



Feeling Important, Feeling Well. The Association Between Mattering and Well-being: A Meta-analysis Study

Monica Paradisi¹ · Camilla Matera¹ · Amanda Nerini¹

Accepted: 16 December 2023
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Abstract

Perception of mattering, the feeling of being important to others (Rosenberg & McCullough in *Community Ment Health J* 2:163–182, 1981), is receiving increasing attention as a factor that promotes well-being. Individual well-being has been defined in different ways, such as hedonic, as in a deep satisfaction with life (Diener & Lucas in *Well-being: Foundations of Hedonic Psychology* 213, 1999), eudaimonic, as in the realization of the true self (Ryff in *Curr Dir Psychol Sci* 4(4):99–104, 1995), and holistic, which is satisfaction across all domains of life (Prilleltensky et al., in *J Community Psychol* 43(2):199–226, 2015). The present study aims to systematize this body of literature on mattering and well-being to clarify whether the two constructs are linked independently from their conceptualization; to this end, a meta-analysis of 30 studies, following the PRISMA framework, was conducted. A significant medium effect size emerged between mattering and well-being ($r = 0.41^{***}$ [95% CI 0.33, 0.49]), with eudaimonic well-being showing a higher effect size in association with mattering ($r = 0.55^{***}$ [95% CI 0.46, 0.64]). The results indicate that mattering is a relevant construct when studying the positive functioning of individuals; in particular, mattering was found to be a key factor in the process of defining one's sense of worth and purpose in life.

Keywords Mattering · Well-being · Meta-analysis · Happiness

✉ Monica Paradisi
monica.paradisi@unifi.it
Camilla Matera
camilla.matera@unifi.it
Amanda Nerini
amanda.nerini@unifi.it

¹ University of Florence, Firenze, Italy

1 Introduction

The study of individual well-being and positive functioning has attracted increasing attention in the psychological literature since the 1970s (Veenhoven, 2009). Different conceptualizations of well-being have been proposed, like hedonic (i.e., subjective happiness or the balance between positive and negative feelings, namely life satisfaction; Diener, 2009) and eudaimonic (i.e., a sense of living a meaningful and purposeful life, as well as having positive relationships with others; Ryff, 1995). In recent years, these approaches have been criticized due to their exclusively individualistic perspectives; instead, some have suggested a deeper consideration of the social and contextual elements that can affect well-being (Arcidiacono & Di Martino, 2016; Keyes, 1998). Following this idea, models conceiving well-being in a more holistic way have been proposed, including the Interpersonal, Community, Occupational, Psychological, Physical and Economic model (Prilleltensky et al., 2015).

The connection between the individual and social spheres, necessary for the full realization of a person's well-being, is well expressed by the concept of *mattering*, which was originally defined as an individual's feeling of being important and significant to others (Rosenberg & McCullough, 1981). According to James (1890), an individual who has a good sense of worth (like self-esteem), but who is not valued and acknowledged by others, cannot experience a complete sense of well-being. Indeed, the concept of *mattering* is strictly related to that of well-being because of its peculiarity of connecting the individual level to the relational one.

Prilleltensky (2014) outlined that the search for *mattering* and thriving is what makes life worth living. Loving relationships are one of the key determinants of happiness (Holder et al., 2016; Vaillant, 2015); specifically, people experience happiness when they interact with others who make them feel important and significant (Flett, 2018). Even though *mattering* has been studied in relation to both positive (e.g., well-being) and negative (e.g., depression) outcomes (for a review, see Flett, 2018), Peterson (2009) lamented the fact that *mattering* had not received enough attention as a key protective factor in the positive psychology field. The present research focuses on the association between *mattering* and well-being, analyzed from a positive perspective. According to Flett (2018), *mattering* is linked with multiple indicators of positive adjustment, such as self-compassion or unconditional self-acceptance. Recent research findings have shown that individuals' perception of being important to others, and within one's social context, can contribute to enhance one's sense of well-being (Giangrasso et al., 2022; Matera et al., 2021b; Scarpa et al., 2021) and self-esteem (Matera et al., 2020), and can reduce anti-social behaviors that can be deleterious, not only for the individual but also for society more broadly (Schmidt, 2018).

Although a body of empirical evidence suggests the existence of a link between *mattering* and well-being, such evidence has yet to be systematically analyzed. The multitude of definitions of well-being makes it necessary to analyze how, and in which cases, it is associated with *mattering*. In doing so, it seems necessary to clarify the nature of this relationship by considering the different conceptualizations of the two constructs provided in the various studies. Like well-being, perceived *mattering* is also a multifaceted concept which has been differently defined and operationalized across different studies. For instance, a distinction between interpersonal and societal *mattering* is proposed by Rosenberg and McCullough (1981) and adopted in later studies (e.g., Jung & Heppner, 2017; Schmidt et al., 2020). As we will see in the next section, while the former refers to the perception of being important

to other people, the latter is defined as the perception that an individual's actions can make a difference in the broader socio-political scheme of events (Rosenberg, 1985).

