



Evaluating meaningful work: Psychometric properties of the Work and Meaning Inventory (WAMI) in Italian context

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Abstract

Individuals who are involved in meaningful work are positively engaged in their jobs, perceiving it as both significant and congruent with themselves. Considering that meaningful work is related to positive working and organizational outcomes, a valid and reliable scale of meaningful work may be useful in research contexts and consultation projects to evaluate the effectiveness of psychological interventions aimed at increasing the perceived meaning of work. This study tested the psychometric properties of the Work and Meaning Inventory in the Italian context, verifying its measurement invariance across gender and its validity. Participants included 807 Italian adults, balanced by gender. The dimensions analysed are meaningful work, work engagement, organizational citizenship behaviour, flourishing, life satisfaction and job satisfaction. The results indicate good psychometric properties of the WAMI scale in the Italian context, confirming the original factor structure and showing good reliability indexes, measurement invariance across genders, and concurrent validity. Suggestions for further research and practical implications are discussed: the instrument can be useful in career counselling to reflect on the importance of meaningful work; organizations may benefit by promoting the meaningful work, as more engaged and more committed workers in turn will be more productive.

Keywords Meaningful work · Decent work · Wellbeing · Fulfilment · Engagement · Job satisfaction

Introduction

In the elder conceptualizations, work is defined as the activity that allows people to provide the necessities of life and that allows for personal fulfilment (Drenth, 1991); subsequently, literature on the concept of work (e.g., Psychology-of-working framework; Blustein, 2001, 2008) has underlined the aspects of work that are related to personal satisfaction, self-affirmation, and the possibility of connecting individuals and society (Blustein, 2001, 2008; Richardson, 1993). Even though many people work primarily to meet survival

needs (Blustein, 2006), work can help to meet higher-order needs, for example, the need for relationships with colleagues, or for intrinsic rewards. More recently, Rosso et al. (2010), proposed an integrative theoretical framework for meaningful work, focused on two psychological dimensions: the first dimension is posed along the continuum *agency-communion*; pursuing agency, individuals are driven to separate, assert, expand, master, and create; pursuing communion they are driven to contact, attach, connect, and unite. As underlined by the authors, this dimension allows to understand “different ways people approach their work [... in fact], the activities driven by the pursuit of agency versus communion may have fundamentally distinct influences on the experience of meaningful work” (p.114). The second dimension represents the continuum *self-directed* and *other-directed* action: even though both work experiences oriented toward the self and oriented toward others can be experienced as meaningful, the processes that make these sources as meaningful are different, according to the target of one’s work efforts. As underlined by Steger et al. (2012), Rosso and colleagues’ conceptual model is one of the first attempts to provide a theoretical framework of meaningful

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work; focusing on the reciprocal interaction between individuals and groups, self and collective, this proposal seems consistent with the Steger and colleagues' conceptualization. Thus, they assume the distinction between meaning (whatever work means to people) and meaningfulness (work that is both significant and positive in valence), proposed by Rosso and colleagues, adding that “the positive valence of meaningful work has a eudaimonic (growth- and purpose-oriented) rather than hedonic (pleasure-oriented) focus” (p. 323). These authors propose a model of meaningful work composed of three dimensions: (1) Positive meaning (PM) referred to subjective experience and personal judgment on how the work is important and meaningful; (2) Meaning-making (MM) through work referred to work perceived as a mean for a deeper understanding of individuals' own selves and the surrounding environment, and ultimately, helping their personal growth; (3) Greater-good (GG) motivations is referred to the other-directed actions, underlining the idea that broader is the impact that work has on others, more meaningful it can be considered. Meaningful experiences at work (relevant for the individuals' existence and worthy for the work itself), even though often individualized, lead people to find a balance between self-focused goals and other-oriented goals (Allan et al., 2019; Lips-Wiersma & Wright, 2012).

Assessing and implementing the dimension of meaningful work could be useful for organizations as it has been related to important organizational outcomes, as work engagement (May et al., 2004), job satisfaction (Wrzesniewski et al., 1997), individual performance (Hackman & Oldham, 1980; Wrzesniewski, 2003), personal fulfilment (Kahn, 2007), and quality of life (Magnano et al., 2019). The study conducted by Fairlie (2013), has underlined the positive impact of a meaningful work for all workers, regardless of the generation or age of the workers.

Finally, confirming the importance of meaningful work in ensuring greater benefits for both individuals and organizations, Fletcher and Robinson (2016) suggest that it may be useful for organizations to stimulate a sense of meaningfulness for those tasks that seem to be insignificant, to motivate workers to carry them out better and more efficiently.

Research on meaningful work is growing, although certain limitations prevent its further growth. Steger et al. (2012) supported the psychometric properties and validity of their measure, but they also emphasized the necessity of continuing to establish the validity of the WAMI in samples drawn from diverse organizational contexts in the future. Moreover, in Italy, only one preliminary study has been conducted regarding the scale (Di Fabio, 2018); therefore, Italian measures of meaningful work are currently lacking.

