions of personality: Emotional Stability (or the opposite pole: neuroticism), Conscientiousness, Extraversion, Agreeableness, and Intellect (openness to experience). The Big Five model (Goldberg et al., 1993; McCrae & Costa, 1987) is considered the most empirically accepted model for describing individual personality differences (Johnson, 2017). Each of the Big Five traits illustrates individual differences in a set of comparable characteristics (Soto, 2018). Extraversion is characterized by social engagement, assertiveness, and a high level of activity or energy. It is common for highly extroverted individuals to enjoy socializing and expressing positive emotions (Soto, 2018). A person's degree of agreeableness can be characterized as their degree of compassion, respect for others, and ability to accept them. Agreeable individuals care about the well-being of others, treat them with respect, and have generally positive attitudes toward others. Conscientiousness is characterized by organization, productivity, and responsibility; this personality trait describes a person's general tendency to work and complete tasks. Emotional stability captures individual differences in negative emotions frequency and intensity. Highly neurotic individuals tend to experience anxiety, sadness, and mood swings when faced with difficult situations, whereas emotionally stable

individuals remain calm and optimistic in difficult situations. Openness to experience represents individual differences in intellectual curiosity, aesthetic sensitivity, and imagination. Individuals with a high degree of openness have wide intellectual and creative interests, are receptive to art and beauty, and tend to develop original ideas (Soto, 2018).

According to research by Goldberg (1993), McCrae and Costa (1987) as well as Judge et al. (2002), individuals higher in extraversion have a propensity for pleasant feelings, which is likely to affect their level of job satisfaction. Additionally, highly extroverted people's higher tendency for socializing results in more pleasant interpersonal interactions at work, which protects against job stress (Sulsky & Smith, 2005). Finally, more extroverted individuals are more likely to assume leadership positions at work, which may influence their contentment with their work (Soto, 2018).

In collaborative work environments, agreeableness is widely acknowledged as a key predictor of higher performance (Soto et al., 2016 & Strickhouser et al., 2017). According to Goldberg (1993), those with high levels of agreeableness are more motivated to build positive interpersonal interactions, which may account for their better life and career satisfaction. In general, higher productivity at work and the use of problem-focused coping in stressful work settings relate to conscientiousness, which is defined as a person's general habits toward work and task performance (Sulsky and Smith, 2005). Higher degrees of conscientiousness typically prompt people to accomplish their jobs more effectively, which increases work engagement and job satisfaction. Therefore, a mechanism explaining the association between conscientiousness and job satisfaction has been proposed which involves a higher possibility of earning formal and informal rewards at work (Judge et al., 2002).

The trait of emotional stability has been found to be positively related to overall mental health and well-being (Soto, 2018). Likewise, in a meta-analysis by Judge et al., (2002) it was found that emotional stability/neuroticism is the strongest predictor of job satisfaction. This is likely because emotionally stable individuals tend to remain calm and positive during challenging situations and therefore regulate emotions more easily. While in contrast, individuals who are higher in neuroticism tend to interpret work situations as more stressful and react more strongly because of workplace stressors. This usually results in using less resilient coping skills (Skulsky & Smith, 2005).

The main attributes of intellect (or openness to experience) incline individuals towards either negative or positive emotions, therefore its relationship to well-being is unclear (Judge et al., 2002). In previous studies, openness to experience has not been shown to predict job satisfaction (Judge et al., 2002). It has also not been found to predict it in a negative direction when examined in younger workers (Bui, 2017), but it can be hypothesized that this trait can be a source of job satisfaction in some working contexts. Because individuals with higher levels of intellect and imagination enjoy novelty and variation (Goldberg, 1993; McCrae & Costa, 1987), they should feel at ease in unfamiliar and difficult circumstances in a demanding work context. As a result, this characteristic might be seen as a potential predictor of job performance and career advancement, which is a behavioral variable that influences job satisfaction.

In many cases, personality has been found to have a stronger correlation with subjective well-being than life circumstances (Lucas & Diener, 2009). In part, this might be because temperament and other individual differences can influence people's feelings and evaluations of their lives, but also because people's emotions, or how they act on them, are an inherent part of personality (Diener, 2009).

Literature review

In recent research, several approaches have been taken to better understand and positively contribute to the well-being of workers. Schulte and Vainio (2010) and Wijngaards and colleagues (2021), for instance, seek to describe the concept of well-being at the workplace. Wijngaards et al (2021) focus their work on the measurement of worker well-being, whereas Schulte and Vainio (2010) aim to better understand the concept of well-being at work. In these papers, the reader does not find an overview of how the different dimensions of well-being (i.e., Job Satisfaction, Work Engagement) are composed. The present paper addresses this by examining how central the different factors are to well-being at the workplace.

Biggio and Cortese (2013) and Shier and Graham (2013; 2011), on the other hand, specifically investigate the factors at work that influence workers' well-being. By using qualitative interviews as a method to answer the questions, they ask workers what factors they think to influence their well-being at work. The results of the three studies (Biggio & Cortese, 2013; Shier & Graham, 2013; Shier & Graham, 2011) demonstrate that, according to workers, subjective well-being is most strongly influenced by the work environment (such as the workplace or work culture), social relationships at work (i.e., with colleagues, customers, or the

boss) and various aspects of the job (i.e., workload). Furthermore, Biggio and Cortese (2013) identify that well-being at work does not rely solely on external factors, such as management or the work environment, but also on individual characteristics and behaviors. These three papers provide guidance on which factors should be considered by companies and managers to ensure that the overall well-being of the workforce is high (Biggio & Cortese, 2013; Shier & Graham, 2013; Shier & Graham, 2011). The present paper uses a quantitative approach to examine whether similar or identical factors are central to well-being in the workplace and can be supported with data based on the results.