Based on these considerations, the aim of the present research is to systematically review and analyze the studies that examine the link between mattering and well-being, with a specific focus on the different conceptualizations provided for these two constructs. In other words, does perceived mattering contribute to increased well-being, regardless of the different perspectives adopted to study them?

1.1 Mattering

As stated above, the construct of mattering is defined as an individual's feeling of being important and significant to others (Rosenberg & McCullough, 1981). According to Rosenberg (1985) it consists of two dimensions, namely interpersonal mattering and societal mattering. Interpersonal mattering is the perception of being significant to a specific group of people, such as family or friends, and encompasses attention, importance, and dependence (Rosenberg & McCullough, 1981). Attention is the perception of being noticed by others, in terms of one's presence and actions; importance is the feeling of being significant to someone, as expressed through sentiments of concern and actions of caring for one's needs, thoughts, and behaviors; and dependence is the feeling of being significant because others are relying on the individual in question. In 1985, Rosenberg proposed an additional two elements, which are ego-extension, the recognition of another person's emotional investment in the individual, and noted absence, the feeling of being missed by others when one is no longer around.

Societal mattering is defined as the perception that an individual's actions can make a difference in the broader socio-political scheme of events (Rosenberg, 1985), and this is an area that has received less attention in the psychological literature. Jung and Heppner (2017) applied the concept of societal mattering to employment, suggesting that people can perceive themselves to be connected to the broader context through their work and contribute to the functioning of the society. Schmidt (2018) studied societal mattering among adolescents living in a rural area of the USA, defining it as the perception of feeling important at school and in the community, and found that higher levels of societal mattering can prevent youths from engaging in anti-social behaviors.

Despite Rosenberg's (1985) conceptualization, in more recent years, Reece and colleagues (2019) suggested that mattering, especially in organizational contexts, is linked to the perceived impact of one's action and is best understood as an action-oriented construct, which is composed of recognition (renown accrued for one's excellence in action) and achievement (the achievement of excellence in one's actions). Prilleltensky (2020) proposed a similar conceptualization of mattering, characterized by two principal processes; feeling valued, that expresses the need to be recognized, acknowledged, appreciated and feel worthy; and adding value, that consists of having the opportunities to express oneself, to make a difference, to gain mastery over one's environment, and to have purpose in order to develop a sense of meaning. In this conceptualization, mattering is linked to all domains of life (individual, relational, work, and community), all of which are at the same time, sources from which feeling valued and beneficiaries of the added value (Prilleltensky, 2020).

While the construct of mattering was first described at the beginning of the 1980s, it received little attention until the 2000s. One of the reasons that may explain this renewed

interest might be the diffusion of positive psychology, which has contributed to the increased attention to factors that can promote well-being, instead of focusing only on mental health disease (Seligman & Csikszentmihalyi, 2000). Due to this new popularity of the mattering construct, many studies have examined its correlates. Mattering has been negatively associated with insecure attachment (Raque-Bogdan et al., 2011), while it emerged as a protective factor against high levels of anxiety (Dixon et al., 2009), distress (Flett & Nepon, 2020; Rayle & Chung, 2007), depression (Krygsman et al., 2022; Turner et al., 2004; Wight et al., 2015), and suicide (Elliott et al., 2005; Joiner et al., 2009). It is also positively associated with self-compassion (Raque-Bogdan et al., 2011), self-esteem (Matera et al., 2020) and emotional self-regulation (Giangrasso et al., 2022; Matera et al., 2021b).

The link between mattering and well-being has been firstly outlined by Rosenberg (1985) almost 40 years ago. By reporting some results from the Bachman's Youth in Transition study (Bachman et al., 1967; reported in Rosenberg, 1985), the author described a significant positive association between self-reported happiness and the feeling of being important to parents in a large group of American boys. Even if Rosenberg himself (1985) moved some doubts regarding the validity of the measurement of mattering in that study, according to the author this result sheds light on how the feeling of being cared and significant to parents in adolescence can contribute to form a positive self-concept that can foster a more satisfying and happy life. Since then, an increasing number of studies have investigated the relationship between perceived mattering and self-reported levels of well-being, mostly showing a positive association between these two constructs (Giangrasso et al., 2022; Matera et al., 2021b; Scarpa et al., 2021). Nevertheless, as stated above, these studies adopt different perspectives from which to examine well-being, which is a very broad concept that can refer to different psychological processes and states.