To provide a useful measure to assess meaningful work, both in organizations and for psychosocial research, we present in this article an Italian version of the WAMI,

investigating its psychometric properties and its validity in public, private and non-profit organizations. To assess the scale's validity, we analysed the relationship of meaningful work with some working dimensions that have been previously related to meaningful work: work engagement, job satisfaction, organizational citizenship behaviours, life satisfaction, and flourishing.

Previous Studies Using the WAMI

In a review of more than 70 articles, Both-Nwabuwe et al. (2017) highlighted the multidimensional character of the construct and found 14 different definitions subsequently divided into four categories. Through this analysis, they formulated an all-inclusive, exhaustive definition: “Meaningful work is the subjective experience of existential significance resulting from the fit between the individual and work”. Comparing the different measures of meaningful work, they indicated that the WAMI is a satisfactory measure of this comprehensive definition. WAMI has shown very good internal consistency (Cronbach's alpha > 0.80) in recent studies in which meaningful work was related to other working dimensions: i.e., in Steger et al.' study (2013), which explored the mediating role of meaningful work in the relationship between affective disposition and engagement; in Magnano et al.'s research (2019), that underlined the role of meaningful work in quality of life and its relationship with courage; in Vignoli et al.'s study (2020), which include the measurement of meaningful work through the WAMI among the evaluation of the characteristics of decent work.

Finally, through an accurate literature review, we have found that the WAMI has been adapted in different cultural contexts, showing good psychometric properties: the WAMI has been validated in Turkey (Akin et al., 2013), Brazil (Leonardo et al., 2019), and Israeli (Steger et al., 2013). The Turkish version of the scale confirmed the original factor structure, showing the adequate fit indexes and good internal consistency of the three subscales and of the high-order factor. Conversely, the Brazilian adaptation showed better fit indexes in the one-factor model than in the three-factors one. Similarly, the Israeli version of the WAMI is a unidimensional scale, composed of 7 items, 4 items that focus on people's perception that there is a positive meaning to their work with an additional 3 items that focus on whether there is a point or purpose to their work. Different results were shown by the Polish adaptation (Puchalska-Kamińska et al., 2019): the WAMI was validated through a two-dimensional model of meaningful work, the self-perspective and the world perspective in work meaning.

Variables Related to Meaningful Work

Following the meta-analytic review recently conducted by Allan et al. (2019), the relationship between meaningful work, job satisfaction, and work engagement can be fully explained by the Job Characteristics Theory (JCT; Hackman & Oldham, 1976). The large correlations among these constructs may suggest meaningful work as proximal cause of these outcomes (Allan et al., 2019). Moreover, the correlations between work engagement and job satisfaction on one hand, and outcomes, such as organizational citizenship behaviours (OCBs; Organ, 1988; Podsakoff et al., 1990; Smith et al., 1983), on the other, further support the idea that meaningful work may have effects on more distal work-related outcomes through work engagement and job satisfaction.

Previous studies have highlighted that meaningful work has direct relations with work engagement (Jacobs, 2014; Williamson & Geldenhuys, 2014) and job satisfaction (Duffy et al., 2014; Steger et al., 2012), leading to suppose that work engagement and job satisfaction are immediate outcomes of work meaningfulness; detaching meaningful work from job satisfaction is very difficult because meaningful work is intrinsically satisfying (Allan et al., 2019). In fact, workers may experience their work as meaningful when it is engaging and satisfying. Other work-related variables have been considered as outcomes of meaningful work, even though they have been shown smaller relations with meaningful work than the previous two. Among the others (i.e., self-rated job performance and withdrawal intentions), we can find organizational citizenship behaviours (Lam et al., 2016; Steger et al., 2012). Consistent with the literature review proposed by Allan et al. (2019), meaningful work is related to organizational citizenship behaviours through work engagement and job satisfaction. To better clarify, work engagement refers to a positive state of fulfilment in one's work (Salanova & Schaufeli, 2009); this may, in turn, lead to organizational citizenship behaviours, which is consistent with several empirical studies (Davila & Finkelstein, 2013; Christian et al., 2011; Schaufeli & Bakker, 2004). Following Allan et al.' reasoning (2019, p. 505), "beliefs about the value of one's work (meaningful work) may lead to positive attitudinal change (work engagement [...] and job satisfaction), which may then lead to behavioural change ([...] organizational citizenship behaviours)".

Finally, several studies have explored the role of meaningful work in increasing subjective wellbeing, as life satisfaction – that is a global, cognitive judgement of individuals' gratification with their current life (Diener et al., 1985) – and flourishing or meaning and purpose in life, which refers to the subjective experience that one's life

is significant and worthwhile (Steger et al., 2012). Allan et al. (2019) consider these outcomes as distal, as they have shown smaller correlations with meaningful work. Among the two subdimensions of subjective wellbeing (Magnano et al., 2019), however, the flourishing is stronger related to meaningful work, as the meaningfulness of work experienced may contribute to a higher meaning of life.