In this context, two studies can be found that investigate the well-being at work of a specific sample group (Na'imah et al., 2023). Both studies examine the question of which factors influence the work well-being of the respective work sector. The sample in the present study is not based on a specific target group/work group, it includes workers from different sectors to generate a holistic picture of the factors influencing well-being at work. Nevertheless, it can be interesting to see how the results of the present study align with the findings of Carvajal-Arango et al and Na'imah et al. The results of the study by Na'imah and colleagues (2023) illustrate that well-being among teachers is influenced by two factors organizational justice and workplace spirituality. Organizational support, on the other hand, does not affect workplace well-being (Na'imah et al., 2023). Carvajal-Arango and colleagues (2021) found that among construction workers the following dimensions have the greatest influence on well-being: rewards and recognition, growth and projection, sense of work and interpersonal relationships, activity performed, physical work environment, physical and mental health (Carvajal-Arango et al., 2021).

Present study

Based on the current state of research, it remains unclear which factors in general are important for well-being at work. In the following study, a general picture is to be developed, through which one can identify which factors are important in general, or which are rather irrelevant. For this purpose, different dimensions and influence factors related to subjective well-being will be examined. With the help of a self-report questionnaire, workers/employees were asked to provide information on the areas of life satisfaction, work engagement, job satisfaction, workplace well-being, and personality. The dimensions are then examined from a network perspective using classical network analysis. The intended aim is to use an exploratory approach

to answer the research question of which dimensions are most central to the concept of subjective well-being at work. Based on the study, management, and companies would be given an insightful idea of which influence factors are necessary to facilitate and improve the subjective well-being at their respective workplace.

Methods

Procedure

To capture the subjective well-being of individuals at work, an online survey was created in Qualtrics. Participants were recruited through a variety of channels, including personal social networks, LinkedIn, work colleagues, and Instagram. To ensure the quality of the data, the selection criteria were individuals aged 18 years or over, currently working or employed, and with sufficient knowledge of English. At the beginning of the study, the purpose of the work and the assurance of anonymity were explained to encourage open and honest responses.

Participation in the study could be terminated at any time without consequence. If participants had any remaining questions, they could contact the authors by email at any time. The survey could be completed on a mobile phone, laptop, or tablet. Once the questionnaire was completed, the survey was finished, and no further action was required of the participants.

Participants

A total of 243 participants completed the online survey fully. The sample included 35.80 % males and 62.96 % females, with an average age of 30.34 years ($SD = 9.52$). There was a broad range of nationalities reported by participants, most commonly German, Polish, and American. The majority of participants have been working for 1-5 years, with 111 participants reporting working from home more than 60% of their work time. The question of how many hours per week one works on average was answered by 11.93 % who work less than 20 hours per week, 28.40 % who work between 20 and 40 hours per week, and 59.67 % of the participants who work 40 hours or more on average per week. Participants were also asked to provide details about the type of work they were doing. 159 participants reported having an office job. Furthermore, a detailed description of all demographic information is presented in Appendix Table 1-6.

Instruments

The full survey consisted of six blocks and contained a total of 105 questions. The first block, consisting of seven questions, referred to the demographic data of the participants. In this

section, information such as age, gender, nationality, work details, etc. was requested. This was followed by a battery of questionnaires to assess various aspects including life satisfaction, work engagement, subjective well-being at the workplace, job satisfaction, and personality traits.

Diener's Satisfaction with Life Scale

The Diener Satisfaction with Life Scale (SWLS; Diener et al., 1985) is a widely used self-report measure to assess overall life satisfaction. The scale consists of five items, each rated on a seven-point Likert scale, with 1 standing for 'totally dissatisfied' and 7 standing for 'totally satisfied'. Higher scores indicate greater life satisfaction (Pavot & Diener, 2008). The formulation of the SWLS items is global rather than particular, which allows respondents to evaluate the areas of their lives in a way that is consistent with their values (Pavot & Diener, 2008). In the study by Diener et al. (1985), the internal consistency coefficient was found to be high with a Cronbach's alpha of 0.87. Furthermore, the test-retest correlation in this sample was 0.82 (Diener et al., 1985). In the present study, the SWLS was chosen because, unlike many other satisfaction scales, no other concepts related to satisfaction are integrated, and the focus is exclusively on general satisfaction with one's own life (Pavot et al., 1991).

1 Item Life Satisfaction

The Single Item Life Satisfaction Scale (Cheung & Lucas, 2014) is a brief measure of life satisfaction that consists of a single item asking participants to rate their overall satisfaction with life (i.e., 'All things considered, how satisfied are you with your life as a whole?') on a scale from 0 (totally dissatisfied) to 10 (totally satisfied). Single-point measurements are often used to reduce the participants' workload to a minimum (Cheung & Lucas, 2014). Although the scale is simple, its reliability and validity have been established in several studies, with high correlations reported with other measures of life satisfaction (Cheung & Lucas, 2014; Diener et al., 2013; Jovanovic, 2016; Jovanovic & Lazic, 2020; Lucas & Donnellan, 2012). In Lucas and Donnellan (2012) the internal consistency coefficient was found to be between 0.68 and 0.74, which indicates good reliability. In general, the validity and reliability of the Single Item Life Satisfaction Scale are comparable to that of the Satisfaction with Life Scale (Cheung & Lucas, 2014; Jovanovic, 2016).