1.2 Conceptualizations of Well-being

When talking about individuals' psychological functioning, we can either adopt a negative or a positive focus (Joseph & Wood, 2010). Negative adjustment refers to the presence or absence of psychopathological symptoms or disease, such as depression or anxiety, and to which factors may or may not contribute to the development of those conditions (Johnson & Wood, 2017). On the other hand, positive functioning, namely well-being, is a broad term that includes different conceptualizations of what makes individuals feel good about their lives, adopting the perspective of positive psychology which focuses more on individual differences that can foster human flourishing (Johnson & Wood, 2017).

When considering individual well-being, we can identify at least three macro-conceptualizations in the psychological literature: hedonic, eudaimonic, and holistic.

Hedonic, or subjective, well-being can be defined as that which makes life and experiences enjoyable (Kahneman, 1999). Subjective well-being describes how people evaluate their lives in terms of emotional responses, domain satisfaction, and a global judgment of life satisfaction (Diener & Lucas, 1999). From this perspective, well-being is conceptualized as the set of judgements on what is good and bad in life, and it is determined by happiness (Diener & Lucas, 1999). Subjective happiness, in turn, is the balance between positive and negative feelings and it encompasses life satisfaction, high positive affect (e.g., joy, contentment, happiness, love) and low negative affect (e.g., sadness, anger, worry, stress) (Diener & Lucas, 1999; Diener, 2009; Watson et al., 1988).

Eudaimonic well-being can be defined as the effort to reach one's true potential, the construction of meaning, and the pursuit of an individual's purposes and ethical life values and, from this perspective, well-being is achieved when the person is true to their own inner self (Ryff, 1995). Eudaimonic well-being is constituted by a sense of living a meaningful and purposeful life, as well as having positive relationships with others; this is sometimes termed as flourishing (Ryff & Singer, 2000). The construct of psychological well-being, proposed by Ryff and Keyes (1995), reflects this conceptualization. According to the authors, psychological well-being is composed of six dimensions; autonomy, self-acceptance, environmental mastery, purpose in life, positive relations with others, and personal growth. Self-determination theory (Ryan & Deci, 2000) can also be reconducted to this macro-conceptualization as it defines individual well-being as the realization of an individual's self through the satisfaction of the three main needs of autonomy, competence, and relationality. The satisfaction of an individual can generate an ongoing sense of integrity, flourishing, and well-being at both social and personal levels.

The conceptualization of well-being in holistic terms is satisfaction experienced in all life domains. In the Wheel of Wellness model, wellness is determined by five life tasks which make up the invisible self, namely spirituality, self-direction, work/leisure, friends, and love (Myers et al., 2000). Similarly, the ICOPPE model defines well-being as an individual's satisfaction towards seven different domains of life, which are interpersonal, community, occupational, psychological, physical, economic, and overall well-being (Prilleltensky et al., 2015).

1.3 The Present Research

Even if psychological functioning can be approached both clinically and from a positive psychology perspective (Johnson & Wood, 2017), in the present study we chose to focus on individuals' well-being and positive functioning. In the preliminary studies presented by Rosenberg (1985), the feeling of being important, which is developed through the interaction with significant others, emerged as pivotal in defining a worthy self-concept that can foster life satisfaction and happiness. Although its significant role for individuals' experience of well-being (Flett, 2018), it is essential to ascertain whether these two constructs are independently associated beyond their conceptualizations. As highlighted above, conceptualizations of well-being in the psychological literature are heterogeneous, hence this term can be used to refer to very different psychological processes and states. Although past studies have investigated the association between mattering and well-being, no research to date has examined this relationship by comparing different conceptualizations of well-being. Feeling valued and important to others can significantly enhance the number of positive feelings an individual will experience, and reduce the negative ones, thereby fostering a greater sense of life satisfaction (hedonic well-being). At the same time, when individuals perceive that others genuinely care about what happens to them and consider them to be significant in their lives, they might feel a deep sense of purpose and self-worth (eudaimonic well-being). Moreover, perception of mattering can serve as a crucial indicator of the quality of one's relationships and integration in various life domains, ultimately determining the level of satisfaction individuals experience across different aspects of their lives (holistic well-being). Therefore, the aim of the current study is to detect if there is any difference

in the association between mattering and well-being that depends on the perspective being adopted to define the two constructs.

The hypothesis is that the relationship between mattering and well-being is strong enough to remain stable, regardless of the different definitions and operationalizations of the two concepts. In other words, we suppose that perceived mattering is associated with well-being, regardless of the way they are conceptualized, since the perception of being important, either to other people (interpersonal mattering) or broader society (societal mattering) might equally contribute to happiness (hedonic well-being), meaning and self-realization (eudaimonic well-being), and satisfaction across all life domains (holistic well-being).

To test our hypothesis, we conducted a meta-analysis of the literature based on the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) model, as developed by Page et al. (2021).