Aim of the Study

The main aim of the present study is to verify the psychometric properties of the WAMI in the Italian context; more specifically, we tested the factor structure, internal consistency, and concurrent validity of the scale. Following the original study on the construction and validation of the WAMI (Steger et al., 2012), we measured a series of work-related and general well-being variables in a group of workers in heterogeneous jobs to verify whether the experience of meaningful work may be related to more positive work attitudes, behaviours and well-being in the individual. According to the literature, individuals involved in meaningful work are positively engaged in their jobs, perceiving it as both significant and congruent with themselves (Spreitzer et al., 2005). Thus, working in such conditions can be a motivating and satisfying experience that enriches an individual's life.

Moreover, in Allan et al.' study (2019), applying the most recent development of the theory of planned behaviour (Ajzen & Fishbein, 2000), meaningful work – reflecting a belief system about one's work – would lead to positive attitudinal and affective states, as work engagement and job satisfaction; these positive attitudinal states, in turn, activate behavioural changes, as organizational citizenship behaviours. Furthermore, meaningful work has shown to have significant relations with subjective wellbeing variables, as life satisfaction and life meaning, even though these dimensions are not directly referred to one's work.

Therefore, to provide additional evidence of the contribution of WAMI scores on organizational citizenship behaviours and subjective wellbeing, we conducted three hierarchical regression analyses to evaluate the contribution of work-meaning and work engagement in affecting (1) organizational citizenship behaviours (2) life satisfaction, (3) flourishing.

Method

Participants and Procedure

Participants included 807 Italian adults (males = 365, 45.2%; females = 442, 54.8%) between 18 and 67 years of

age ($M=39.64$; $SD=11.67$) from different Italian regions. About half of them had graduated high school (331, 41%); the remaining portion had a university degree (289, 35.8%), are post-graduate (126, 15.6%) or a junior high school degree (61, 7.6%). They were employed (660, 81.8%) or unemployed (147, 18.2%); the unemployed had previous working experience. The respondents worked in public (308, 38.2%), private (462, 57.2%) and non-profit (37, 4.6%) organizations. More than half had permanent contracts (415, 51.4%); the remaining portion had fixed-term contracts (170, 21.1%) or other forms of contracts (27.5%). The largest portion (646, 80%) declared that their jobs were consistent with their professional interests and competencies. Among the participants, 38.4% (310) had worked in their organizations for more than 10 years; the remaining portion had worked in their organizations for 1–5 years (236, 29.2%), less than one year (145, 18%), or for 5 years and 6 months to 10 years (116, 14.4%).

The participants were recruited on a voluntary basis using convenience sampling. They submitted data anonymously through an online survey after reading an informed consent form and agreeing to participate. They could end their participation at any moment. The survey was approved by the university ethics commission, and the research followed the ethical guidelines of the Italian Psychological Association and the Italian Society for Vocational Guidance (SIO).

The translation in Italian of the WAMI followed the back-translation procedure: two bilingual social psychologist researchers translated the items independently, subsequently agreeing on the (few) differences.

Measures

Work and Meaning Inventory

The WAMI (Steger et al., 2012) consists of 10 items with a 5-point Likert scale from (1) *absolutely untrue* to (5) *absolutely true*. The original version of the scale measures three factors: Positive meaning (PM; sample item: “I have found a meaningful career”), Meaning-making through work (MM through work; sample item: “I have a good sense of what makes my job meaningful”), and Greater-good motivation (GG; sample item: “My work helps me better understand myself”). Cronbach’s alphas as reported in the validation study of the scale were 0.89 for PM, 0.82 for MM through work, 0.83 for GG, and 0.93 for the total scale.

Utrecht Work Engagement Scale

The Italian version of the Utrecht Work Engagement Scale (UWES-9; Balducci et al., 2010) includes nine items; responses are given on a frequency scale ranging from 0 (*never*) to 6 (*always*). In this study, the items were grouped

into three 3-item dimensions: (1) Vigour (VI; sample item: “At my work, I feel bursting with energy”); (2) Dedication (DE; sample item: “I am enthusiastic about my job”); (3) Absorption (AB; sample item: “I feel happy when I am working intensely”). In the sample for this study, Cronbach’s alpha values for the scale were 0.89 for VI, 0.94 for DE, 0.86 for AB, and 0.95 for the total score.

Organizational Citizenship Behaviour

We used the Italian version of Podsakoff et al.’s (1990) questionnaire (Argentero et al., 2008), which includes 24 items assessing three factors: Altruism (sample item: “I willingly help others who have work-related problems”), Conscientiousness (sample item: “I attend functions that are not required but that help the company image”) and Civic virtue (sample item: “I respect company rules and policies even when no one is watching me”). Participants evaluated each behaviour using a 7-point Likert scale in which 1 = *it doesn’t describe me at all* and 7 = *it describes me completely*. In this sample, Cronbach’s alpha values were 0.89 for Altruism, 0.77 for Conscientiousness, and 0.80 for Civic virtue.

