

What makes a workday meaningful? Evidence on the role of task significance, competence and subjective meaningful work

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Francesco Tommasi, Riccardo Sartori and Andrea Ceschi
Department of Human Sciences, University of Verona, Verona, Italy, and
Stephan Dickert
*School of Business and Management, Queen Mary University of London,
London, UK*

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Abstract

Purpose – The construct of meaningful work is a relevant topic for the managerial literature interested in job design, employees' motivation, and job performance. The current research seeks to improve our knowledge on meaningful work by exploring the processes by which a workday is experienced as meaningful.

Design/methodology/approach – Adopting the lens of the Job Demands-Resources model and Self-Determination theory, we argue that work conditions and psychological conditions are associated with the experience of meaningful work on a daily basis. Moreover, we propose that the experience of meaningful work on a long-term basis (i.e. the evaluation of one's own work as holding significance *per se*) intensifies the associations between daily conditions and the experience of meaningful work. We collected data via an event-based longitudinal diary study for a total sample of $N = 114$ employees from six organizations and $N = 545$ observations.

Findings – Results of the multilevel analysis showed that competence and task significance led to the experience of meaningful work during working days. Moreover, cross-level analyses revealed that these associations are stronger for employees who experience their work to be meaningful in the long-term.

Originality/value – The novelty of the present study lies in highlighting the role of specific factors contributing to the experience of meaningful work during a workday. These findings help specify targets and organizational and individual dimensions to be addressed by managerial interventions to ensure employees' meaningful work experience.

Keywords Meaningful work, Daily meaningful work, Psychological and work conditions, Diary study method

Paper type Research paper

Introduction

In the last two decades, international research in the area of management and business has shown an increasing interest in the dynamics and processes which lead to optimal work conditions of individuals, organizations and institutions (Michaelson *et al.*, 2014; Bailey *et al.*, 2019). These endeavors are part of an expanding effort to better understand the factors that contribute to meaningful work (Pratt and Ashforth, 2003; Rosso *et al.*, 2010), defined as the experience and perception that one's own work is significant in a broader sense. This can lead

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Data availability statement: The data that support the findings of this study are available from the corresponding author, upon reasonable request.



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to positive individual and organizational outcomes such as work engagement (Woods and Sofat, 2013) and job performance (May *et al.*, 2004). The concept of meaningful work is particularly relevant for management studies focusing on employee motivation and job performance (Yeoman *et al.*, 2019). However, scholars have noted the lack of empirical research on the topic with a significant gap remaining on how managerial practices can contribute to meaningful work (Bailey *et al.*, 2019; Bailey and Madden, 2020). Specifically, no prior empirical studies focused on the multilevel and temporal nature of meaningful work and what makes a workday meaningful on a daily basis.

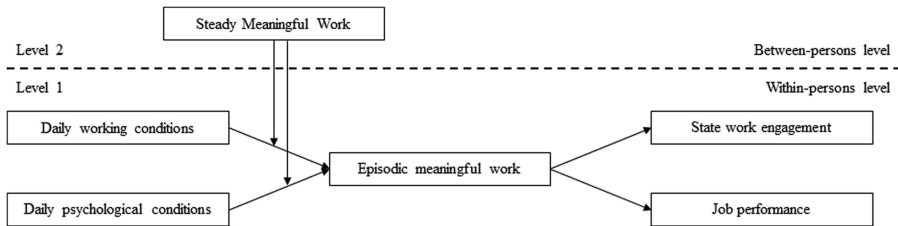
Bailey *et al.* (2019) reviewed the literature on meaningful work and stated that one of the problematic issues within the managerial and organizational literature on meaningful work relates to the ways it has been defined. One of the assumptions is that it is an inherently subjective evaluation and a pervasive positive attitude towards one's job (Rosso *et al.*, 2010), which can be both stable over time as well as episodic or occasional (Tommasi *et al.*, 2020). Thus, a critical aspect of meaningful work is the question of its *temporal dynamic*, namely, the intensity of the experience, the frequency with which it occurs, and the dichotomy between stability and occasionality over time. Recent conceptual analyses have argued that meaningful work should be considered via a dual conceptualization: (a) as a permanent steady mindset (i.e. "steady meaningful work"), covering the subjective evaluation of work as contributing to personal flourishing which (b) can also occur episodically (i.e. "episodic meaningful work"), as a temporal dynamic psychological phenomenon (Tommasi *et al.*, 2020). However, it is still unclear which factors are related to episodic meaningful work on a daily basis (i.e. work context and psychological conditions; Lysova *et al.*, 2019) and whether this is influenced by steady meaningful work.

In the present study, we seek to improve our knowledge on meaningful work as a multilevel and temporally dynamic construct by using multi-level modeling, which allows insights into the stable and changeable conditions of meaningful work (Allan, 2017; Lysova *et al.*, 2019). Focusing on the temporal-dynamic psychological and multilevel nature of the construct allows a better comprehension of factors that are assumed to be related to episodic meaningful work (Bailey *et al.*, 2018; Fletcher and Schofield, 2019). The overarching aim of this study is to renew interest in managerial interventions addressing both organizational and individual levels. Studying episodic meaningful work responds to the call on the understanding of what makes a workday meaningful and has implications on how to target organizational level interventions to sustain individual positive experiences at work on a daily basis. Yet, examining the role of steady meaningful work on daily work experience allows us to understand how work is experienced as being rewarding and significant in relation to a general and long-term basis.

Our work expands on the recent conceptualizations of meaningful work by empirically distinguishing potential dynamics and processes which can contribute to optimal conditions of individuals, organizations, and institutions (Figure 1).

Situational conditions at work as well as psychological conditions can influence episodic meaningful work. In our model, we base our within-person assumptions on work and

Figure 1.
Theoretical model:
meaningful work as a
multilevel and dynamic
construct



Source(s): Authors' work

psychological conditions underlying the experience of meaningful work. Thus, we emphasize the need to focus on job characteristics and job design features as relevant for meaningful work. We refer to the job demands-resources (JD-R) model (Bakker, 2014) and the literature on daily work experiences (Ohly *et al.*, 2010). We hypothesize that daily work conditions like task significance, team climate and co-workers are positively associated with the episodic experience of meaningful work (Allan, 2017; Bakker, 2014). Moreover, we draw on Self-Determination Theory to identify the psychological variables which vary in the context of daily work and underpin episodic meaningful work: namely, autonomy, competence, and relatedness dimensions (Martela *et al.*, 2021; Martela and Riekkki, 2018; Martela and Ryan, 2016). We hypothesize that this separate set of basic psychological needs, if satisfied on a daily basis, can relate to employees experiencing episodic meaningful work. This approach allows us to reveal insights for the managerial literature. The JD-R model and Self-Determination Theory have been widely used for exploring daily events in managerial as well as work and organizational psychology literature (Ohly *et al.*, 2010), and these allow us to examine how workday dimensions (work and psychological conditions) are associated with meaningful work.

Moreover, meaningful work represents an important topic for management studies concerning employees' work engagement and job performance. According to the literature, experiencing meaningful work leads to positive individual and organizational outcomes, including temporal dynamic work engagement and job performance (Allan *et al.*, 2019; Bakker, 2014; Xanthopoulou *et al.*, 2009, 2014). In line with this research, we hypothesize that episodic experiences of meaningful work mediate the association between both daily work conditions as well as psychological conditions, and (a) work engagement and (b) job performance.

Finally, we examine the potential moderating role of subjective meaningful work in the relationship between specific psychological and work conditions and the episodic experience of meaningful work. Meaningful work is also considered to be a steady construct as a stable subjective assessment of meaningfulness where work can potentially contribute to meaning in life, individual fulfillment, self-development and self-actualization (Lips-Wiersma and Wright, 2012; Schnell and Hoffmann, 2020; Dik *et al.*, 2013). As such, general stable subjective assessment, such as steady meaningful work, can moderate the role of psychological and work conditions related to daily episodic of meaningful work.