2 Materials and Methods

2.1 Research Strategies

We ran searches on four scientific databases relevant to the field of social and health psychology: Scopus, PubMed, Web of Science, and PsycINFO, using the keywords “wellbeing”, “well-being”, “quality of life”, “wellness”, “health”, “positive affect”, “life satisfaction”, “hedonic”, “eudaimonic” and “flourishing”. Each of these terms was linked, through the Boolean operator AND, to a second cluster of keywords, which are “mattering”, “importance to others”, “adding value” and “feeling valued”. We also linked them to the term “qualitative” through the Boolean operator NOT, to exclude qualitative studies. All the searches were conducted using only keywords in the English language. On Scopus, we used the title/abstract/keywords search fields; on PubMed we used title/abstract; and on Web of Science and PsycINFO, we used all the fields. The final search was conducted in July 2023. We then systematically analyzed the records with the support of the online software, EndNote.

2.2 Inclusion and Exclusion Criteria

We defined the following inclusion criteria; studies investigating the relationship between perceived mattering and well-being; studies that were available in scientific journals; and studies available in English. We also included conference papers and doctoral dissertations to consider possible data from the grey literature. The five exclusion criteria were: a research design that did not include empirical primary data (e.g., editorials or meta-analyses); studies that used only qualitative methods; any study that had mattering as a dimension of the Meaning in Life (Baumeister, 1991; George & Park, 2016) as this brings in an existential meaning¹; studies in which well-being is not conceptualized as either hedonic, eudaimonic

¹ Based on Baumeister's (1991) Meaning in Life, George and Park (2016) proposed a tripartite view, in which the construct is composed of three dimensions: comprehension, purpose and mattering. In this perspective, mattering is defined as the feeling that one's existence is of significance in the world. This is a different conceptualization from the one by Rosenberg and McCullough (1981), which is more focused on individuals' everyday experiences of feeling important through meaningful interpersonal relationships. Because of the different conceptualization of the construct, and considering that relevant authors in the study of mattering

and holistic, but rather as a mental health issue such as anxiety or depression; studies for which the full text was not available; and studies where mattering or well-being were not measured with a scale, but just with a single item.

We used these inclusion and exclusion criteria both in the screening phase, based on an analysis of titles and abstracts, and in the selection phase, when the full texts were examined. As the interest of the present research is to report all studies that explored the relationship between mattering and well-being, we decided not to exclude any study based on the publication year. For the meta-analysis, after contacting the authors, we further excluded all studies in which the Pearson correlation between at least one measure of mattering and one measure of well-being was not available. We also excluded all studies in which the PANAS measure had been used to assess well-being, but the association with mattering was provided only for one of the two subscales (positive or negative) and not for the composite one. Finally, to reduce the risk of bias during the screening phase, two independent judges, one of whom was external to the research group, analyzed 20% of all the studies included in the research project after the removal of duplicates. Since the inter-judge agreement was higher than 60% for all inclusion and exclusion criteria, all the ulterior selection phases have been conducted after those categories without any changes.

2.3 Coding System

The reports were then categorized according to the macro-conceptualization of well-being adopted; hedonic, eudaimonic, or holistic. For each study, we classified seven groups of information: bibliographical references; the nation where the study was conducted; sample size, age, gender, and other relevant characteristics of the participants; research design; measures used to assess mattering levels; measures used to analyze well-being; and the Pearson correlation between well-being and mattering scores. Where more than one measure of mattering or well-being was present, we calculated the mean value between the available correlations (Littell et al., 2008; Sánchez-Meca & Marín-Martínez, 2010). In the studies where more than one sample was analyzed, we classified them as different studies, because in a meta-analysis, it is mandatory to have independent measures from independent samples (Littell et al., 2008).

The coding process was conducted by one researcher who had been trained on Cochrane's PRISMA model (Page et al., 2021). Once completed, the summary tables were revised by the entire research group and disagreements were settled after discussion and comparison until an agreement between researchers was reached.²

(e.g., Flett, 2018; Prilleltensky & Prilleltensky, 2021) did not treat the Meaning in Life model, we decided to exclude studies that adopted a definition of mattering as existential meaning.

² After this revision phase, for Matera and colleagues' study (2021b) we decided to include only longitudinal data since they already included the mean association between the three administrations. Similarly, results reported by Rosenberg (1985) have been excluded, as from the text it was not clear how mattering and well-being had been measured. Moreover, we could not retrieve the original study (Bachman et al., 1967; reported in Rosenberg, 1985). In addition, Rosenberg (1985) himself moved some doubts regarding the way mattering was assessed in that occasion, since no validated mattering measures were available at the time.