Satisfaction with Life Scale

The Satisfaction with Life Scale (Diener et al., 1985) is a one-dimensional, five-item scale with a 7-point Likert scale from 1 (*strongly disagree*) to 7 (*strongly agree*) that measures an individual’s overall life satisfaction (sample item: “In most ways my life is close to my ideal”). Cronbach’s alpha for the study sample was 0.90.

Flourishing Scale

The Flourishing Scale (Diener et al., 2010) is a one-dimensional, eight-item scale with a 7-point Likert scale from 1 (*strongly disagree*) to 7 (*strongly agree*) that measures meaning and purpose in life (sample item: “I am engaged and interested in my daily activities”). Cronbach’s alpha for the study sample was 0.91.

Organizational Satisfaction Questionnaire

The Organizational Satisfaction Questionnaire (OSQ), developed by Cortese (2001), evaluates job satisfaction. It includes 20 items with a 7-point Likert scale (sample item: “Referring to your current work situation, express how much are you satisfied about ... the content of your job”). Cortese reports a three-factor structure for the scale (general satisfaction, satisfaction with the contract, satisfaction with the context) but indicates that an organizational satisfaction index should be derived from the sum of the 20 items. In our study, alpha for the organizational satisfaction index was 0.94.

Data Analysis

To test the factorial structure of the scale, a confirmatory factor analysis with three latent factors and 10 observed variables (i.e., the single items) was performed using the software LISREL 8.80 (Jöreskog & Sörbom, 2006); after having conducted the multivariate normality test (Mardia, 1970) to verify the normality assumption, we decided to use the robust maximum likelihood method (RML estimation; Byrne, 2001), which is preferred when the normality assumption is slightly or moderately violated (Browne, 1987). We tested two different models with the aim of finding the best factorial solution: Model 1 with three factors (PM, MM through Work, GG) organized under a higher-order factor of meaningful work, according to the original version of the scale; and Model 2 with one factor representing the meaningful work. We compared the indices with the acceptable threshold (Schermelleh-Engel et al., 2003), to verify the general adequacy of the models; as these statistics are sensitive to sample size, we chose the two-index strategy (Hu & Bentler, 1999; Jöreskog & Long, 1993) using the comparative fit index, in which a good fit value is between 0.95 and 1 (Bentler, 1990); a Standardized Root Mean Square Residual (SRMR) in which values lower than 0.08 are considered acceptable (Brown & Cudeck, 1993); and the Root Mean Square Error of Approximation (RMSEA), in which values lower than 0.05 are usually considered good (Hu & Bentler, 1999). To compare different models, we used the Akaike Information Criterion (AIC; Burnham & Anderson, 2004), in which a lower value indicated a superior model fit, compared to models with higher values. Modification indices were also inspected to assess the extent to which the hypothesized model was appropriately described (Byrne, 2001).

The Cronbach-alpha coefficient is limited for testing the reliability of the multiple-indicator construct (Raykov, 1998), so we also calculated composite reliability (CR; the degree to which the scale indicators reflect an underlying factor; Fornell & Larcker, 1981) and average variance extracted (AVE; the average percentage of variation explained among the items of a construct; Hair et al., 1998). To evaluate internal consistency, we used Cronbach's alpha index. We considered alpha values < 0.60 not acceptable; between 0.60 and 0.70 acceptable; > 0.70 good; and > 0.80 very good (Kline, 1999; Traub, 1994). Next, we ran a series of multiple-group CFAs on the whole sample grouped by gender, through which different forms of equivalence were tested (Milfont & Fischer, 2015). In addition to configural invariance (i.e., the number of constructs and observed variables associated with each construct were the same across groups), the following forms of equivalence were tested:

- Metric invariance (Meredith & Teresi, 2006), which requires that in addition to the constructs being measured by the same items, the factor loadings for those items must be equivalent across administrations.
- Measurement error invariance (Mullen, 1995; Singh, 1995), which means that the variance–covariance matrices of the error terms are not significantly different, indicating comparable reliability across groups (Joreskog & Sorbom, 1989).
- Structural invariance (Byrne, 2008), which means that the variances and covariances of the latent variables are not significantly different (Joreskog & Sorbom, 1989).

The concurrent validity was assessed by correlating the scores of the WAMI with the following measures: UWES-9, Podsakoff et al.'s questionnaire, the Flourishing Scale and Pearson's *r* coefficient. Significances of *r* coefficients, after Bonferroni's correction, will be reported. Gender differences were assessed through a *t*-test for independent samples and Cohen's *d* to calculate the effect size. Correlations, *t*-test and descriptive analyses were calculated using SPSS 25.0; Cohen's *d* was calculated using free online calculator (<https://www.socscistatistics.com/effectsize>).

Results

Descriptive Analyses of the WAMI

Table 1 shows the 10 items of the WAMI and associated descriptive statistics. The distribution of the items' scores is normal, as all the items have skewness and kurtosis values < 1.