Overall, this article makes the following contributions. By examining episodic meaningful work in conjunction with steady meaningful work, we can improve the empirical understanding of the nature of such a complex phenomenon. Existing literature on the topic has emphasized the lack of cohesion within the study of meaningful work, which includes disparate conceptualizations, measurement problems and understanding of the concept (Bailey *et al.*, 2018, 2019; Bailey *et al.*, 2017; Mitra and Buzzanell, 2017). Our work contributes to this literature by providing an accurate test of the dual nature of meaningful work (Bailey *et al.*, 2019; Tommasi *et al.*, 2020) but also advances it by examining in more depth the multilevel and temporal nature of meaningful work, and its antecedents on a daily basis. Moreover, understanding the nature of meaningful work has practical implications for human resources managers and organizations who want to ensure that employees experience their daily work as meaningful. In the literature, two main levels of intervention aimed at increasing meaningful work exist, and they separately focus on episodic or steady meaningful work. The first corresponds to job design features such as task significance and team climate which can allow employees to have episodic experiences of meaningful work. The second group refers to individual level interventions focused on specific behaviors (e.g. job crafting) and field interventions that operate on the ways individuals attribute meaning to their work on a long-term basis (Bailey and Madden, 2020). By addressing the nature of meaningful work, our article offers a starting point to extend the repertoire of interventions and helps human resources managers and organizations in reaching their goal to provide meaningful work.

Theoretical foundation of the model

Work and psychological conditions related to episodic meaningful work

One of the central features of meaningfulness is its occurrence in reference to work-related opportunities (Chalofsky, 2003; Lavy and Bocker, 2018) which can elicit occasional meaningfulness (Harpaz and Fu, 2002; Matz-Costa *et al.*, 2019; Vogel *et al.*, 2020). According to the JD-R model, team climate, co-workers' support and task significance represent work resources capable of explaining the daily variations of meaningful work (Allan, 2017; Bakker, 2014). Team climate can lead to meaningful work experiences as an indicator of team success and team interactions while co-workers' support reflects the social resources in the pursuit of specific work tasks. Likewise, task significance represents a core work resource that can change during the day depending on the nature of the work tasks (e.g. tasks with a clear purpose versus an ambiguous purpose; Fletcher *et al.*, 2017). Drawing on these, the following hypotheses regarding work and organizational conditions can be made:

H1a. Team climate is positively related to episodic meaningful work.

H1b. Perception of co-workers' support is positively related to episodic meaningful work.

H1c. Perception of task significance is positively related to episodic meaningful work.

Regarding the psychological conditions, we follow the assumption that a subjective understanding of meaningful work experience is related to a small set of basic psychological needs (Martela and Ryan, 2016), including autonomy, relatedness and competence dimensions (Martela and Riekkki, 2018). The satisfaction of these psychological needs can lead to the sustained presence of positive individual states and thereby make work seem meaningful (Martela and Riekkki, 2018). Drawing on Self-Determination Theory, research has shown these small set of basic psychological needs, such as autonomy, relatedness and competence, constitutes a species-typical feature of the human experience of meaningful work which could be considered universal across individuals and occupations (i.e. autonomy, relatedness, and competence; Baumeister *et al.*, 2013; Martela and Riekkki, 2018; Martela and Ryan, 2016; Vogel *et al.*, 2020). Autonomy refers to actions that are performed without external pressure and reflect an individual's true identity. Likewise, relatedness reflects the extent to which individuals are connected to others and varies as a function of the composition of, and interactions between, workgroup members. Competence (i.e. a sense of being able to do an activity) can vary depending on the employee's sense of mastery and efficacy, which can also boost the presence of episodic meaningful work. Accordingly, we predict that:

H1d. Perceived autonomy is positively related to episodic meaningful work.

H1e. Perceived relatedness is positively related to episodic meaningful work.

H1f. Perceived competence is positively related to episodic meaningful work.

Daily work outcomes: the mediating role of meaningful work

In the literature, both daily work conditions as well as psychological conditions are presented as fluctuating factors that can determine employees' temporal dynamic state (e.g. work engagement) and variations in job performance (Bakker, 2014; Fletcher *et al.*, 2017; Xanthopoulou *et al.*, 2009). Employees' capability to engage in work and subsequently to have a good level of subjective job performance is enabled both by the perception of the work context and the satisfaction of personal needs. Work conditions include the physical, social and organizational aspects that can affect employees' (a) desire and capacity to engage with work goals as well as the (b) ability to achieve them. When basic psychological needs are satisfied this can foster daily work engagement and job performance (Bakker and Oerlemans, 2019; Gagné, 2014). The satisfaction of the needs for

autonomy, relatedness, and competence elicits individuals' broadening of the thought-action repertoire for optimal psychological functioning at the workplace (Martela and Riekk, 2018; Martela and Ryan, 2016). Conversely, the frustration of basic psychological needs impairs the ability to engage and perform at work (Bailey et al., 2017; Schultz et al., 2015). We posit the following hypotheses:

H2a. Work conditions and psychological conditions are positively associated with work engagement.

H2b. Work conditions and psychological conditions are positively associated with daily job performance.

Moreover, a recent meta-analytical study on the positive outcomes of meaningful work revealed that it reliably and primarily leads to higher work engagement (Allan et al., 2019). Indeed, these dimensions are strongly related (Kahn, 1990), with meaningful work activating an affective-cognitive process that increases the capacity to engage employees at work. Thus, episodic meaningful work may mediate the associations between both work conditions as well as psychological conditions and work engagement (Fletcher et al., 2017). According to seminal organizational theories such as the Job Characteristics Theory (JCT; Hackman and Oldham, 1976), episodic meaningful work represents one of the key factors for employees to have higher job performance. Although recent evidence suggests that the correlation between these concepts may be only modest (i.e. 0.33; Allan et al., 2019), the direction of the relationship is consistent within the literature.

H2c. Episodic meaningful work mediates the relationship between both perceived work conditions as well as psychological conditions with work engagement.

H2d. Episodic meaningful work mediates the relationship between both perceived work conditions as well as psychological conditions with daily job performance.

Moderation effects of between-persons steady meaningful work

While episodic experience of meaningful work fluctuates over the course of the workday, an individual may hold a more generalized evaluation about their work as meaningful (Rosso et al., 2010). The way individuals view themselves and their work influences how they experience and perceive their work (Michaelson et al., 2014; Tommasi et al., 2020). We thus suggest that steady meaningful work influences relations between daily work and psychological conditions and episodic experience of meaningfulness. Accordingly, steady meaningful work is considered as an abstract evaluative construct concerning work as personally and independently significant and capable of affecting between- and within-persons dimensions. Individuals with higher levels of steady meaningful work will be psychologically capable to positively affect their experience at the workplace (Berg et al., 2015; Rosso et al., 2010; Wrzesniewski, 2003). Therefore, we hypothesize a moderating role of steady meaningful work:

H3a. The positive association between work conditions and episodic meaningful work is stronger for higher levels of steady meaningful work.

H3b. The positive association between psychological conditions and episodic meaningful work is stronger for higher levels of steady meaningful work.

Method

Participants and procedure

Employees ($n = 130$) from six Northern Italian organizations across three sectors ($n = 2$ professional services, $n = 1$ public, and $n = 3$ manufactured) volunteered to participate in the

study. A total of 140 employees have been contacted via email by one of the researchers to recruit the sample. Out of the total, $n = 10$ did not complete the diary pack (response rate = 96.4%), while $n = 16$ subjects were discarded because of more than 60% + missing data in the returned questionnaires for a resulting number of $n = 114$ participants with $n = 545$ observations.

Participants (41.98% females, 62.3% with long-term contracts, 46.15% with a master's degree or more, average age $M = 35.92$, $SD = 12.59$) were informed about the aim of the study and instructed about the procedure by the researcher, after which they signed an informed consent form if they wished to continue. We informed about the use of the diary study as a means for collecting data on characteristics within the work environment that might fluctuate over time. Following the recommendations for the event-based longitudinal diary study method (Bolger *et al.*, 2003; Ohly *et al.*, 2010), we constructed an event-based diary pack comprising two main sections, the first assessing the between-person variables that participants had to complete before and after diary study data collection (average minutes for completing the section = 12.31, $SD = 4.44$). The second section aimed at accompanying participants in the daily compilation. We instructed participants to fill in the daily questionnaires after the respective workdays: in a period of five subsequent weeks, they first chose two days that they felt held some sort of augmented episodic meaningful work; then, they also had to choose two days along the same weeks which, on the contrary, displayed a perceived lack of episodic meaningful work. Finally, they had to choose one day which appeared to be neutral to the extent that neither augmented nor lack of episodic meaningful work was reported (average period of data collection, 22 days, $SD = 12$). Then, we tasked them to reflect on the items and compared them with their experiences at work before filling in the diaries (average minutes for completing a daily diary = 5.22, $SD = 4.64$). Moreover, we left an empty space to report any significant issues that occurred that might affect the data collection process.

The study has been approved by the ethical committee of the University (Author's Institution) (code:) according to the declaration of Helsinki.