2.4 Analyses

The analyses were conducted using Jamovi 2.3.26, and the Pearson correlation coefficient r was used to estimate the effect size. A positive correlation coefficient indicates a conducive effect, as high mattering is associated with higher levels of well-being. As specified above, we calculated the mean value between the available correlations where more than one measure of mattering or well-being were present (Littell et al., 2008; Sánchez-Meca & Marín-Martínez, 2010). Each r was weighted by the sample size to calculate the mean correlations. In addition to the main analysis that examined the relationship between mattering and general well-being, we examined additional sets of effect sizes based on the three different conceptualizations of well-being. We examined each set of effect sizes in separate analyses, since one study included multiple measures of well-being, so these different sets of effect sizes were not independent. Finally, since only Jung & Happner (2017) measured societal mattering, we did not analyze different mean effect sizes based on mattering conceptualizations.

All the analyses were carried out using the Fisher r -to- z transformed correlation coefficient as the outcome measure, and a random-effects model was fitted to the data (Field, 2005; Hedges & Tipton, 2010). The amount of heterogeneity was estimated using the Hunter-Schmidt estimator (Hunter & Schmidt, 2004). In addition to the estimate of τ^2 , the Q -test for heterogeneity and the I^2 statistic are reported (Borenstein, 2023). In case of detecting any level of heterogeneity, a 95% prediction interval (95% PI) for the actual results was also presented (Borenstein, 2023; Hoaglin, 2016). Studentized residuals and Cook's distances are used to examine whether studies may be outliers and/or influential in the context of the model. Studies with a studentized residual larger than the $100 \times (1 - 0.05 / (2 \times k))$ th percentile of a standard normal distribution are considered potential outliers (i.e., using a Bonferroni correction with two-sided $\alpha = 0.05$ for k studies included in the meta-analysis) (Viechtbauer & Cheung, 2010). Studies with a Cook's distance larger than the median plus six times the interquartile range of the Cook's distances are considered to be influential (Martin & Pardo, 2009; Viechtbauer & Cheung, 2010). The rank correlation test and the regression test, using the standard error of the observed outcomes as the predictor, were used to check for funnel plot asymmetry (Begg & Mazumdar, 1994; Rothstein et al., 2005).

3 Results

After the selection process was completed, the number of reports included in the meta-analysis was 30, while the number of samples included for the analysis was 39, as some papers presented results on more than one sample. Of these 39 samples, there are 19 in the hedonic well-being group, 10 in the eudaimonic group, and 11 that adopted a holistic approach. Demir and Davidson (2013) analyzed well-being from both the hedonic and eudaimonic perspective, so their study was included in both groups. All reports included in the analyses were peer reviewed papers published in international journals. All the studies were published after 2003; most of them ($n=20$) were published between 2019 and 2023. The United States was the primary nation of investigation (16 studies), followed by Italy (six studies) and Israel, Canada, and Turkey, with two studies each. The other studies took place in Iran,

Switzerland, and Ghana. Almost all the studies adopted a cross-sectional design, and only Froidevaux et al. (2016); Matera et al. (2021b) presented longitudinal analyses (Fig. 1).

3.1 Participants

Participant characteristics are presented in Table 1. Almost all the studies involved both male and female participants, except for Brandt and Carmichael (2020) who recruited only men who did not identify as heterosexual.

Most of the studies were conducted with university and college students, though the respondents in two studies were Army cadets at the first year in the academy, all about 18 years old (Gibson & Myers, 2006; Myers & Bechtel, 2004). The next largest grouping were adults, followed by adolescents and elders.

3.2 Measures of Mattering and Well-being

A description of the measures used to assess mattering are presented in Table 2. The General Mattering Scale (Marcus & Rosenberg, 1987) was the most used measure (17 studies), followed by the Mattering to Others Questionnaire (Marshall, 2001), used in 13 studies, and the Interpersonal Mattering Scale (Elliott et al., 2004) that was chosen in five studies. Some studies also assessed the perception of anti-mattering (Flett, 2018) and the fear of not mattering (Flett, 2020). Although those are constructs that are theoretically linked to mattering, they are different variables, as explained by Flett (2018). Anti-mattering is defined as the perception of not being important to others, which cannot be considered the same as perceiving lower levels of mattering, since it can have different consequences on well-being (Flett, 2018). Similarly, fear of not mattering reflects a negative sense of self and a need for validation through the connection with other people (Casale & Flett, 2020). For this reason, we decided not to include those measures in the meta-analysis.

Table 3 describes the measures used to assess well-being, divided based on the adopted conceptualization. For the hedonic measures, the most used instrument is the Satisfaction with Life Scale (Diener et al., 1985), chosen in ten studies. In six papers, either the Positive and Negative Affects Scale (PANAS; Watson et al., 1988) or its shortened version (I-PANAS-SF; Thompson, 2007) were administered. Regarding eudaimonic well-being, the Psychological Well-being Scale (Ryff, 1995) was the most used measure (5 studies). Moschella and Banyard (2021) used the Psychological Well-being Assessment, an adapted version of Ryff's Psychological Well-being Scale, composed of 42 items. The remaining studies included in the eudaimonic group adopted measures deriving from self-determination theory (Ryan & Deci, 2000). Finally, to assess holistic well-being, the most used instrument was the Interpersonal, Community, Occupational, Psychological, Physical and Economic Well-being Scale (Prilleltensky et al., 2015), in both long and short forms (Esposito et al., 2022).