Factor Structure

The factor structure was verified comparing two models, as reported in Data analysis paragraph; the results indicated that the model with three factors organized under a higher-order factor, according to the original structure of the scale, showed acceptable fit indexes: Model 1 (10 items, 3 factors solution, 1 high-order factor), SB $\chi^2_{(32)} = 199.99$; SRMR = 0.03; RMSEA = 0.08 (C.I. 90% 0.07 – 0.09); CFI = 0.98; AIC = 245.99. Comparing Model 1 with the one-factor solution (Model 2), we obtained the following fit indexes: Model 2 (10 items, 1 factor solution), SB $\chi^2_{(35)} = 257.80$; SRMR = 0.04; RMSEA = 0.09 (C.I. 90% 0.08 – 0.10); CFI = 0.98; AIC = 297.80. The lower value for the AIC indicates that Model 1 is better than Model 2. We estimated Convergent validity for each factor through composite reliability (CR; acceptable threshold > 0.70) and the AVE (acceptable threshold > 0.50); the values for these indices were as follows: PM, CR = 0.87; AVE = 0.62; MM through work, CR = 0.79, AVE = 0.57;

Table 1 Descriptive statistics of the WAMI (N = 807). The Italian translation of each item is reported in parentheses

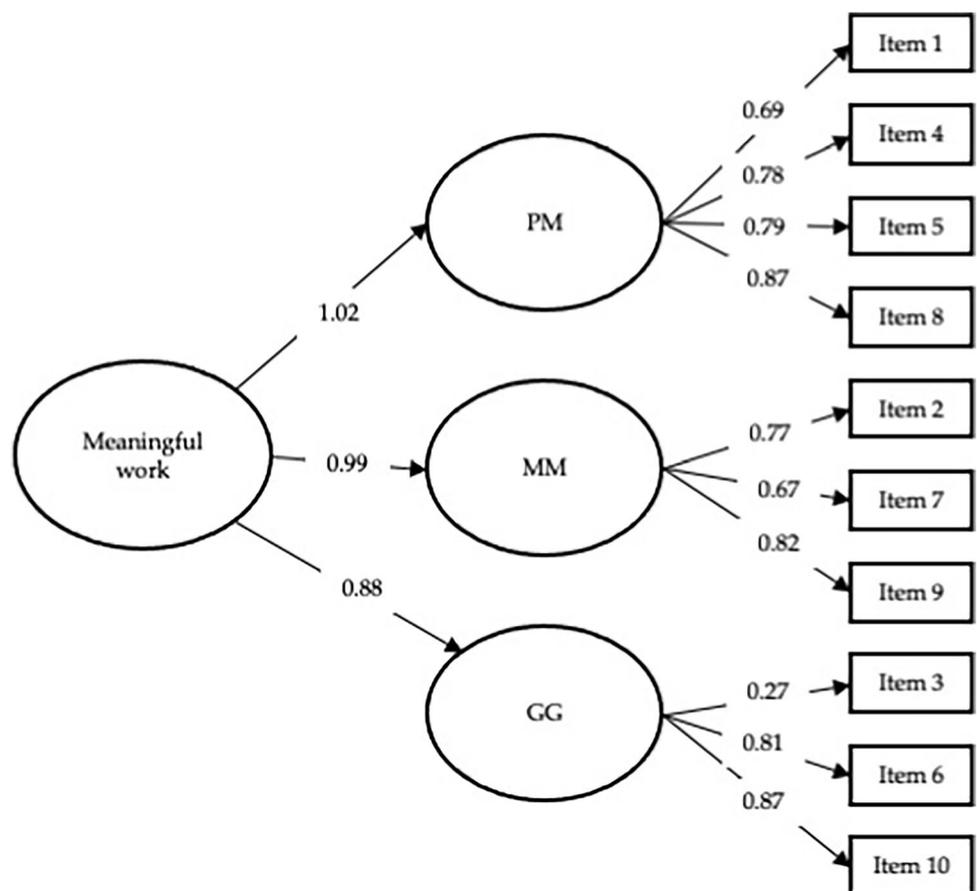
	M	SD	Skewness	Kurtosis
1. I have found a meaningful career (Ho trovato una carriera significativa)	3.30	1.23	-0.46	-0.68
2. I view my work as contributing to my personal growth (Ritengo che il mio lavoro contribuisca alla mia crescita personale)	3.80	1.19	-0.91	-0.09
3. My work really makes no difference to the world* (Il mio lavoro non dà alcun contributo alla realtà che vivo*)	3.88	1.26	-0.78	-0.61
4. I understand how my work contributes to my life’s meaning (Il mio lavoro dà significato alla mia vita e so perché)	3.62	1.15	-0.79	-0.08
5. I have a good sense of what makes my job meaningful (Sono consapevole di ciò che rende il mio lavoro significativo)	3.85	1.06	-0.95	0.40
6. I know my work makes a positive difference in the world (Il mio lavoro dà contributo positivo nel mondo)	3.55	1.17	-0.55	-0.53
7. My work helps me better understand myself (Il mio lavoro mi aiuta a capire meglio me stesso)	3.56	1.16	-0.70	-0.26
8. I have discovered work that has a satisfying purpose (Ho trovato un lavoro che ha scopi soddisfacenti)	3.56	1.18	-0.67	-0.35
9. My work helps me make sense of the world around me (Il mio lavoro mi aiuta a dar senso alla realtà che vivo)	3.53	1.13	-0.60	-0.32
10. The work I do serves a greater purpose (Il lavoro che faccio ha obiettivi importanti)	3.60	1.25	-0.62	-0.59

*items with reversed score

and GG, CR = 0.71, AVE = 0.49. These values indicated a very good convergent validity. All standardized factor loadings (Lambda-x) for Model 1 – shown in Fig. 1 – were significant ($t > 2.58$).