Instruments

Within-person measures. We included specific within-persons factors expected be related to the daily associations considered. Participants reported the day entry (1 = Monday to 7 = Sunday) in addition to the number of compilations of the diary (1–5) in order to control for the effect of time. Moreover, we asked participants to indicate the quality of the day at work by rating 2-items for controlling for good/bad days (i.e. All things considered, I had a good day at work today, All things considered, I had a bad day at work today; Fletcher *et al.*, 2017). We also asked participants to report their daily mood indicating if they had a 1 = good, 2 = quiet or 3 = bad day.

We used the following grouped variables for daily work conditions: Daily psychological conditions, episodic meaningful work and daily outcomes. In the literature, there are no specific state level measures for such variables at present. Thus, we followed Ohly *et al.* (2010) suggestion to adapt existing measures to daily conditions. Each of the variables' items was modified by adding "today, at work" in order to reflect the situational perspective which was measured on a 7-point rating scale of agreement (1 = not at all, to 7 = completely agree). To assess work conditions, we measured (a) task significance (3-items, e.g. today's tasks have given me the ability to improve the well-being of other people, $\alpha = 0.89-0.95$, Grant, 2008), (b) co-workers' support (3-items, e.g. today, the people I have worked with were competent, $\alpha = 0.84-0.92$, Gillen *et al.*, 2001), and (c) team climate (3-items, e.g. there was a good working climate at my work, $\alpha = 0.79-0.88$, Kattenbach *et al.*, 2010). To assess psychological conditions, we used the adapted version of the Basic Psychological Needs scale (Chen *et al.*, 2015) comprising the dimensions of (a) autonomy (3-items, e.g. today, I felt that I was free to choose what to do at work, $\alpha = 0.87-0.93$), (b) competence (3-items, e.g. today, I felt confident

that I could do my work well, $\alpha = 0.83-0.92$), and (c) relatedness (3-items, e.g. today, I felt interested in me from the people I care about, $\alpha = 0.80-0.86$).

To measure episodic meaningful work, we used module 2 of the Italian version of the Meaning in Work (Me-work) inventory (Schnell and Hoffmann, 2020; Tommasi *et al.*, 2021). The Me-work offers a multidimensional approach that has revealed better validity in German and Italian samples in capturing facets of meaning in work (module 1), in addition to the general assessments of one's own work as meaningful, meaningless (module 2) and source of meaning (module 3). In our study, we used the scale of meaningful work of module 2 with items adapted for allowing the participants to fill in the answer according to how they felt about their workday (3-items, e.g. today, my work was meaningful to me, $\alpha = 0.90-0.96$).

Finally, to assess job outcomes, we used (a) a 3-item shortened validated version of the three dimensions of work engagement (e.g. today, I felt proud of what I did, $\alpha = 0.80-0.87$, Schaufeli *et al.*, 2006). For job performance, we used the (b) 2-item self-rated job performance by Williams and Anderson (1991) (e.g. today, I got interested in the other employees, $\alpha = 0.65-0.67$). The computation of the overall factor score of job performance did not satisfy the criteria for inclusion in our analyses. Therefore, we refrained from testing H2b and H2d.

Between-person measures. We measured between-persons variables of meaningful work at the start (pre) and the end of the data collection (post). We solely referred to the scale of meaningful work in module 2 of the ME-Work to capture the steady level of meaningful work within the participants (3-items, e.g. I see meaning in my work, $\alpha = 0.93-0.95$, on a 6-point rating scale from 1 = not at all, to 6 = completely).

Moreover, we measured the following between-persons variables; gender (1 = male, 2 = female, 3 = other, 4 = prefer not to say), age (in years), organization (i.e. 1 = private or 2 = public sector organization among the six involved in the study), contract (1 = long-term, 2 = short term).

Data analysis plan

The statistical analysis was conducted using the SPSS statistics version 22 for descriptive statistics and the RStudio program with the specific programs for multilevel modeling of nlme (Pinheiro *et al.*, 2020), the lme4 (Bates, 2018), and the RMediation package which computes the confidence intervals (CIs) for a nonlinear function of the model parameters in both single-level and multilevel models (Tofighi and MacKinnon, 2011). Before the analysis, data were hierarchically ordered at two levels with $n = 545$ observations clustered within $N = 114$ participants. In this, we follow the suggestions for mean centering (Ohly *et al.*, 2010) and higher-level variables were grand-mean centered, and lower-level variables were centered on the person's mean [1].

We conducted a multi-level analysis for testing the hypotheses. In the overall models, we controlled for theoretically meaningful between- and within-persons variables, namely, gender, organization, contract, and day quality to account for variance in outcomes (Carlson and Wu, 2012). The mediation hypotheses were tested through the asymmetric confidence limit method. We calculated confidence intervals of mediation effects based on Monte Carlo simulations for assessing mediation (Tofighi and MacKinnon, 2011). The moderation effect was tested by following the recommendations for cross-level moderations (see, Aguinis *et al.*, 2013; Mathieu *et al.*, 2012). Accordingly, we proceeded by testing (a) model-A, including within-person predictors; (b) model-B added within-persons predictors allowing variation in slopes; (c) model-C added the between-person predictors; and (d) model-D added the cross-level interactions. We calculated confidence intervals separately for low (mean - 1 SD) and high (mean + 1 SD) levels of moderation. Confidence intervals not including zero indicate a significant mediation.

Results

Descriptive statistics

We first examined if the proportion of the variance of meaningful work was attributed to the different levels of analysis. The intra-class correlation showed that 54.2% of variance of meaningful work was attributable to between-persons differences. A significant amount of variance is left to be explained by within-person fluctuations justifying the use of the multi-level approach. Table 1 reports the mean, standard deviation, and correlations among the between- and within-persons study variables.

Hypotheses testing

To test the first group of hypotheses (H1a–c, i.e. whether team climate, co-workers' support and task significance predict meaningful work; H1d–f, i.e. whether autonomy, relatedness and competence predict meaningful work), we examined three models separately (see Table 2): a control model (Model 1) where we controlled for gender, organization, contract, day quality and steady meaningful work; Model 2 added daily work conditions as well as psychological conditions separately by testing two sub-models, i.e. Model 2a for work conditions (H1a–c), and Model 2b for psychological conditions (H1d–f). In turn, we tested the two conditions together in Model 3 (H1a–f). Results supported hypotheses H1c and H1f as showing only task significance (for work conditions) and competence (for psychological conditions) were significantly associated with the daily experience of meaningful work.

Episodic meaningful work as a mediator. The second class of hypotheses (H2a–d) cover the mediation effects of episodic meaningful work between the associations of both work conditions as well as psychological conditions and work engagement (H2c) [2]. Table 2 shows the results of the multilevel models. We firstly tested the hypothesized associations (H2a–b) of work conditions, psychological conditions, and episodic meaningful work predicting work engagement (i.e. Model 5, H2a). Results of Model 5 show that higher day quality, task significance, competence, episodic meaningful work and lower autonomy predicted higher work engagement.

In order to test the mediating role of episodic meaningful work we used the Monte Carlo method for assessing mediation (MCMAM). Accordingly, we tested H2c, i.e. whether meaningful work mediates the associations between task significance on work engagement, and competence on work engagement. Although the effect size was relatively small, results of H2c showed that the effects of both task significance and competence on work engagement can be explained by an indirect effect through episodic meaningful work [3] (see Table 3).

Steady meaningful work as a moderator. We tested the cross-level moderation effects of steady meaningful work on episodic meaningful work via four models (see Table 4). Model B, with respect to Model A, had a better fit supporting the assumptions that the associations between the work conditions as well as psychological conditions and episodic meaningful work varied across individuals. In turn, Model C supported the progression for moderation by including the positive association between steady meaningful work and episodic meaningful work. Therefore, with the last model (Model D) we tested the cross-level interactions of (a) steady meaningful and task significance as well as (b) steady meaningful work and competence. This model showed better fit indices than the previous Model C, supporting the third hypotheses (H3a and H3b). Indeed, there were significant positive interactions between (a) steady meaningful work and task significance, and between (b) steady meaningful work and competence. Accordingly, the simple slopes of both interactions were significant both at low and high levels of steady meaningful work (i.e. task significance $z = 3.61, p = 0.0003$; $z = -3.99, p = 0.0001$; competence, $z = 3.81, p = 0.0001$; $z = -4.17, p = 0.001$) with a substantial effect size for each interaction. Steady meaningful work explained 23% of the between-person variance in the task significance slope, and 24% of the between-person

Table 1.
Mean, standard
deviation, and
correlations among the
between- and within-
persons variables