Work Engagement

Work engagement is measured using the Utrecht Work Engagement Scale (De Bruin & Henn, 2013). The scale consists of nine items, which are rated on a seven-point Likert scale with

anchors 0: Never and 6: Always/ every day. The scale assesses three dimensions of work engagement: vigor, dedication, and absorption (De Bruin & Henn, 2013).

In the studies of De Bruin & Henn (2013), Seppälä and colleagues (2009), and Willmer and colleagues (2019) a high reliability of the scale with a Cronbach's alpha between 0.82 and 0.92 was found. The validity is also well-supported by numerous studies (De Bruin & Henn, 2013; Seppälä et al., 2009; Willmer et al., 2019).

Eudaimonic Workplace Well-Being Scale

The recently developed Eudaimonic Workplace Well-Being Scale (EWWS; Bartels et al., 2019) is a measure of workplace well-being from a eudaimonic perspective. The scale encompasses both the intrapersonal and interpersonal dimensions of workplace well-being. The intrapersonal dimension concentrates on an employee's energy, goal setting, and personal growth. Whereas the interpersonal dimension refers to the comfort a person feels at work and the occurrence of interpersonal relationships. The scale consists of 8 items rated on a seven-point Likert scale (1=strongly disagree; 7= strongly agree), with higher scores indicating greater eudaimonic well-being at work. In Bartels et al., (2019) the reliability of the overall scale was found to be high, with Cronbach's alpha ranging from 0.87 to 0.90, from 0.83 to 0.85 for the intrapersonal dimension, and 0.87 to 0.93 for the interpersonal dimension.

Job Satisfaction

The Facet Satisfaction Scale (FSS; Bowling et al., 2018) is used to measure job satisfaction. The scale consists of 25 items, which are rated on a seven-point Likert scale from 1 (strongly disagree) to 7 (strongly agree). The 25 items are distributed over five subscales to capture a holistic picture of job satisfaction: work itself, supervision, colleagues, pay, and promotional opportunities. According to Bowling and colleagues (2018), all FSS subscales had a Cronbach's alpha above 0.85. These results are indicators of the reliability of the FSS subscales. Not only reliability but also validity is well-supported by the studies conducted by Bowling and colleagues (Bowling et al., 2018).

Personality

For the assessment of personality, the IPIP Big-Five Factor (Goldberg et al., 2006) was used. It measures the five broad dimensions of personality: emotional stability, conscientiousness, extraversion, agreeableness, and Intellect. The scale consists of fifty items, with ten items for each of the five factors. The items are rated on a five-point Likert scale where

1= strongly disagree and 5= strongly agree (Goldberg et al., 2016). The reliability and validity of the scale have been shown to be high in previous studies, with internal consistencies of 0.84 and 0.90 (Gow et al., 2005; Zheng et al., 2008).

Data analysis

Before starting the sample description and data analysis, participants who did not answer one or more questions were excluded (i.e., through listwise deletion). Beyond that, there were no further exclusion criteria.

In the present work, a network analysis is conducted which should be well-suited to the exploratory nature of the thesis' purpose, i.e., investigating how workplace well-being is related to other psychological constructs. Network analysis is used to specifically explore the direct relationships between observable variables (Costantini et al., 2015). The statistical program JASP was used to complete the analysis (JASP Team, 2023).

Network analysis is a research method used to study the relationships and interactions between different dimensions in a network. This method involves creating a network of nodes and edges. Nodes represent different dimensions and edges represent the connection or relationship between the individual nodes. In the present work, each node represents a variable or a sub-dimension of a variable (Hevey, 2018). The following bullet points stand for the seventeen nodes of the network in this study:

- Diener Life satisfaction Scale
- 1 Item Scale
- Work Engagement
 - Vigor
 - Dedication
 - Absorption
- Eudaimonic workplace well-being scale
 - Intrapersonal
 - Interpersonal
- Job Satisfaction
 - work itself
 - Supervision
 - Colleagues

- Pay
- promotional opportunities
- Personality
 - Conscientiousness
 - Extraversion
 - Agreeableness
 - Openness/Intellect
 - Emotional stability

Furthermore, an undirected and weighted network analysis is used with EBICglasso as an estimator. An undirected network is primarily focused on visualizing salient relationships between nodes, while a directed network represents all relationships in the network. The edges of a network can be weighted or unweighted. Unweighted networks simply display the presence or absence of edges. Weighted networks, on the other hand, encode extra details about the size of the relationships. The strength of the connections can be found in the weight matrix which is a square matrix where each row and column denotes a node. The matrix's components display how strongly two nodes are connected to one another. The value zero in the weighting matrix means that there is no significant connection between these two nodes (Costantini et al., 2015, Hevey, 2018). When using the EBICglasso estimator, this is considered and only nodes where the links are greater than zero are connected. This allows for better identification of which relationships are important and should be considered (Costantini et al., 2015, Hevey, 2018). Additionally, to understand which dimensions (i.e., nodes) are most central to workplace well-being, the centrality coefficients betweenness, closeness, and strength were used. The larger the value of one of the three centrality measures (betweenness, closeness, strength), the more central the role of the node in the network (Costantini et al., 2015, Hevey, 2018). Betweenness indicates that more edges pass through these nodes, making it easier to move from one node to another. With the coefficient closeness, one can see whether changes in the network have an impact on these nodes, and conversely, whether a change in this node influences the overall network. A larger number indicates a stronger effect in both directions. Strength also indicates how well a node can directly influence other nodes in the network (Bringmann et al., 2019). With the help of these

factors, one can interpret the network more clearly and obtain important insights into the individual nodes and edges (Bringmann et al., 2019; Costantini et al., 2015; Hevey, 2018).