Given the significant differences across genders (see Table 3), gender invariance was also evaluated. To verify whether the factorial structure was replicated across independent samples drawn from the same population (Byrne, 2008), we divided respondents into two groups based on

Fig. 1 The factor structure of the WAMI



gender. We conducted cross-validation comparisons through a series of multiple-group CFAs in which we tested different, progressively more stringent forms of measurement equivalence (Milfont & Fischer, 2015). The first multiple-group analysis tested a model of configural invariance (Model 3) by simultaneously evaluating the fit of Model 1 on male and female samples. The fit indices ($\chi^2_{(69)} = 238.73$, $p = 0.0$; CFI = 0.98; SRMR = 0.07; RMSEA = 0.08) all indicated an acceptable fit for this model, supporting an equivalent 3-factor solution for the WAMI for both men and women. The fit of this configural model provided the baseline value against which all subsequently specified equivalence models were compared (Byrne, 2008). Model 4 was tested for metric invariance. All the fit indices were acceptable (Table 2). Moreover, $\Delta\chi^2_{M4-M3}(14) = 52.07$ and $\Delta\text{CFI} = 0.000$ suggested that Model 4 was equivalent to Model 3. Thus, metric invariance was supported. Also, structural invariance (as tested by Model 5) was found ($\Delta\chi^2_{M5-M4}(2) = 3.62$, $\Delta\text{CFI} = 0.000$). Finally, we tested the equivalence in measurement errors (Model 6): $\Delta\chi^2_{M6-M5}(2) = 5.03$, $\Delta\text{CFI} = 0.000$. Results were satisfactory as the model fit proved to be invariant across both populations (see Table 2).

Reliability, Item Analysis and Gender Differences

The internal consistency of the scale was calculated through Cronbach's alpha. The alpha coefficients were as follows: PM = 0.86; MM through work = 0.81; GG = 0.64; WAMI = 0.91. The split-half coefficient is 0.79, and the Spearman-Brown coefficient was 0.88. All the coefficients were good (> 0.60) for all subscales. The total score for the WAMI ranged from 11 to 50 ($M = 36.25$, $SD = 8.78$,

skewness = -0.66, kurtosis = -0.15, and the Shapiro–Wilk statistic for normality = 0.96, $p < 0.001$), confirming a good distribution of scores. Quartiles for scores in our general sample were 31 (Q1), 38 (median) and 43 (Q3). The item analysis showed that all items had adequate values, and the overall alpha value (0.91) did not increase consistently after elimination of some items. Table 3 reports gender differences for the subscales and the total score for the WAMI, which we analysed using a t -test. All comparisons showed differences (indicating higher values in females) which were significant in the probabilistic analysis due to the large dimension of the sample, but effect sizes were small (< 0.30) for each subscale and for the overall scale score.

Concurrent Validity

We tested the concurrent validity of the WAMI in the whole sample using the Utrecht Work Engagement Scale (UWES-9), an Italian version of Podsakoff et al.'s questionnaire to evaluate organizational citizenship behaviour, the Satisfaction with Life Scale, the Flourishing Scale, and the Organizational Satisfaction Questionnaire. The correlations between the subscales and total scores for the WAMI and the other scales are reported in Table 4. The total score for the WAMI was significantly and strongly related to engagement and its sub-dimensions, as well as to flourishing and job satisfaction, with a positive correlation; moreover, the correlations with the three sub-dimensions of organizational citizenship – altruism, conscientiousness and civic virtue – were significant although weaker. Finally, the subscales – PM, MM through work and GG—showed significant

Table 2 Tests of measurement invariance for the WAMI across gender

Model	$SB \chi^2$	df	SRMR	RMSEA (C.I.)	CFI	ΔCFI
3 (Configural Invariance)	238.73*	69	.07	.08 (.068-.089)	.98	-
4 (Metric Invariance)	290.80*	83	.09	.08 (.069-.088)	.98	.000
5 (Structural Invariance)	294.41*	85	.09	.08 (.067-.087)	.98	.000
6 (Measurement error Invariance)	289.39*	87	.09	.08 (.068-.087)	.98	.000

* $p < 0.001$

Table 3 Gender Differences for dimensions of meaningful work

	M (N = 365)		F (N = 442)		t	P	Cohen's d
	M	SD	M	SD			
PM	13.91	4.11	14.68	3.68	-2.79	0.005	0.23
MM through work	10.52	3.16	11.21	2.73	-3.31	0.001	0.20
GG	10.67	2.87	11.32	2.71	-3.30	0.001	0.23
WAMI total score	35.09	9.32	37.21	8.20	-3.40	0.001	0.25