	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
<i>Between-persons variables</i>																			
1. Gender	—	—																	
2. Age	35.92	12.59	—	0.13 ^{***}															
3. Organization	—	—	0.03	0.11 [*]															
4. Contract	—	—	0.13 ^{***}	0.12 ^{***}	0.04														
5. Work Experience	9.91	10.34	−0.04	0.79 ^{***}	0.03	0.03													
6. Remuneration	—	—	−0.11 [*]	0.06	0.06	−0.16 ^{***}	0.16 ^{***}												
7. S/meaningful work	4.14	1.06	0.05	0.20 ^{***}	0.33 ^{***}	0.18 ^{***}	0.06	0.03											
<i>Within-persons variables</i>																			
8. Daily Mood	1.22	0.56	0.07	0.04	−0.07	−0.01	−0.01	−0.03	−0.01	−0.33 ^{***}	−0.33 ^{***}	−0.24 ^{***}	−0.16 [*]	−0.12 [*]	−0.13 [*]	−0.25 ^{***}	−0.13 [*]	−0.14 [*]	−0.20 ^{***}
9. Day Quality	3.81	0.79	0.06	0.05	0.15 ^{***}	0.03	−0.02	0.03	0.26 ^{**}	−0.31 ^{***}	—	0.34 ^{***}	0.38 ^{***}	0.34 ^{***}	0.36 ^{***}	0.32 ^{***}	0.33 ^{***}	0.33 ^{***}	0.43 ^{***}
10. Task significance	5.06	1.14	0.01	0.14 ^{***}	0.32 ^{***}	0.12 ^{***}	0.08	0.03	0.35 ^{***}	−0.27 ^{***}	0.48 ^{***}	—	0.34 ^{***}	0.51 ^{***}	0.48 ^{***}	0.67 ^{***}	0.56 ^{***}	0.71 ^{***}	0.72 ^{***}
11. Team climate	5.18	1.14	0.01	0.15 ^{***}	0.19 ^{***}	0.12 ^{***}	0.03	−0.01	0.36 ^{***}	−0.21 ^{***}	0.51 ^{***}	0.63 ^{***}	—	0.82 ^{***}	0.66 ^{***}	0.77 ^{***}	0.63 ^{***}	0.68 ^{***}	0.62 ^{***}
12. Co-worker support	5.29	1.08	−0.01	0.17 ^{***}	0.12 ^{***}	0.11 [*]	0.04	−0.06	0.38 ^{***}	−0.15 ^{***}	0.38 ^{***}	0.53 ^{***}	0.77 ^{***}	—	0.57 ^{***}	0.69 ^{***}	0.53 ^{***}	0.64 ^{***}	0.55 ^{***}
13. Autonomy	5.15	1.32	−0.02	0.13 ^{***}	0.19 ^{***}	0.10 [*]	0.04	0.03	0.34 ^{***}	−0.11 ^{***}	0.43 ^{***}	0.47 ^{***}	0.58 ^{***}	0.58 ^{***}	—	0.71 ^{***}	0.65 ^{***}	0.55 ^{***}	0.42 ^{***}
14. Relatedness	5.09	1.16	−0.01	0.11 ^{***}	0.24 ^{***}	0.15 ^{***}	0.03	−0.03	0.35 ^{***}	−0.26 ^{***}	0.44 ^{***}	0.56 ^{***}	0.65 ^{***}	0.60 ^{***}	0.62 ^{***}	—	0.78 ^{***}	0.74 ^{***}	0.70 ^{***}
15. Competence	5.23	1.22	0.06	0.16 ^{***}	0.20 ^{***}	0.16 ^{***}	0.04	−0.11 ^{***}	0.36 ^{***}	−0.15 ^{***}	0.39 ^{***}	0.42 ^{***}	0.47 ^{***}	0.42 ^{***}	0.52 ^{***}	0.68 ^{***}	—	0.70 ^{***}	0.72 ^{***}
16. Beneficence	5.09	1.15	0.04	0.07	0.27 ^{***}	0.20 ^{***}	0.01	−0.05	0.33 ^{***}	−0.19 ^{***}	0.32 ^{***}	0.56 ^{***}	0.36 ^{***}	0.35 ^{***}	0.38 ^{***}	0.56 ^{***}	0.69 ^{***}	—	0.87 ^{***}
17. E/meaningful work	4.98	1.32	0.03	0.15 ^{***}	0.21 ^{***}	0.17 ^{***}	0.08 [*]	−0.01	0.44 ^{***}	−0.11 ^{***}	0.33 ^{***}	0.45 ^{***}	0.42 ^{***}	0.40 ^{***}	0.36 ^{***}	0.47 ^{***}	0.48 ^{***}	0.52 ^{***}	—
18. Work engagement	5.00	1.18	0.04	0.10 [*]	0.17 ^{***}	0.12 ^{***}	0.03	0.01	0.35 ^{***}	−0.23 ^{***}	0.37 ^{***}	0.44 ^{***}	0.39 ^{***}	0.35 ^{***}	0.29 ^{***}	0.49 ^{***}	0.59 ^{***}	0.67 ^{***}	0.75 ^{***}
Note(s): Between-person correlations below the diagonal. Within-person correlations above the diagonal. Between-persons variable are grand mean centered while within-persons variables are person mean centered. S=meaningful work, E=meaningful work, B=episodic meaningful work. * $p < 0.05$, ** $p < 0.01$																			
Source(s): Authors work																			

Table 2.
Multilevel analysis for
predicting episodic
meaningful work, work
engagement and daily
job performance

Independent variable	Episodic experience of meaningful work				Work engagement			
	Model 1	Model 2a	Model 2b	Model 4	Model 5	Model 5	Model 5	Model 5
	Estimate	SE	Estimate	SE	Estimate	SE	Estimate	SE
<i>Control model</i>								
Gender	−0.10	0.16	−0.05	0.15	−0.03	0.10	0.00	0.07
Organization	0.05	0.05	0.03	0.05	0.03	0.03	−0.01	0.02
Contract	0.24	0.16	0.17	0.15	0.08	0.10	−0.09	0.08
Day quality	0.33***	0.06	0.19***	0.07	0.31***	0.05	0.15***	0.05
Steady meaningful work	0.43***	0.07	0.37***	0.07	0.18***	0.07	0.02	0.04
<i>Working conditions</i>								
Task significance			0.16	0.06***			0.08**	0.04
Team Climate			0.04	0.07			−0.04	0.05
Co-workers support			0.06	0.07			0.01	0.05
<i>Psychological conditions</i>								
Autonomy					0.00	0.05	−0.15***	0.03
Competence					0.23***	0.05	0.33***	0.04
Relatedness					0.21	0.06	0.02	0.04
Episodic meaningful work							0.53***	0.03
Between-person variance	0.93		0.95		0.92		0.46	
Within-person variance	0.42		0.31		0.25		0.03	
Loglikelihood	1614.25		1610.41		1588.16		1181.49	
Δ Loglikelihood	86.41***		90.25***		112.50***		453.70***	
Note(s): * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$								
Source(s): Authors work								

variance in the competence slope (see the two interactions graphically plotted in [Figures 2 and 3](#)). These results indicate that the personal view of meaningful work plays a central role in the associations between the daily variables. That is, the tendency to see one's work as significant (or not significant) leads to different perceptions and experiences of one's working state.

Discussion

The present study was designed to capture the dual conceptualization of meaningful work as both a steady and episodic phenomenon and examine the role that personal and contextual

	Lower bound	Upper bound	ab	Effect size
Indirect effect on work engagement				
Episodic meaningful work as mediator				
Task significance	0.165	0.275	0.219	0.028
Competence	0.228	0.319	0.272	0.023

Note(s): ab = a(relationship between predictor and mediator) X b(relationship between mediator and dependent variable). Confidence intervals for low, i.e. mean – 1 SD and high, i.e. mean + 1 SD, levels of moderation. Confidence intervals not including zero indicate a significant mediation