Ethical considerations

All procedures performed in this study involved human participants and followed the ethical standards of Lund University's internal ethical guidelines as well as with the 1964 Helsinki Declaration and its later amendments or comparable ethical standards. Additionally, no deception tactics were used, and anonymity is guaranteed.

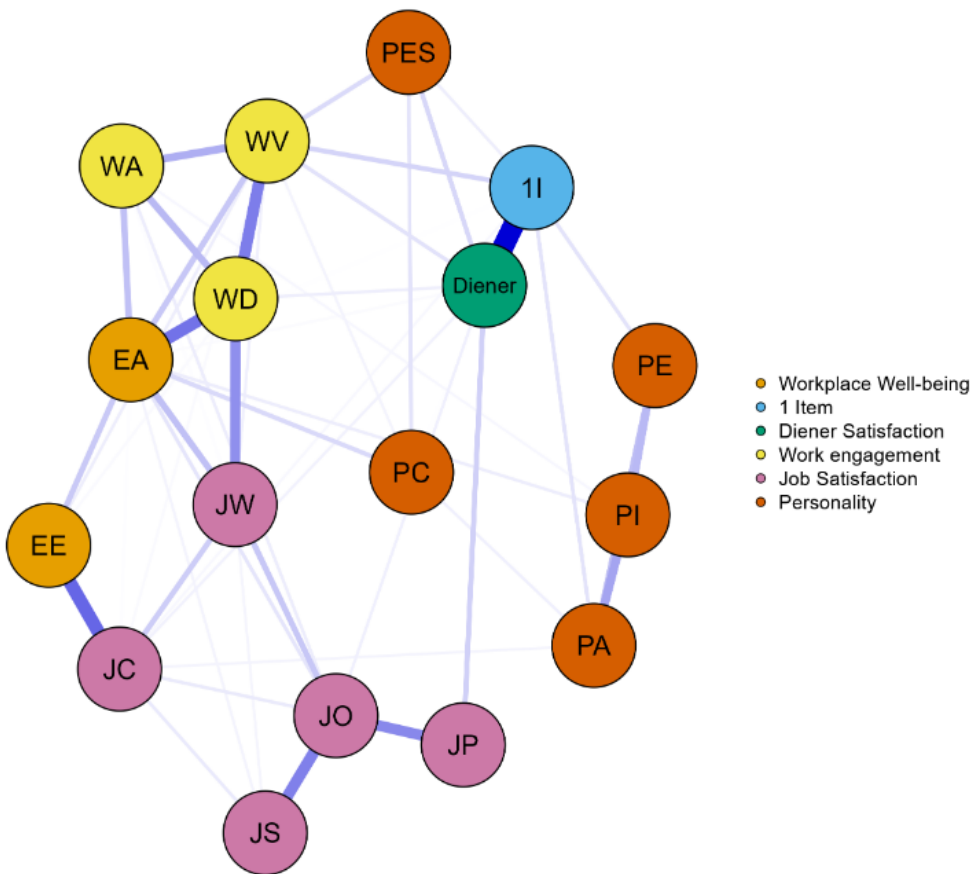
Results

Table 9 in the appendix gives the reader an overview of the descriptives of each variable examined in our network analysis, including mean, standard deviation, variance, skewness, and kurtosis.

The network, illustrated in Figure 2, consists of 17 nodes and 136 edges. Of the 136 edges, 52 edges are direct connections. This implies that a relationship greater than zero exists between two nodes. Each node represents a variable or dimension of a variable. The edges indicate whether there is a connection between two nodes (i.e., variables) and if so, how strong it is. The thicker the line, the stronger the relationship between the two nodes. If two nodes are not connected, it means there is no connection. The network displays strong connections among certain variables. For example, extraversion, agreeableness, and imagination are close together, as are 1 item life satisfaction and Diener life satisfaction. The two nodes (i.e., EE and EA), which stand for workplace well-being, are mainly surrounded by work engagement and job satisfaction nodes. Based on the figure, it can be deduced that the dimensions of job satisfaction and work engagement in particular have key influencing factors on well-being at work because of the thicker edges.

Figure 2

Network with 17 nodes and 52 edges with EBICglasso as estimator.



Note. The figure represents a map of the network with all variables surveyed.

Thicker lines in this case represent stronger connections between the individual variables, whereas no line represents no connection. For example, WD and EA are strongly connected, as are EE and JC. Whereas there is no connection between JW and PC.