M males; F females, PM positive meaning, MM meaning making through work, GG greater good motivation, $WAMI$ work and meaning inventory

Table 4 Correlations between the dimensions of meaningful work, dimensions of work engagement, organizational citizenship behaviours, flourishing, life satisfaction, and job satisfaction (N = 807). Pearson's r coefficient

		1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	PM	1													
2	MM through work	.83	1												
3	GG	.71	.67	1											
4	WAMI total	.95	.92	.86	1										
5	VI	.63	.57	.49	.63	1									
6	DE	.70	.65	.56	.71	.83	1								
7	AB	.56	.55	.44	.58	.79	.80	1							
8	Engagement total score	.68	.64	.54	.69	.93	.94	.92	1						
9	Altruism	.34	.33	.25	.34	.48	.42	.50	.50	1					
10	Conscientiousness	.34	.32	.28	.35	.49	.42	.52	.51	.72	1				
11	Civic virtue	.35	.35	.33	.38	.47	.48	.53	.53	.59	.57	1			
12	Flourishing	.52	.49	.44	.53	.58	.57	.50	.59	.53	.50	.39	1		
13	Life satisfaction	.57	.47	.43	.55	.52	.54	.41	.53	.30	.27	.25	.68	1	
14	Job satisfaction	.55	.49	.42	.54	.56	.63	.48	.60	.36	.36	.38	.46	.48	1

PM positive meaning, *MM through work* meaning making through work, *GG* greater good motivation, *WAMI* work and meaning inventory, *VI* vigor, *DE* dedication, *AB* absorption. All the correlations are significant at $p < .001$

correlations with the concurrent measures, confirming the external validity of the scale.

Then, we conducted three hierarchical regression analyses to evaluate the contribution of work-meaning and work engagement on (1) organizational citizenship behaviours, (2) life satisfaction, and (3) flourishing. Following the suggestions provided in the literature, the variables were entered into the regression analysis in two hierarchical steps. In the first step, the meaningful work was put as antecedent, work engagement and job satisfaction were inserted in the second step, to observe their affection on the three aspects of organizational citizenship behaviours (altruism, civic virtue and conscientiousness) in the first regression analysis, on life satisfaction in the second regression analysis and on flourishing in the third regression analysis.

As seen in Table 5, beyond the first step predictors, meaningful work seems more strongly related to life satisfaction and flourishing, rather than to organizational citizenship behaviours.

Discussion

In this study, we aimed to verify the psychometric properties of the WAMI in an Italian context. The results provided evidence for the reliability and validity of the Italian version of the scale without any modification to the original version. We also confirmed the original structure of the WAMI, with a higher-order factor with three-factors, in the Italian context; moreover, we found the gender-measurement invariance of the scale. These results were in line with the American validation and the Turkish one (Akin et al., 2013);

moreover, the Brazilian form (Leonardo et al., 2019) partially overlaps the tested version.

Thus, in our study, the WAMI showed good reliability and internal consistency. Its external validity has been explored through correlations with constructs semantically related to the meaningfulness of work. Previous literature has shown significant relationships among these constructs: work engagement, organizational citizenship behaviours, job satisfaction, and, at a personal level, life satisfaction and flourishing. We hypothesized that WAMI subscales and the total score would be positively related to desirable work variables—engagement, organizational citizenship behaviours and job satisfaction—and individual well-being such as life satisfaction and flourishing. The results showed that all WAMI subscales and the WAMI total score have significant and positive correlations with positive work and personal outcomes. Confirming the results of the original article on the validation of the WAMI scale, in our study, the PM subscale showed the largest correlations with these variables. These relationships were stronger for work engagement, job satisfaction and individual well-being and weaker—but significant—for the three dimensions of organizational citizenship behaviours. These findings confirmed previous, although limited, research on meaningful work, which had demonstrated its relationship with important work-related and general well-being variables (Allan et al., 2019; Steger et al., 2012). The relationship between meaningful work and work engagement has been demonstrated in other validation studies of the WAMI scale (Leonardo et al., 2019; Puchalska-Kamińska et al., 2019), and in Rosso et al.'s (2010) theoretical work, as well as in Allan et al.'s (2019) meta-analytic study. Similarly to the results of the

Table 5 Hierarchical regression analysis predicting Organizational citizenship behaviours, Life Satisfaction, and Flourishing