3.3 Meta-analysis Results

We initially conducted a meta-analysis on the totality of the included studies, using a random-effects model in which the random variance component was determined using Hunter-Schmidt (Hunter & Schmidt, 2004). The mean weighted effect size across $k=39$ samples ($N=18,406$) was significantly positive (Table 4), indicating that higher levels of mattering

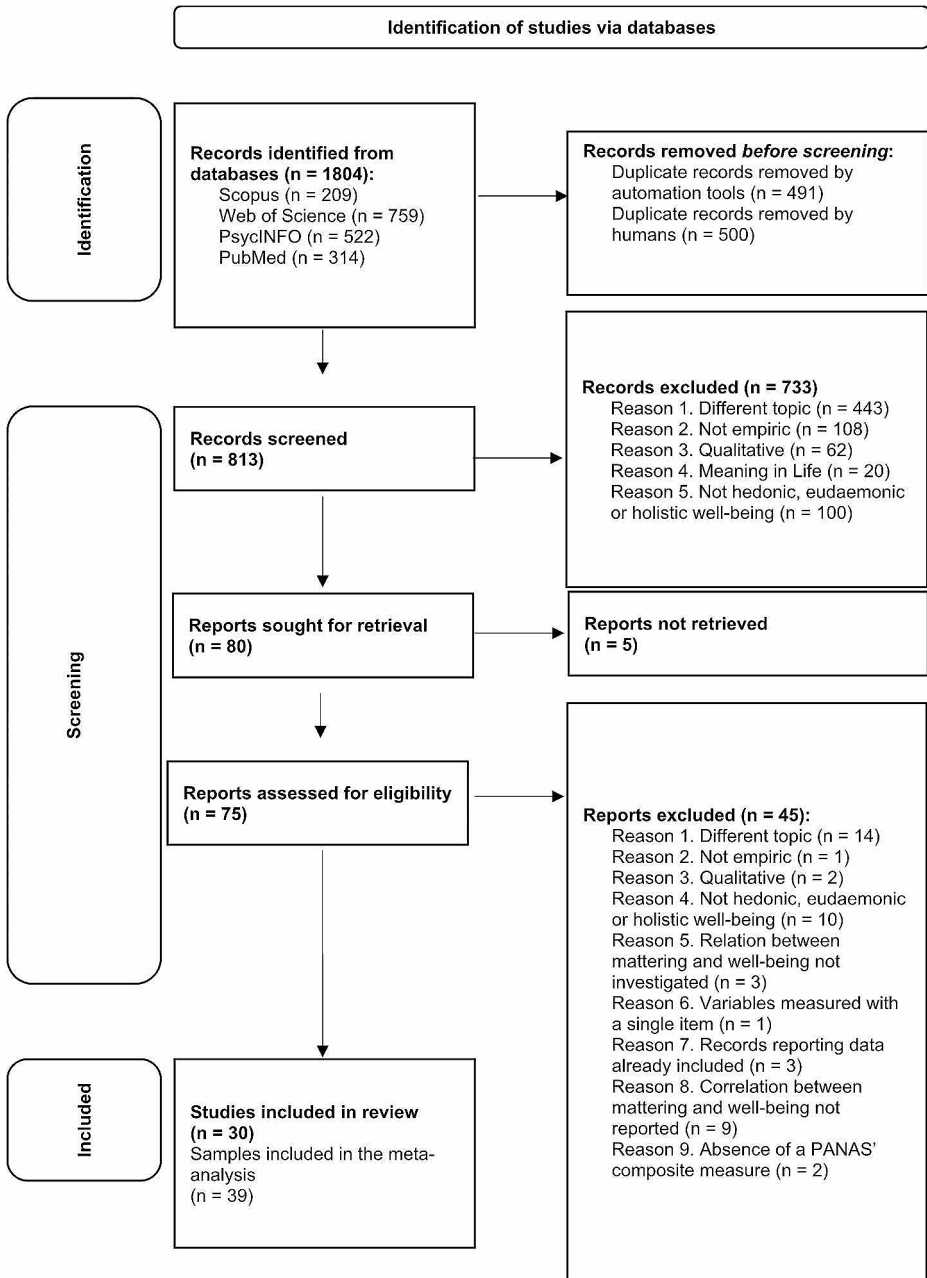


Fig. 1 PRISMA 2020 flow diagram for systematic reviews which included searches of databases

are positively related to a better self-reported well-being. Furthermore, according to the Q-test, the true outcomes appear to be heterogeneous, indicating that effect sizes differed more than would be expected from sampling error alone. A 95% prediction interval for