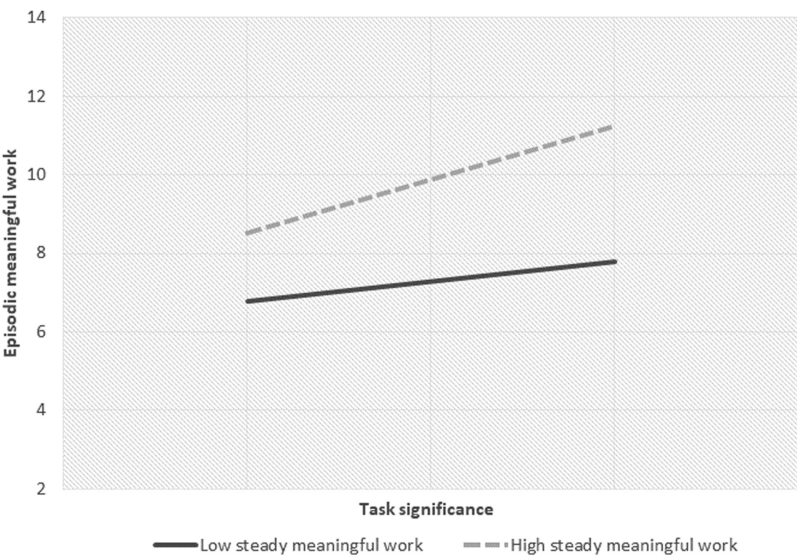
Source(s): Authors work

Table 3.
MCMAM test for
indirect effects on work
engagement and job
performance

	Episodic experience of meaningful work							
	Model A		Model B		Model C		Model D	
	Estimate	SE	Estimate	SE	Estimate	SE	Estimate	SE
<i>Within-person</i>								
Day quality	0.12	0.07	0.13	0.07	0.12	0.07	0.10	0.07
Task significance	0.18***	0.06	0.17***	0.06	0.15***	0.06	0.14***	0.06
Team Climate	0.00	0.07	0.01	0.07	0.00	0.07	0.03	0.07
Co-workers support	0.05	0.07	0.06	0.07	0.04	0.07	0.07	0.07
Autonomy	0.00	0.05	0.00	0.05	–0.03	0.05	–0.01	0.05
Competence	0.26***	0.05	0.24***	0.05	0.23***	0.05	0.18***	0.05
Relatedness	0.05	0.07	0.06	0.07	0.07	0.07	0.06	0.07
<i>Between-person</i>								
Gender					–0.04	0.13	–0.07	0.13
Organization					0.09	0.14	0.09	0.13
Contract					0.02	0.04	0.00	0.04
Steady meaningful work					0.31***	0.06	0.79***	0.26
<i>Cross-level interaction</i>								
Steady meaningful work*Task							0.17***	0.05
Significance								
Steady meaningful work*Competence							0.19***	0.04
Between-person variance	0.91		0.95		0.92		0.89	
Within-person variance	0.30		0.31		0.25		0.15	
Loglikelihood	1603.77		1598.41		1546.95		1527.91	
Δ Loglikelihood	96.89***		102.25***		153.71***		172.75***	
Note(s): * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$								
Source(s): Authors work								

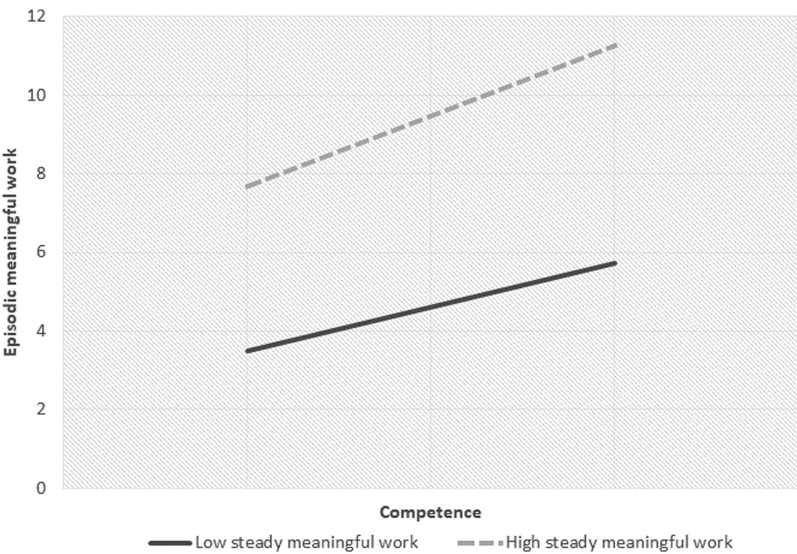
Table 4.
Multilevel modeling
testing cross-level
moderation effects on
episodic
meaningful work

Figure 2.
Cross-level interaction
of steady meaningful
work and task
significance on
episodic
meaningfulness



Source(s): Authors' work

Figure 3.
Cross-level interaction
of steady meaningful
work and competence
on episodic
meaningfulness



Source(s): Authors' work

factors play in work engagement within that framework. The results of our event-based longitudinal diary study provided empirical evidence for the multilevel and temporally dynamic nature of meaningful work, in line with recent theorizing on the issue (Bailey *et al.*, 2019; Lysova *et al.*, 2019; Tommasi *et al.*, 2020). We also found that specific work conditions as well as psychological conditions (i.e. task significance and sense of competence) emerged as

process variables able to explain fluctuations in reported meaningful work episodes. This means that employees are more likely to experience meaningful work on days when they see the significance and feel mastery of their tasks. Our results also indicate that episodic meaningful work mediates the associations between work and psychological conditions and daily work engagement. This finding demonstrates the motivating potential of meaningful work for job-related behavior (Fletcher *et al.*, 2017; Xanthopoulou *et al.*, 2009). Accordingly, on days in which work seems more meaningful, employees are more capable of engaging in their work and perform better. Moreover, evidence of cross-level moderation revealed a significant positive effect of steady meaningful work on the relationship between task significance and sense of competence with the daily experience of meaningful work.

Of the work and psychological factors used in our study, only task significance and sense of competence are predictive of episodic experiences of meaningful work when all predictors were used in the analysis. These results only partially support the existing literature (e.g. predictions from the JD-R model and Self-Determination Theory), as co-workers' support, team climate, autonomy, and relatedness were not significantly associated with meaningful work when considered simultaneously with other potential factors underlying meaningful work episodes. If these dimensions are examined independently, however, they appear to be directly affecting meaningful work (see, Allan, 2017; Bakker, 2014 for work conditions; see, Martela and Ryan, 2016 for psychological conditions). Our correlational analysis also provides support for this notion, as all of these constructs were positively related to meaningful work. One possible reason why in a joint analysis only task significance and sense of competence emerge as predictors of meaningful work is that both might be more salient, evaluable, and present in people's minds during our diary study. Conversely, team climate and co-worker support (as well as autonomy and relatedness) could have emerged as more important predictors if participant responses were measured in teams or in specific occupations that rely on a high degree of cooperation within the team. Moreover, task significance and a sense of competence are conceptually different from the other predictors as they are representative of occupation-specific predictors of meaningful work: they influence episodic meaningful work as a result of a cognitive-affective process of recognizing the objective value of a task (i.e. task significance, Lips-Wiersma, 2019; Michaelson *et al.*, 2014) or the personal value in mastering working skills (i.e. task significance, Chalofsky and Cavallero, 2019; Ciulla, 2012; Martela and Riekk, 2018).

Despite this, our results empirically support that what makes a workday meaningful is the cognitive-affective process activated by task significance and sense of competence. This is in line with most of the critical perspectives on meaningful work (Bailey *et al.*, 2019) although there is cross-sectional and sparse longitudinal support for this process. Theory suggests that task significance and sense of competence are important for the experience of episodic meaningful work (Lips-Wiersma, 2019; Michaelson *et al.*, 2014), yet empirical studies have not taken their joint and dynamic character into account. Based on our analyses, we argue that what makes a workday meaningful depends on a cognitive-affective process which is sparked by the joint presence of both task significance and sense of competence. That is, in days in which employees are able to recognize the significance of their tasks (i.e. sense of purpose in doing their working tasks), and feel like they are able to deal with various demands (i.e. sense of value by mastering working skills), they experience and perceive their work as meaningful (Chalofsky and Cavallero, 2019; Ciulla, 2012; Martela and Riekk, 2018).

Our results also provide an empirical answer to the proposition that an individual's steady level of meaningful work will interact with daily dimensions that underpin episodic meaningful work (Bailey *et al.*, 2019; Tommasi *et al.*, 2020). Steady meaningful work strengthens the associations between both feeling competent and episodic meaningful work as well as experiencing task significance and episodic meaningful work. Individuals who generally view their work as meaningful and important (i.e. with higher levels of steady

meaningful work) are more likely to experience daily work as meaningful when they have the possibility to (a) evaluate their task as holding significance and (b) they can express themselves by the sense of mastering work skills.

This confirms and provides additional support to critical perspectives on meaningful work where psychological process of meaningful work underpin specific work and psychological conditions. Our study indicates that steady meaningful work can strengthen or/and weaken the relationships between certain work and psychological conditions relevant when examining temporal dynamics.