	β	t	R ²	ΔR^2	ΔF
Altruism					
Step 1					
Meaningful work	.34	10.27***	.12		
Step 2					
Meaningful work	-.02	-.56	.25	.14	73.24***
Work engagement	.46	10.12***			
Job satisfaction	.09	2.38*			
Civic virtue					
Step 1					
Meaningful work	.38	11.52***	.14		
Step 2					
Meaningful work	.003	0.07			
Work engagement	.46	10.46***	.28	.14	79.92***
Job satisfaction	.10	2.67**			
Conscientiousness					
Step 1					
Meaningful work	.35	10.57***	.12		
Step 2					
Meaningful work	-.02	-.46	.26	.14	76.13***
Work engagement	.47	10.41***			
Job satisfaction	.09	2.24*			
Life satisfaction					
Step 1					
Meaningful work	.55	18.52***	.30		
Step 2					
Meaningful work	.30	7.63***	.36	.07	42.46***
Work engagement	.20	4.76***			
Job satisfaction	.20	5.54***			
Flourishing					
Step 1					
Meaningful work	.53	17.92***	.28		
Step 2					
Meaningful work	.22	5.54***	.39	.10	67.13***
Work engagement	.37	8.98***			
Job satisfaction	.12	3.44***			

work conducted by Puchalska-Kamińska et al. (2019), we found that, among the measures of work engagement, the dimension of dedication has the strongest relationship with meaningful work. This dimension is defined as the experience of a sense of significance through work; performing it makes the worker proud. This is close to the definition of meaningful work proposed by Steger et al. (2012), according to which meaningful work refers to the meaning that a worker gives an activity and the meaning and fulfilment one derives from it.

Researchers have only limitedly explored the role of organizational citizenship behaviours in meaningful work. In their study on the validation of the WAMI scale, Steger et al.

(2012) considered organizational citizenship behaviours among the desirable work variables positively related to meaningful work. Allan et al. (2019) defined organizational citizenship behaviours as distal outcomes of the meaningful work. The results of the present study – as the previous ones (Hodson, 1997; Schlechter & Maharaj, 2007) – are not definitive regarding the direction of these relations, as the hierarchical regression has not shown a significant role of meaningful work in activating prosocial behaviours in the workplace.

On the contrary, the relationships between meaningful work and subjective well-being (life satisfaction and flourishing) are clearly defined: in our analysis, meaningful work adds a significant portion of explained variance in affecting both life satisfaction and flourishing. A recent, growing body of research explores the relationships between flourishing and meaningful work (Duffy et al., 2015), also suggesting that meaningful work could be a constituent part of the construct of flourishing (Redelinguys et al., 2019; Rothmann et al., 2019). Our analyses, then, suggest that people that experience a feeling of fulfilment when work is perceived as important for them, consistent with their values, and felt as useful for the community are more satisfied in the work domain, and, in turn, and in general life.

Finally, studies on gender differences in meaningful work are very scarce (Bailey, et al., 2019). Similar results have been found by Lips-Wiersma and Wright (2012), who suggest to further explore them in future studies.

Conclusions and Limitations

The study presented shows that the WAMI scale is a good instrument to evaluate the perception of meaningfulness of work in the Italian context. So, the first contribution of this study is the availability in the Italian context of a reliable and valid instrument for researchers and practitioners to detect meaningful work. Thus, this study improves on the existent body of research by demonstrating the core role of meaningful work in well-being and job satisfaction.

Workers experiencing meaningful work are more satisfied with their jobs and their lives, experiencing a sense of usefulness; organizations may benefit by promoting the meaningfulness of work, gaining more engaged and more committed workers who in turn will be more productive. At the individual level, then, meaningfulness in work is today an essential characteristic of the wider concept of decent work (Vignoli et al., 2020). It not only encompasses the dimensions of economic reward and security/safety, but it should also include the possibility of achieving personal fulfilment and self-realization. The results of this study provide suggestions for both workers and organizations. First, career counsellors can use some of the indications on the importance of meaningful work in their

work with clients, stimulating the reflection on the connection between meaningful work and meaningful life, by doing what Seligman et al. (2006) define as “satisfying instead of maximizing” (p. 782). Secondly, organizations should invest in promoting meaningfulness in their job positions, recognizing the range of organizational benefits from employing individuals who perceive their work as meaningful (Steger et al., 2012). These benefits include higher levels of engagement and lower levels of turnover intention, which in turn indicate more productive, loyal and satisfied workers. As underlined by Bailey et al. (2019, p. 105), “it is important for human resource practitioners to understand more about what meaningful work is and how a sense of meaningfulness can be fostered through organizational interventions”.

However, the results of the study should be read in light of its limitations. First, the cross-sectional nature of the study does not permit the establishment of causal relationships between the variables; future longitudinal studies may help to verify the predictive validity of the WAMI with respect to personal and working outcomes. Secondly, convenience sampling imposes some limits on the generalization of the results to the general population. Therefore, the results provide suggestions for future research on meaningful work: first, considering that women reported on average a higher level of meaningful work compared to men, and given the paucity of research on the individual differences in meaningful work, gender differences and other individual differences, as age or personality, could be further explored; moreover, future research should explore the relationships of meaningful work with other organizational dimensions such as psychosocial climate (Magnano et al., 2020) and diversity climate (Paolillo et al., 2017).

Authors' Contributions Paola Magnano: conceptualization, data management, data analysis, writing and editing;

Rita Zarbo: data collection, data analysis, writing;

Giuseppe Santisi: conceptualization, supervision.

Availability of Data and Material if requested dataset is available.

Code Availability used software for data analysis are: SPSS 25.0; Lisrel 8.80.

Declarations

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