Table 1 Overview of the studies included in the meta-analysis

References	Nation	Participants				Research Design	Well-being's conceptualization
		N.	Female gender (%)	Mean age (SD)	Other information		
Barnett et al. (2020)	USA	81	56.75	n.d. 13–18 years	Alaska Native Adolescents	Cross-sectional	HEDONIC
Besser et al. (2020a)	Israel	462	75.54	28.41 (n.d.)	College student During COVID-19 pandemic	Cross-sectional	HEDONIC
Besser et al. (2020b)	Israel	1217	77.65	27.42 (7.70)	College student During COVID-19 pandemic	Cross-sectional	HEDONIC
Brandt and Carmichael (2020)	USA	205	0	25.51 (7.77)	identify as a non-heterosexual man	Cross-sectional	EUDAIMONIC
Connolly and Myers (2003)	USA	82	55	38.2 (10.33)	Adults	Cross-sectional	HOLISTIC
Dadfar et al. (2021)	Iran	72	77.5	40.8 (9.9)	University employees	Cross-sectional	HEDONIC
Demir et al. (2011)	USA	196	69.89	23.50 (5.04)	College students	Cross-sectional	HEDONIC
		245	71.84	19.17 (1.67)	College students	Cross-sectional	HEDONIC
Demir et al. (2012)	Turkey	296	n.d.	21.14 (1.90)	Turkish college students	Cross-sectional	HEDONIC
	USA	273	n.d.	21.80 (4.12)	USA college students	Cross-sectional	HEDONIC
Demir and Davidson (2013)	USA	4283	73.62	18.81 (1.44)	College students	Cross-sectional	HEDONIC EUDAIMONIC
Fantinelli et al. (2023)	Italy	147	76	17.9 (1.0)	High School Students	Cross-sectional	HOLISTIC
Flett et al. (2022)	Canada	197	72.08	19.8 (4.1)	University students	Cross-sectional	EUDAIMONIC
		134	53.73	17 (0.72)	High school students	Cross-sectional	EUDAIMONIC
France and Finney (2009)	USA	593	72	18.93 (1.14)	University students	Cross-sectional	EUDAIMONIC
Froidevaux et al. (2016)	Switzerland	161	57.8	58.55 (2.6)	Employees for whom retirement is a relevant theme	Longitudinal (2 waves at 1 year of distance).	HEDONIC
		178	53.9	68.4 (5.26)	Retirees	Longitudinal (2 waves at 1 year of distance).	HEDONIC
Giangrasso et al. (2022)	Italy	350	79.7	24.67 (4.69)	During COVID-19 pandemic	Cross-sectional	HEDONIC

Table 1 (continued)

References	Nation	Participants				Research Design	Well-being's conceptualization
		N.	Female gender (%)	Mean age (SD)	Other information		
Gibson and Myers (2006)	USA	234	13.2	18.7 (0.83)	Army cadets	Cross-sectional	HOLISTIC
Jung and Heppner (2017)	USA	589	n.d.	39.86 (13.28)	Working adults	Cross-sectional	HEDONIC
Karaman et al. (2023)	Turkey	1583	60.7	21.59 (2.13)	University students	Cross-sectional	HEDONIC
Lemon and Watson (2011)	USA	640	48	16.21 (1.36)	High School Students	Cross-sectional	HOLISTIC
Lenz et al. (2018)	Ghana	657	34.85	22.47 (4.37)	College students	Cross-sectional	HEDONIC
Martinez-Damia et al. (2023)	Italy	308	55.2	43.5 (13.07)	First-generation immigrants, coming from developing countries, and living in the north of Italy	Cross-sectional	HOLISTIC
Matera et al. (2020)	Italy	134	80.5	32 (10.58)	Adults	Cross-sectional	HOLISTIC
Matera et al. (2021a)	Italy	39	34.2	45.63 (10.95)	Individuals living with HIV/AIDS (PLWHA)	Cross-sectional	HOLISTIC
		61	25.5	34.96 (11.48)	Individuals living with disabilities (PWDs)	Cross-sectional	HOLISTIC
Matera et al. (2021b)	Italy	109	63.3	57.30 (7.32)	During COVID-19 pandemic	Longitudinal (3 waves at 3 months of distance each)	EUDAIMONIC
Moschella and Banyard (2021)	USA	180	80	19.46 (1.71)	University students	Cross-sectional	EUDAIMONIC
		447	65.1	20.39 (2.26)	University Students	Cross-sectional	EUDAIMONIC
Myers and Bechtel (2004)	USA	179	16.2	19.4 (6.4)	Army cadets	Cross-sectional	HOLISTIC
Prinzing et al. (2023)	USA	295	59.7	39.28 (13.54)	Adults	Cross-sectional	HEDONIC
		252	66.6	19.08 (1.76)	University students	Cross-sectional	HEDONIC
		378	50.5	39.40 (12.16)	Adults	Cross-sectional	HEDONIC
Rayle (2005)	USA	462	50.5	16.24 (1.25)	High school students	Cross-sectional	HOLISTIC