Applied implications for management

Understanding when and how people feel that their work is meaningful is a prerequisite for effective managerial interventions. Drawing on our findings, managerial practices can create initiatives via contextual approaches (i.e. job design) by evaluating how work and tasks are organized to impact workers daily experiences (Fletcher and Schofield, 2019; Lysova *et al.*, 2019; Molina-Azorín *et al.*, 2020). Opportunities could be prompted with tasks that are – objectively and subjectively – purposeful and useful in order to foster a sense of contribution. Likewise, the creation of work opportunities during which employees feel capable and confident in their work tasks (i.e. sense of competence) could be also facilitated. Employees who view their work as generally meaningful may benefit differently compared to those who do not. Efforts to increase task significance and a sense of competence function especially well for employees who already see meaning in their work. Viewed differently, managerial interventions such as providing training on work activities as well as by enriching workers' day-to-day experience with a sense of contribution and skill mastery will not be as helpful to employees who lack a sense of general purpose and meaning in their occupation. For these employees, managerial efforts instead should be directed at a level which promotes the perception that their work is socially worthwhile in the first place (Lips-Wiersma, 2019).

Moreover, employees with higher levels of meaningful work may benefit differently from those who report to have lower levels. In the first case, individuals with higher levels of steady meaningful work might benefit from activities that strengthen their overall significance about their work. In the second case, managerial initiatives could be devised as a means for supporting workers' sense of competences by providing training on work activities as well as by enriching workers' day-to-day experience with a sense of contribution that promotes the perception that their work is socially worthy (Lips-Wiersma, 2019).

Lastly, our study offers implications on using assessment tools for organizational analysis and management practices. This involves using surveys in organizations to evaluate workers' levels of steady meaningful work and tailoring organizational initiatives as well as training interventions on these survey results (Schnell and Hoffmann, 2020). We encourage new avenues of research to connect organizational practices with evidence on the daily pathways to meaningful work. The diary study method could be used to evaluate managerial initiatives and training practices for facilitating meaningful work as well as daily work engagement (Ohly *et al.*, 2010). Additionally, we encourage authors and practitioners to take into account our evaluations in order to examine the impact of interventions to improve psychological conditions (i.e. job crafting) and organizational initiatives (i.e. job design).

Limitations

The present research provides an initial basis for understanding meaningful work as a multilevel and temporally dynamic construct. However, the findings have to be interpreted with some caution as a few limitations must be acknowledged. First, employees voluntarily participated in our study, which means that issues related to self-selection bias cannot be

ruled out and may compromise the generalizability of our results. In parallel, self-report data can be subject to inaccuracies or social desirability. On the one hand, as participants were not compensated for their efforts, we can at least assume that they were motivated by personal interest rather than financial incentives. On the other hand, while our research design can reduce the risk of common method bias (Podsakoff *et al.*, 2003), future studies should apply triangulation and include data from multiple sources or objective data on so that the robustness of these findings can be evaluated. Despite our efforts to decrease self-report bias by ensuring anonymity and confidentiality, it is possible that employees were unwilling to provide the most accurate responses about their workday experiences. Future data collection techniques such as the use of registered data are warranted to provide more accurate and objective investigations on employees' daily experiences.

Furthermore, we considered general dimensions for the daily assessment in a sample of employees across a range of different occupations from the North of Italy. First, while this study addresses the need to conduct investigations outside North America going beyond the Western-Eastern paradox (Bailey *et al.*, 2019), and it is one of the first exploration of the fluctuations of meaningful work, it becomes important to replicate our results in other countries and cultural contexts. Second, while our sampling allowed obtaining a heterogeneous sample and variance in the study variables (Demerouti and Rispens, 2014), future studies might consider linked and registered data to not bias the estimation as well as using probability sampling methods to increase the generalizability of our findings (Böckerman *et al.*, 2012). For example, the composition of our sample could have affected our results, such that co-worker and team climate as well as autonomy and relatedness variables were not associated with meaningful work once the effects of task significance and sense of competence were accounted for. Given the different job characteristics of the employees in our sample, this should not necessarily be seen as an indication that these variables are never associated with meaningful work. In fact, all variables independently correlated with episodic meaningful work in our data set. Further investigation might tailor self-report measures according to the specific characteristics of the occupations considered (Ohly *et al.*, 2010; Xanthopoulou *et al.*, 2009). This last aspect on self-report measures pertains to an additional limitation of the present study. Although we hypothesized a mediating role of episodic meaningful work in the association between work and psychological conditions and job performance, we could not test the model. The computation of the overall factor scores across all the days showed unsatisfactory levels of reliability which might indicate that the scale used by Williams and Anderson (1991) is not representative of job performance across different occupations and that subjective job performance on a daily level should be operationalized via different self-report measures.

Finally, we restricted our data collection to span a range of five weeks. We did so for practical reasons and to minimize participant drop out. Nonetheless, our data may not fully capture some long-term associations between and changes of the examined factors and meaningful work. Likewise, there might be additional external factors or changes which could influence fluctuations of meaningful work. These limitations do not affect the implications of our results *per se*, yet they may limit the extent of their interpretation. Future studies could examine the temporal dynamics of the antecedents and consequences of meaningful work over a longer period of time.

Conclusion

The present study examined the nature of meaningful work with a specific focus on its multilevel and temporal dynamics. Conceptualizing meaningful work into an episodic as well as steady part allowed us to find that (1) task significance and sense of competence are critical for the experience of meaningful work on a daily basis relates to the presence, and that (2)

these associations are stronger when steady meaningful work is higher. These results can help managers who aim to ensure that employees experience their daily work as something meaningful. Particularly, our findings offer indications on how to devise interventions in regard to both job design and individual-based interventions.

Notes

1. With respect to reliability of our measures, due to the limited sample size, and especially the number of observations, we did not compute multilevel confirmatory factor analyses (Geldhof *et al.*, 2014). Rather, we followed results of the computed overall factor score for each variable for each day entry with a cut-off of >0.65 (Cortina, 1993).
2. We followed Baron and Kenny (1986)'s procedure for mediation conditions. Results were similar when using the PROCESS macro for mediations (Hayes, 2013).
3. Given that all of the work conditions as well as the psychological conditions were significantly correlated with work engagement (see Table 1), we also tested the mediating role of episodic meaningful work for co-worker support, team climate, and relatedness on work engagement. Results showed that the effect of co-worker support on work engagement was mediated by episodic meaningful work. Additionally, the effect of autonomy on job engagement was also mediated by episodic meaningful work. See Table A1 in the appendix for the results of these mediations.

References

- Aguinis, H., Gottfredson, R.K. and Culpepper, S.A. (2013), "Best-practice recommendations for estimating cross-level interaction effects using multilevel modeling", *Journal of Management*, Vol. 39 No. 6, pp. 1490-1528, doi: [10.1177/0149206313478188](https://doi.org/10.1177/0149206313478188).
- Allan, B.A. (2017), "Task significance and meaningful work: a longitudinal study", *Journal of Vocational Behavior*, Vol. 102, August, pp. 174-182, doi: [10.1016/j.jvb.2017.07.011](https://doi.org/10.1016/j.jvb.2017.07.011).
- Allan, B.A., Batz-Barbarich, C., Sterling, H.M. and Tay, L. (2019), "Outcomes of meaningful work: a meta-analysis", *Journal of Management Studies*, Vol. 56 No. 3, pp. 500-528, doi: [10.1111/joms.12406](https://doi.org/10.1111/joms.12406).
- Bailey, C. and Madden, A. (2020), "Contemporary challenges in meaningful work", *The Future of Work and Employment*, Edward Elgar Publishing, pp. 65-82.
- Bailey, C., Madden, A., Alfes, K. and Fletcher, L. (2017), "The meaning, antecedents and outcomes of employee engagement: a narrative synthesis", *International Journal of Management Reviews*, Vol. 19 No. 1, pp. 31-53, doi: [10.1111/ijmr.12077](https://doi.org/10.1111/ijmr.12077).
- Bailey, C., Yeoman, R., Madden, A., Thompson, M. and Kerridge, G. (2018), "A review of the empirical literature on meaningful work: progress and research agenda", *Human Resource Development Review*, September 1995, pp. 1-31, doi: [10.1177/1534484318804653](https://doi.org/10.1177/1534484318804653).
- Bailey, C., Lips-Wiersma, M., Madden, A., Yeoman, R., Thompson, M. and Chalofsky, N. (2019), "The five paradoxes of meaningful work: introduction to the special issue 'meaningful work: prospects for the 21st century'", *Journal of Management Studies*, Vol. 56 No. 3, pp. 481-499, doi: [10.1111/joms.12422](https://doi.org/10.1111/joms.12422).
- Bakker, A.B. (2014), "Daily fluctuations in work engagement: an overview and current directions", *European Psychologist*, Vol. 19 No. 4, pp. 227-236, doi: [10.1027/1016-9040/a000160](https://doi.org/10.1027/1016-9040/a000160).
- Bakker, A.B. and Oerlemans, W.G.M. (2019), "Daily job crafting and momentary work engagement: a self-determination and self-regulation perspective", *Journal of Vocational Behavior*, Vol. 112, December 2018, pp. 417-430, doi: [10.1016/j.jvb.2018.12.005](https://doi.org/10.1016/j.jvb.2018.12.005).
- Baron, R.M. and Kenny, D.A. (1986), "The moderator-mediator variable distinction in social psychological research: conceptual, strategic, and statistical considerations", *Journal of Personality and Social Psychology*, Vol. 51 No. 6, p. 1173.