Variable description: EA: intrapersonal eudaimonic workplace well-being; EE: interpersonal eudaimonic workplace well-being; WA: work engagement – absorption; WV: work engagement – vigor; WD: work engagement – dedication; JW: job satisfaction - work itself; JC: job satisfaction – colleagues; JS: job satisfaction – supervision; JO: job satisfaction - promotional opportunities; JP: job satisfaction – pay; 1I: 1 Item Life Satisfaction Scale; Diener: Diener Life satisfaction Scale; PES: personality - emotional stability; PC: personality – conscientiousness; PE: personality – extraversion; PI: personality – imagination; PA: personality – agreeableness

The strength of the connection between two nodes is shown in the weight's matrix (Table 7). A value of zero indicates that there is no connection between two nodes, while higher values indicate a stronger relationship (Costantini et al., 2015). Given the focus of this study on the construct of workplace well-being and the factors that are central to the construct, we will examine the variables of intrapersonal eudaimonic workplace well-being (i.e., EA) and interpersonal eudaimonic workplace well-being (i.e., EE) in the weight matrix. These two variables represent the dimensions of eudaimonic workplace well-being. The weight's matrix (Table 7) shows that the node EA is connected to almost all other nodes in the network, with the strongest connections to dedication (0.35), work itself (0.16), absorption (0.16), vigor (0.140) and interpersonal workplace well-being (0.13). In contrast, interpersonal workplace well-being has a notable connection only with the node which stands for colleagues (0.38).

Table 7

Weight's matrix between 17 variables.

Variable	EA	EE	II	Diener	WD	WA	WV	JW	JS	JC	JP	JO	PC	PE	PA	PI	PES
EA	.00	.13	.00	.01	.35	.16	.14	.16	.03	.00	.00	.06	.09	.00	.00	.05	.00
EE	.13	.00	.00	.00	.01	.00	.04	.00	.00	.38	.00	.00	.00	.00	.00	.00	.00
II	.00	.00	.00	.63	.00	.00	.11	.00	.00	.02	.00	.00	.07	.07	.00	.04	.00
Diener	.01	.00	.63	.00	.04	.00	.07	.00	.00	.03	.12	.04	.00	.00	.00	.00	.10
WD	.35	.01	.00	.04	.00	.17	.32	.28	.00	.00	.00	.00	.00	.00	.00	.00	.00
WA	.16	.00	.00	.00	.17	.00	.20	.01	.00	.00	.00	.05	.00	.00	.00	.02	.00
WV	.14	.04	.11	.07	.32	.20	.00	.04	.00	.01	.00	.00	.03	.00	.00	.00	.09
JW	.16	.00	.00	.00	.28	.01	.04	.00	.02	.13	.00	.14	.00	.00	.00	.00	.00
JS	.03	.00	.00	.00	.00	.00	.00	.02	.00	.05	.00	.32	.00	.00	.00	.00	.00
JC	.00	.38	.02	.03	.00	.00	.01	.13	.05	.00	.00	.05	.00	.00	.03	.00	.00
JP	.00	.00	.00	.12	.00	.00	.00	.00	.00	.00	.00	.30	.00	.00	.00	.00	.00
JO	.06	.00	.00	.04	.00	.05	.00	.14	.32	.05	.30	.00	.00	.00	.00	.00	.00
PC	.09	.00	.00	.00	.00	.00	.03	.00	.00	.00	.00	.00	.00	.00	.04	.00	.07
PE	.00	.00	.07	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.16	.17	.00
PA	.00	.00	.07	.00	.00	.00	.00	.00	.00	.03	.00	.00	.04	.16	.00	.23	.00
PI	.05	.00	.00	.00	.00	.02	.00	.00	.00	.00	.00	.00	.00	.17	.23	.00	.00
PES	.00	.00	.04	.10	.00	.00	.09	.00	.00	.00	.00	.00	.07	.00	.00	.00	.00

Note. The strength of the connections between the variables can be found in the weight matrix. A higher number indicates a stronger connection. Variable description: EA: intrapersonal eudaimonic workplace well-being; EE: interpersonal eudaimonic workplace well-being; WA: work engagement – absorption; WV: work engagement – vigor; WD: work engagement –

dedication; JW: job satisfaction - work itself; JC: job satisfaction – colleagues; JS: job satisfaction – supervision; JO: job satisfaction - promotional opportunities; JP: job satisfaction – pay; II: 1 Item Life Satisfaction Scale; Diener: Diener Life satisfaction Scale; PES: personality - emotional stability; PC: personality – conscientiousness; PE: personality – extraversion; PI: personality – imagination; PA: personality – agreeableness

Additional important indicators to answer the question of which factors are central to workplace well-being can be found in the centrality table (Table 8). The larger the value of one of the three centrality measures (betweenness, closeness, strength), the more central the role of the node in the network (Costantini et al., 2015, Hevey, 2018). Intrapersonal well-being (1.17), 1 item life satisfaction (1.52), dedication (1.26), and work itself (1.17) show the strongest betweenness values. This indicates that more edges pass through these nodes, making it easier to move from one node to another. Four variables in the network display higher values for the measured value closeness (intrapersonal (1.23), dedication (1.63), vigor (1.29), and work itself (1.02). Changes in the network are likely to have a strong impact on these nodes, and conversely, these nodes are likely to have a strong impact on the overall network. Strength also indicates how well a node can directly influence other nodes in the network. Four nodes have high values in this measure: intrapersonal workplace well-being (1.57), Diener’s life satisfaction (1.12), dedication (1.56), and vigor (1.16). The node’s intrapersonal workplace well-being and dedication are particularly notable, as they have the highest values for all three centrality measures.