- Bates, D. (2018), "Linear mixed effects models using Eigen and S4. R Studio version 1.1-18.1", pp. 1-26, available at: <https://cran.r-project.org/web/packages/lme4/lme4.pdf>
- Baumeister, R.F., Vohs, K.D., Aaker, J.L. and Garbinsky, E.N. (2013), "Some key differences between a happy life and a meaningful life", *Journal of Positive Psychology*, Vol. 8 No. 6, pp. 505-516, doi: [10.1080/17439760.2013.830764](https://doi.org/10.1080/17439760.2013.830764).
- Berg, J., Dutton, J. and Wrzesniewski, A. (2015), *Purpose and Meaning in the Workplace. Review*, American Psychological Association, pp. 230-232, doi: [10.1037/14183-000](https://doi.org/10.1037/14183-000).
- Böckerman, P., Bryson, A. and Ilmakunnas, P. (2012), "Does high involvement management improve worker wellbeing?", *Journal of Economic Behavior and Organization*, Vol. 84 No. 2, pp. 660-680, doi: [10.1016/j.jebo.2012.09.005](https://doi.org/10.1016/j.jebo.2012.09.005).
- Bolger, N., Davis, A. and Rafaeli, E. (2003), "Diary methods: capturing life as it is lived", *Annual Review of Psychology*, Vol. 54 No. 1, pp. 579-616, doi: [10.1146/annurev.psych.54.101601.145030](https://doi.org/10.1146/annurev.psych.54.101601.145030).
- Carlson, K.D. and Wu, J. (2012), "The illusion of statistical control: control variable practice in management research", *Organizational Research Methods*, Vol. 15 No. 3, pp. 413-435.
- Chalofsky, N. (2003), "An emerging construct for meaningful work", *Human Resource Development International*, Vol. 6 No. 1, pp. 69-83.
- Chalofsky, N. and Cavallero, E. (2019), "To have lived well", *The Oxford Handbook of Meaningful Work*, pp. 100-116.
- Chen, B., Vansteenkiste, M., Beyers, W., Boone, L., Deci, E.L., Van der Kaap-Deeder, J., Duriez, B., Lens, W., Matos, L., Mouratidis, A., Ryan, R.M., Sheldon, K.M., Soenens, B., Van Petegem, S. and Verstuyf, J. (2015), "Basic psychological need satisfaction, need frustration, and need strength across four cultures", *Motivation and Emotion*, Vol. 39 No. 2, pp. 216-236, doi: [10.1007/s11031-014-9450-1](https://doi.org/10.1007/s11031-014-9450-1).
- Ciulla, J.B. (2012), "Worthy work and Bowie's Kantian theory of meaningful work".
- Cortina, J.M. (1993), "What is coefficient alpha? An examination of theory and applications", *Journal of Applied Psychology*, Vol. 78 No. 1, p. 98.
- Demerouti, E. and Rispens, S. (2014), "Improving the image of student-recruited samples: a commentary", *Journal of Occupational and Organizational Psychology*, Vol. 87 No. 1, pp. 34-41, doi: [10.1111/joop.12048](https://doi.org/10.1111/joop.12048).
- Fletcher, L. and Schofield, K. (2019), "Facilitating meaningfulness in the workplace: a field intervention study", *International Journal of Human Resource Management*, Vol. 32, pp. 1-9, doi: [10.1080/09585192.2019.1624590](https://doi.org/10.1080/09585192.2019.1624590).
- Dik, B.J., Steger, M.F., Fitch-Martin, A.R. and Onder, C.C. (2013), "Cultivating meaningfulness at work", *The Experience of Meaning in Life: Classical Perspectives Emerging Themes, and Controversies*, pp. 363-377.
- Fletcher, L., Bailey, C. and Gilman, M.W. (2017), "Fluctuating levels of personal role engagement within the working day: a multilevel study", *Human Resource Management Journal*, Vol. 28 No. 1, pp. 128-147, doi: [10.1111/1748-8583.12168](https://doi.org/10.1111/1748-8583.12168).
- Gagné, M. (2014), *The Oxford Handbook of Work Engagement, Motivation, and Self-Determination Theory*, Oxford University Press, New York, US.
- Geldhof, G.J., Preacher, K.J. and Zyphur, M.J. (2014), "Reliability estimation in a multilevel confirmatory factor analysis framework", *Psychological Methods*, Vol. 19 No. 1, pp. 72-91, doi: [10.1037/a0032138](https://doi.org/10.1037/a0032138).
- Gillen, M., Baltz, D., Gassel, M., Kirsch, L. and Vaccaro, D. (2001), "Perceived safety climate, job demands, and coworker support among union and nonunion injured construction workers", *Journal of Safety Research*, Vol. 33 No. 1, pp. 33-51, doi: [10.1016/S0022-4375\(02\)00002-6](https://doi.org/10.1016/S0022-4375(02)00002-6).

- Grant, A.M. (2008), "The significance of task significance: job performance effects, relational mechanisms, and boundary conditions", *Journal of Applied Psychology*, Vol. 93 No. 1, pp. 108-124, doi: [10.1037/0021-9010.93.1.108](https://doi.org/10.1037/0021-9010.93.1.108).
- Hackman, J.R. and Oldham, G.R. (1976), "Motivation through the design of work: test of a theory", *Organizational Behavior and Human Performance*, Vol. 16 No. 2, pp. 250-279, doi: [10.1037/0021-9010.61.4.395](https://doi.org/10.1037/0021-9010.61.4.395).
- Harpaz, I. and Fu, X. (2002), "The structure of the meaning of work: a relative stability amidst change", *Human Relations*, Vol. 55 No. 6, pp. 639-667, doi: [10.1177/0018726702556002](https://doi.org/10.1177/0018726702556002).
- Hayes, A.F. (2013), "Mediation, moderation, and conditional process analysis", *Introduction to Mediation, Moderation, and Conditional Process Analysis: A Regression-Based Approach*, Vol. 1 No. 6, pp. 12-20.
- Kahn, W.A. (1990), "Psychological conditions of personal engagement and disengagement at work", *Academy of Management Journal*, Vol. 33 No. 4, pp. 692-724.
- Kattenbach, R., Demerouti, E. and Nachreiner, F. (2010), "Flexible working times: effects on employees' exhaustion, work-nonwork conflict and job performance", *Career Development International*, Vol. 15 No. 3, pp. 279-295, doi: [10.1108/13620431011053749](https://doi.org/10.1108/13620431011053749).
- Lavy, S. and Bocker, S. (2018), "A path to teacher happiness? A sense of meaning affects teacher-student relationships, which affect job satisfaction", *Journal of Happiness Studies*, Vol. 19, pp. 1485-1503.
- Lips-Wiersma, M. (2019), "Does corporate social responsibility enhance meaningful work", *A Multi-Perspective Theoretical Framework in the Oxford Handbook of Meaningful Work*.
- Lips-Wiersma, M. and Wright, S. (2012), "Measuring the meaning of meaningful work: development and validation of the comprehensive meaningful work scale (CMWS)", *Group and Organization Management*, Vol. 37 No. 5, pp. 655-685.
- Lysova, E.I., Allan, B.A., Dik, B.J., Duffy, R.D. and Steger, M.F. (2019), "Fostering meaningful work in organizations: a multi-level review and integration", *Journal of Vocational Behavior*, Vol. 110, July, pp. 374-389, doi: [10.1016/j.jvb.2018.07.004](https://doi.org/10.1016/j.jvb.2018.07.004).
- Martela, F., Gómez, M., Unanue, W., Araya, S., Bravo, D. and Espejo, A. (2021), "What makes work meaningful? Longitudinal evidence for the importance of autonomy and beneficence for meaningful work", *Journal of Vocational Behavior*, Vol. 131, 103631.
- Martela, F. and Riekk, T.J.J. (2018), "Autonomy, competence, relatedness, and beneficence: a multicultural comparison of the four pathways to meaningful work", *Frontiers in Psychology*, Vol. 9, JUN, pp. 1-14, doi: [10.3389/fpsyg.2018.01157](https://doi.org/10.3389/fpsyg.2018.01157).
- Martela, F. and Ryan, R.M. (2016), "The benefits of benevolence: basic psychological needs, beneficence, and the enhancement of well-being", *Journal of Personality*, Vol. 84 No. 6, pp. 750-764, doi: [10.1111/jopy.12215](https://doi.org/10.1111/jopy.12215).
- Mathieu, J.E., Aguinis, H., Culpepper, S.A. and Chen, G. (2012), "Understanding and estimating the power to detect cross-level interaction effects in multilevel modeling", *Journal of Applied Psychology*, Vol. 97 No. 5, pp. 951-966, doi: [10.1037/a0028380](https://doi.org/10.1037/a0028380).
- Matz-Costa, C., Cosner Berzin, S., Pitt-Catsoupes, M. and Halvorsen, C.J. (2019), "Perceptions of the meaningfulness of work among older social purpose workers: an ecological momentary assessment study", *Journal of Applied Gerontology*, Vol. 38 No. 8, pp. 1121-1146, doi: [10.1177/0733464817727109](https://doi.org/10.1177/0733464817727109).
- May, D.R., Gilson, R.L. and Harter, L.M. (2004), "The psychological conditions of meaningfulness, safety and availability and the engagement of the human spirit at work", *Journal of Occupational and Organizational Psychology*, Vol. 77 No. 1, pp. 11-37, doi: [10.1348/096317904322915892](https://doi.org/10.1348/096317904322915892).
- Michaelson, C., Pratt, M.G., Grant, A.M. and Dunn, C.P. (2014), "Meaningful work: connecting business ethics and organization studies", *Journal of Business Ethics*, Vol. 121 No. 1, pp. 77-90, doi: [10.1007/s10551-013-1675-5](https://doi.org/10.1007/s10551-013-1675-5).

- Mitra, R. and Buzzanell, P.M. (2017), "Communicative tensions of meaningful work: the case of sustainability practitioners", *Human Relations*, Vol. 70 No. 5, pp. 594-616.
- Molina-Azorín, J.F., Pereira-Moliner, J., López-Gamero, M.D., Pertusa-Ortega, E.M. and José Tarí, J. (2020), "Multilevel research: foundations and opportunities in management", *BRQ Business Research Quarterly*, Vol. 23 No. 4, pp. 319-333, doi: [10.1177/2340944420966970](https://doi.org/10.1177/2340944420966970).
- Ohly, S., Sonnentag, S., Niessen, C. and Zapf, D. (2010), "Diary studies in organizational", *Journal of Personnel Psychology*, Vol. 9, pp. 79-93, doi: [10.1027/1866-5888/a000009](https://doi.org/10.1027/1866-5888/a000009).
- Pinheiro, J., Bates, D., DebRoy, S. and Sarkar, D. (2020), "R Development Core Team. nlme: linear and nonlinear mixed effects models", p. 2020, 2012, available at: <http://CRAN.R-project.org/package=nlme.Rpackageversion>
- Podsakoff, P.M., MacKenzie, S.B., Lee, J.Y. and Podsakoff, N.P. (2003), "Common method biases in behavioral research: a critical review of the literature and recommended remedies", *Journal of Applied Psychology*, Vol. 88 No. 5, pp. 879-903, doi: [10.1037/0021-9010.88.5.879](https://doi.org/10.1037/0021-9010.88.5.879).
- Pratt, M.G. and Ashforth, B.E. (2003), "Fostering meaningfulness in working and at work", in *Positive Organizational Scholarship: Foundations of a New Discipline*, January 2003, pp. 309-327..
- Rosso, B.D., Dekas, K.H. and Wrzesniewski, A. (2010), "On the meaning of work: a theoretical integration and review", *Research in Organizational Behavior*, Vol. 30, C, pp. 91-127, doi: [10.1016/j.riob.2010.09.001](https://doi.org/10.1016/j.riob.2010.09.001).
- Schaufeli, W.B., Bakker, A.B. and Salanova, M. (2006), "The measurement of work engagement with a short questionnaire: a cross-national study", *Educational and Psychological Measurement*, Vol. 66 No. 4, pp. 701-716, doi: [10.1177/0013164405282471](https://doi.org/10.1177/0013164405282471).
- Schnell, T. and Hoffmann, C. (2020), "ME-work: development and validation of a modular meaning in work inventory", *Frontiers in Psychology*, Vol. 11, December, 599913, doi: [10.3389/fpsyg.2020.599913](https://doi.org/10.3389/fpsyg.2020.599913).
- Schultz, P.P., Ryan, R.M., Niemiec, C.P., Legate, N. and Williams, G.C. (2015), "Mindfulness, work climate, and psychological need satisfaction in employee well-being", *Mindfulness*, Vol. 6 No. 5, pp. 971-985, doi: [10.1007/s12671-014-0338-7](https://doi.org/10.1007/s12671-014-0338-7).
- Tofighi, D. and MacKinnon, D.P. (2011), "RMediation: an R package for mediation analysis confidence intervals", *Behavioural Research Method*, Vol. 43 No. 3, pp. 692-700, doi: [10.3758/s13428-011-0076-x.RMediation](https://doi.org/10.3758/s13428-011-0076-x.RMediation).
- Tommasi, F., Ceschi, A. and Sartori, R. (2020), "Viewing meaningful work through the lens of time", *Frontiers in Psychology*, Vol. 11, 585274, doi: [10.3389/fpsyg.2020.585274](https://doi.org/10.3389/fpsyg.2020.585274).
- Tommasi, F.V., Sartori, R., Ceschi, A. and Schnell, T. (2021), "The Meaning in work inventory: validation of the Italian version and its association with sociodemographic variables", *Applied Psychology Bulletin*, Vol. 69 No. 291, pp. 17-36, doi: [10.26387/bpa.291.2](https://doi.org/10.26387/bpa.291.2).
- Vogel, R.M., Rodell, J.B. and Sabey, T.B. (2020), "Meaningfulness misfit: consequences of daily meaningful work needs-supplies incongruence for daily engagement", *Journal of Applied Psychology*, Vol. 105 No. 7, pp. 760-770, doi: [10.1037/apl0000464](https://doi.org/10.1037/apl0000464).
- Williams, L.J. and Anderson, S.E. (1991), "Job satisfaction and organizational commitment as predictors of organizational citizenship and in-role behaviors", *Journal of Management*, Vol. 17 No. 3, pp. 601-617.
- Woods, S.A. and Sofat, J.A. (2013), "Personality and engagement at work: the mediating role of psychological meaningfulness", *Journal of Applied Social Psychology*, Vol. 43 No. 11, pp. 2203-2210, doi: [10.1111/jasp.12171](https://doi.org/10.1111/jasp.12171).
- Wrzesniewski, A. (2003), "Finding positive meaning in work", in *Positive Organizational Scholarship*.
- Xanthopoulou, D., Bakker, A.B., Demerouti, E. and Schaufeli, W.B. (2009), "Work engagement and financial returns: a diary study on the role of job and personal resources", *Journal of Occupational and Organizational Psychology*, Vol. 82 No. 1, pp. 183-200, doi: [10.1348/096317908X285633](https://doi.org/10.1348/096317908X285633).

Xanthopoulou, D., Sanz-Vergel, A.I. and Demerouti, E. (2014), "Reconsidering the daily recovery process", *Contemporary Occupational Health Psychology*, Vol. 3, pp. 51-67, doi: [10.1002/9781118713860.ch4](https://doi.org/10.1002/9781118713860.ch4).

Yeoman, R., Bailey, C., Madden, A. and Thompson, M. (Eds) (2019), *The Oxford Handbook of Meaningful Work*, Oxford University Press.

Appendix

Table A1.
MCMAM test for
additional indirect
effects on work
engagement and job
performance

	Lower bound	Upper bound	ab	Effect size
Indirect effect on work engagement				
Episodic meaningful work as mediator				
Team Climate	−0.012	0.01	0.012	0.001
Co-workers' support	0.29	0.562	0.163	0.01
Autonomy	−0.019	0.013	0.001	0.001
Relatedness	−0.011	0.001	0.013	0.001
Source(s): Authors work				

Corresponding author

Francesco Tommasi can be contacted at: francesco.tommasi@univr.it

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