Table 8

Centrality measures per variable

Variable	Betweenness	Closeness	Strength
EA	1.17	1.23	1.57
EE	-0.57	-0.45	-0.39
II	1.52	0.74	0.80
Diener	0.65	0.57	1.12
WD	1.26	1.63	1.56
WA	-1.10	0.31	-0.28

WV	1.00	1.29	1.16
JW	1.17	1.02	0.23
JS	-1.10	-0.48	-0.87
JC	-0.75	-0.61	0.03
JP	-0.05	0.13	-0.89
JO	0.91	0.32	0.82
PC	-1.10	-0.97	-1.47
PE	-1.10	-1.45	-0.92
PA	-0.40	-1.34	-0.54
PI	-0.58	-1.49	-0.73
PES	-0.93	-0.46	-1.23

Note. The table represents the centrality coefficients betweenness, closeness, and strength. The larger the value of one of the three centrality measures, the more central the role of the node in the network. Variable description: EA: intrapersonal eudaimonic workplace well-being; EE: interpersonal eudaimonic workplace well-being; WA: work engagement – absorption; WV: work engagement – vigor; WD: work engagement – dedication; JW: job satisfaction - work itself; JC: job satisfaction – colleagues; JS: job satisfaction – supervision; JO: job satisfaction - promotional opportunities; JP: job satisfaction – pay; 1I: 1 Item Life Satisfaction Scale; Diener: Diener Life satisfaction Scale; PES: personality - emotional stability; PC: personality – conscientiousness; PE: personality – extraversion; PI: personality – imagination; PA: personality – agreeableness

Discussion

The study aimed to examine the most central dimensions of well-being at work from a network perspective. With the help of a network analysis, the most central dimensions were identified and the relationships between the dimensions were explored. The results indicate five dimensions that show a strong connection to workplace well-being. These dimensions are the three factors of work engagement (i.e., dedication, absorption, vigor) and the two factors of job satisfaction (i.e., work itself and colleagues). The variables that were additionally collected

(personality, general well-being, and other factors of job satisfaction) seem to play a more peripheral role in the present network.

Based on these results, it can be concluded from the employer's and the company's point of view that to create high well-being among the workforce at the workplace, special emphasis should be placed on work engagement and colleagues. Which suggests the importance of the social environment in a working context. In the network strong relationships were observed between eudaimonic workplace well-being (intrapersonal well-being) along with the nodes of work engagement (specifically dedication, absorption, vigor), the construct of work itself within job satisfaction, and interpersonal well-being. There were strong connections also observed between the interpersonal well-being node, specifically with colleagues in job satisfaction measurement, and with intrapersonal well-being, the other facet of the eudaimonic workplace well-being scale. An interesting finding was the placement on the matrix of the IPIP Big-Five Factor emotional stability node. Its distance from the other personality constructs is to be noted, and while the construct itself plays a huge role in some of the influence factors examined in the current study, its placement requires further inquiry. As the literature mentioned, there also was no significant connection found between life satisfaction and workplace well-being, despite new findings on job satisfaction versus life satisfaction playing an important role in subjective well-being (Steel et al., 2008). Therefore, our findings may also suggest that general life satisfaction may not actually play a role in how one feels at work. You can be fulfilled at work, but not display high life satisfaction, and, vice versa, be very high in life satisfaction, but experience low well-being at work.

As stated in the literature review by Biggio and Cortese (2013) and Shier and Graham (2013, 2011), they used a qualitative interview approach to explore workers well-being by asking the workers' what they believe influence subjective well-being at the workplace. Their findings showed that well-being is most strongly influenced by the work environment (such as the workplace or work culture), social relationships at work (i.e., with colleagues, customers, or the boss), and various aspects of the job (i.e., workload). Some findings in the present study show similar results for example the work itself and colleagues playing an important role, however, the qualitative approach did not demonstrate the importance of work engagement which was a central construct in the present study. Hence, it could be said that a quantitative approach is likely to gather more information versus the qualitative approach in this domain. However, it is

important to consider that well-being is subjective and individual by nature, therefore a combination of qualitative and quantitative methods could be applied in future research to grasp well-being in a working context or the well-being of workers.

The sample in the present study is not based on a specific demographic group, rather it includes workers from different sectors to generate a holistic picture of the factors influencing subjective well-being at work. Nevertheless, it can be interesting to see how the results of the present study align with the findings of Carvajal-Arango et al. (2021) and Na'imah et al. (2023) whose samples included teachers and construction workers. Not specifying a specific group can be viewed as a limitation in this case because the multicultural and multisector sample could risk the presence of unknown variables that may affect the results. It can be hypothesized that depending on the nature of work, dimensions central to workplace well-being may vary and companies or researchers examining this should consider narrowing down specific dimensions based on work type. Future studies could consider narrowing populations based on culture or work sectors, but within this exploratory work, a general sample including many individuals from different backgrounds and workplaces was used. Focusing on a particular population was not within the scope of this study.

In the present network analysis, it seems as though personality traits did not play a significant role in subjective well-being in a working context. We could not find any strong relationships between the five personality nodes and workplace well-being nodes. Conscientiousness was the only node that showed a slight connection to intrapersonal workplace well-being (0.094). In general, with personality inventories conducted in the recruitment for employment, conscientiousness is taken strongly into consideration, as it usually demonstrates high productivity, higher performance, and higher work engagement. According to the literature and previous research, there should have been more connections between personality, job satisfaction, and work engagement. For example, high extraversion affects factors like job satisfaction and interpersonal interactions. A possibility that our results do not show a strong relationship between personality and workplace well-being could be the use of EBICglasso as an estimator in the analysis. While using this particular estimator, only nodes are connected when the relation is greater than zero. Since the focus in this paper was only on workplace well-being, we did not dig deeper into the relations between the other variables amongst each other which could be a reason why we did not find more connections between personality and other variables

in our network. The results suggest that personality is not directly connected to well-being in a working context, but personality traits could play an important role in other aspects in a workplace context. For example, measuring the degree of performance, job satisfaction, or work engagement which are related to well-being, therefore future research could find a potential mediator which could demonstrate a stronger relationship between personality and well-being in a working context. Additionally, with the use of partial correlation as an estimator, a relationship although very small, may be present.

A significant limitation of the present study was the listwise deletion of numerous participants due to incomplete questionnaires. Many participants did not fill out the questionnaire completely and left out significant amounts from the implemented survey. Future studies should ensure that the structure and available responses to participants are clear and comprehensible.

Implications

The findings in this study suggest that research on well-being in the workplace has important implications for managers and companies regarding promoting employee well-being and enhancing organizational performance. Firstly, the results may suggest that different factors of the work environment have an impact on subjective well-being at the workplace, such as work engagement or job satisfaction. Improving these factors can lead to higher employee well-being in the workplace. Managers can use this information to design policies and programs that support work engagement and job satisfaction. Secondly, the findings showed the importance of fostering positive relationships between employees and their supervisors and colleagues. Managers or supervisors should encourage communication and collaboration among employees and provide opportunities for social support and team-building activities. This can contribute to a positive work environment and enhance employee well-being.

Conclusion

In conclusion, it should be noted that this is an exploratory preliminary study, and therefore the aim was not to answer a specific hypothesis, but rather explore the following question of what the most central dimensions of subjective well-being in a working context within a network analysis are. The results indicate five central dimensions: work engagement (i.e., dedication, absorption, vigor) and job satisfaction (i.e., work itself and colleagues). We discussed several aspects that should be considered in future research, such as the method and target group while also suggesting having a closer look at personality types and their influence

on well-being. Further studies should explore the dimensions that we considered most significant to gain a holistic picture of what well-being in a working context entail. After all, a significant portion of our lives is spent working or in a working environment. Thus, it is favourable for both companies and the individual to be aware of influential factors that contribute to well-being in a working context.

CRedit author statement

Aleksandra Burzynska: Writing; Conceptualization; Methodology; Investigation. **Ruth Elsner:** Writing; Conceptualization; Methodology; Formal analysis; Investigation

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Appendix

Tables

Table 1

Distribution of gender within the sample (N = 243)

	n	%
Woman	153	62.96
Men	87	35.80
Others	1	0.41
Prefer not to say	2	0.82

Table 2

Distribution of citizenships within the sample (N = 243)

	n	%
Africa	3	1.23
America	27	11.11
Asia	15	6.17
Europe	191	78.60
Multiple citizenships	7	2.88

Table 3

Distribution of the duration of occupation within the sample (N = 243)

	n	%
Less than 1 year	52	21.40
1 – 5 years	108	44.44
5 – 10 years	36	14.81
More than 10 years	47	19.34

Table 4*Distribution of the type of work within the sample (N = 243)*

	n	%
Education	17	7.00
HealthCare	22	9.05
Manual Labor	2	0.82
Office Job	159	65.43
Other	28	11.52
Sales	15	6.17

Table 5*Distribution of working time at home within the sample (N = 243)*

	n	%
Less than 20 %	28	11.52
20 – 40 %	26	10.70
40 – 60 %	22	9.05
More than 60 %	111	45.68
I do not work from home at all.	56	23.05

Table 6*Distribution of average working hours per week within the sample (N = 243)*

	n	%
Less than 20 h	29	11.93
Between 20 h and 40 h	69	28.40
40 h per week or more	145	59.67

Table 9

Descriptive table of variables including Mean, Standard Deviation, Variance, Skewness, Kurtosis

	Mean	SD	Var	Skew	Kurt
Diener Life Satisfaction	4.93	1.16	1.35	-0.58	-0.05
II	5.44	1.19	1.42	-1.46	2.07
Work Engagement	4.60	1.11	1.25	-0.46	-0.48
Job Satisfaction	4.52	0.92	0.85	-0.20	-0.44
Workplace Well-Being	3.47	0.68	0.47	-0.25	-0.14
Personality–Emotional Stability	3.07	0.67	0.44	-0.02	-0.32
Personality–Imagination	3.77	0.51	0.26	-0.03	-0.22
Personality–Extraversion	3.21	0.76	0.58	0.01	-0.33
Personality–Conscientiousness	3.68	0.50	0.25	-0.51	0.95
Personality–Agreeableness	3.96	0.46	0.21	-0.26	-0.09

Scales

Diener's Satisfaction with Life Scale

1. In most ways my life is close to my ideal.
2. The conditions of my life are excellent.
3. I am satisfied with my life.
4. So far I have gotten the important things I want in life.
5. If I could live my life over, I would change almost nothing.

1 – Strongly disagree - 2 – Disagree - 3 – Somewhat disagree - 4 – Neither agree or disagree - 5 – Somewhat agree - 6 – Agree - 7 – Strongly agree

1 Item Life Satisfaction

All things considered, how satisfied are you with your life as a whole?

1 – Totally dissatisfied - 2 – Mostly dissatisfied - 3 – Somewhat dissatisfied - 4 – neither satisfied or dissatisfied 5 – Somewhat satisfied - 6 – Mostly satisfied - 7 – Totally satisfied

Utrecht Work Engagement Scale

V- vigor; D – dedication; A – absorption

1. At my work, I feel bursting with energy (V)
2. At my job, I feel strong and vigorous (V)
3. I am enthusiastic about my job (D)
4. My job inspires me (D)
5. When I get up in the morning, I feel like going to work (V)
6. I feel happy when I am working intensely (A)
7. I am proud of the work that I do (D)
8. I get carried away when I am working (A)
9. I am immersed in my work (A)

0– Never - 1 – Rarely - 2 – Occasionally- 3 – Sometimes - 4 – Frequently - 5 – Usually - 6 – Always/ Every day

Eudemonic Workplace Well-Being Scale (Bartels et al., 2019)

Interpersonal dimension

1. Among the people I work with, I feel there is a sense of brotherhood/sisterhood
2. I feel close to the people in my work environment
3. I feel connected to others within the work environment
4. I consider the people I work with to be my friends

Intrapersonal dimension

5. I am emotionally energized at work
6. I feel that I have a purpose at my work
7. My work is very important to me
8. I feel I am able to continually develop as a person in my job

1 – Strongly disagree - 2 – Disagree - 3 – Neither agree or disagree - 5 – Agree - 7 – Strongly agree

Job Satisfaction – 25 items Facet Satisfaction Scale

1. Overall, I am very pleased with the types of activities that I do on my job.
2. I would be more content with my job if I were doing tasks that are different from the ones I do now (reverse-scored)
3. I am more satisfied with the types of work I currently do that with almost any other work I have ever done.
4. All in all, I am very satisfied with the things I do at work.
5. All in all, I would rather have some other kind of duties in my work (reverse-scored)
6. Overall, I am very pleased with the way my manager supervises me.
7. I would be more content with my job if my manager did not work here (reverse-scored)
8. I am more satisfied with my manager than with almost anyone I have ever worked for.
9. All in all, I am very satisfied with this person as my manager.
10. All in all, I would rather work for some other manager (reverse-scored)
11. Overall, I am very pleased to work with my coworkers.
12. I would be more content with my job if my coworkers did not work here (reverse-scored)
13. I am more satisfied with my coworkers than with almost anyone I have ever worked with before.
14. All in all, I am very satisfied with my coworkers.
15. All in all, I would rather work with some other kind of coworkers (reverse-scored)
16. Overall, I am very pleased with how much money I earn.
17. I would be more content with my job if my pay were not so low (reverse-scored)
18. I am more satisfied with my pay now than I have almost ever been.
19. All in all, I am very satisfied with my pay.
20. All in all, I would rather have better pay (reverse-scored)
21. Overall, I am very pleased with my opportunities for promotion.
22. I would be more content with my job if my promotion opportunities were not so poor (reverse-scored)

23. I am more satisfied with my opportunities for promotion now than with almost any other promotion opportunities I have ever had.

24. All in all, I am very satisfied with my chances for promotion.

25. All in all, I would rather have more opportunities for promotion (reverse-scored)

1 – Strongly disagree - 2 – Disagree - 3 – Somewhat disagree - 4 – Neither agree or disagree - 5 – Somewhat agree - 6 – Agree - 7 – Strongly agree

Personality IPIP Big-Five Factor (Goldberg et al., 2006)

1. I am the life of the party.

2. I feel little concern for others.

3. I am always prepared.

4. I get stressed out easily.

5. I have a rich vocabulary.

6. I don't talk a lot.

7. I am interested in people.

8. I leave my belongings around.

9. I am relaxed most of the time.

10. I have difficulty understanding abstract ideas.

11. I feel comfortable around people.

12. I insult people.

13. I pay attention to details.

14. I worry about things.

15. I have a vivid imagination.

16. I keep in the background.

17. I sympathize with others' feelings.

18. I make a mess of things.

19. I seldom feel blue.

20. I am not interested in abstract ideas.

21. I start conversations.

22. I am not interested in other people's problems.

23. I get chores done right away.
24. I am easily disturbed.
25. I have excellent ideas.
26. I have little to say.
27. I have a soft heart.
28. I often forget to put things back in their proper place.
29. I get upset easily.
30. I do not have a good imagination.
31. I talk to a lot of different people at parties.
32. I am not really interested in others.
33. I like order.
34. I change my mood a lot.
35. I am quick to understand things.
36. I don't like to draw attention to myself.
37. I take time out for others.
38. I shirk my duties.
39. I have frequent mood swings.
40. I use difficult words.
41. I don't mind being the center of attention.
42. I feel others' emotions.
43. I follow a schedule.
44. I get irritated easily.
45. I spend time reflecting on things.
46. I am quiet around strangers.
47. I make people feel at ease.
48. I am exacting in my work.
49. I often feel blue.
50. I am full of ideas.

1. Very Inaccurate, 2. Moderately Inaccurate, 3. Neither Accurate nor Inaccurate, 4. Moderately Accurate, or 5. Very Accurate