Table 1 (continued)

References	Nation	Participants				Research Design	Well-being's conceptualization
		N.	Female gender (%)	Mean age (SD)	Other information		
Reece et al. (2019)	USA	423	39.72	38.65 (9.68)	Adults	Cross-sectional	HEDONIC
Rose and Kocovski (2021)	Canada	271	80.07	19.31 (n.d.)	University students	Cross-sectional	EUDAIMONIC
Scarpa et al. (2021)	USA	1,051	49.8	n.d.	Adults	Cross-sectional	HOLISTIC
Washburn et al. (2020)	USA	472	50.85	46.44 (11.32)	Physical education teachers	Cross-sectional	EUDAIMONIC

the true outcomes was given by -0.05 to 0.88 (Borenstein, 2023; Hoaglin, 2016). Hence, although the average outcome was estimated to be positive, in some studies the true outcome might in fact be negative. An examination of the studentized residuals revealed that the study by Lemon and Watson (2011) had a value larger than ± 3.22 and may be a potential outlier in the context of this model. According to Cook's distances (Martin & Pardo, 2009; Viechtbauer & Cheung, 2010), two studies (Brandt & Carmichael, 2020; Lemon & Watson, 2011) could be considered to be overly influential (Fig. 2).

In addition, we examined the mean weighted effect size across the three different conceptualizations of well-being, all of which were found to be significant and positive, indicating that mattering is positively associated with well-being, regardless of the conceptualization adopted to define well-being.

The mean effect size for the hedonic group was tested across $k=19$ samples ($N=12,221$). According to the classification provided by Cohen (1988), a medium significant positive effect size emerged in the association between mattering and hedonic well-being. The Q-test indicates that the true outcomes appeared to be heterogeneous; a 95% prediction interval for the true outcomes was given by 0.07 to 0.68 (Borenstein, 2023; Hoaglin, 2016). Hence, even though there may be some heterogeneity, the true outcomes of the studies were generally in the same direction as the estimated average outcome. An examination of the studentized residuals revealed that none of the studies had a value larger than ± 3.01 and hence there was no indication of outliers (Viechtbauer & Cheung, 2010). According to the Cook's distances (Martin & Pardo, 2009; Viechtbauer & Cheung, 2010), none of the studies could be considered to be overly influential (Fig. 3).

In the eudaimonic group, the mean effect size was tested across $k=10$ studies ($N=7193$); a large significant positive effect size was found, according to Cohen's classification. The Q-test indicated that the true outcomes appeared to be heterogeneous, so a 95% prediction interval for the true outcomes was given by 0.19 to 0.91 (Borenstein, 2023; Hoaglin, 2016). Hence, even though there might be some heterogeneity, the true outcomes of the studies were generally in the same direction as the estimated average outcome. Examining the studentized residuals (Viechtbauer & Cheung, 2010), one study (Brandt & Carmichael, 2020) had a value larger than ± 2.81 , so it might be a potential outlier. However, according to Cook's distances (Martin & Pardo, 2009; Viechtbauer & Cheung, 2010), none of the studies could be considered to be overly influential (Fig. 4).

Table 2 Description of the measures used to assess mattering in the included studies

Mattering measure and reference	Number of samples to which the measures have been administered	Subscales (number of items)	Other characteristics
General Mattering Scale (Marcus & Rosenberg, 1987)	17	• (5)	
Mattering to Others Questionnaire (Marshall, 2001)	13	• (11)	To friends, family, best friend, second closest friend, third closest friend, significant others
Interpersonal Mattering Scale (Elliott et al., 2004)	5	Awareness (8) Importance (10) Reliance (6)	Short form (15 items)
Unified Measure of University Mattering Scale (Moschella & Banyard, 2021)	2	Awareness (9) Importance (16) Reliance (9)	Short form (10)
Mattering in Domains of Life Scale (Scarpa et al., 2022)	2	Self: feeling valued (3) – adding value (3) Interpersonal: feeling valued (3) – adding value (3) Occupational: feeling valued (3) – adding value (3) Community: feeling valued (3) – adding value (3) Overall mattering (3)	
Perceived Close Others Mattering Questionnaire (Prinzing et al., 2023)	2	• (4)	
Perceived Societal Mattering Questionnaire (Prinzing et al., 2023)	2	• (4)	
Work Mattering Scale (Jung & Heppner, 2017)	1	Interpersonal Mattering (5) Societal Mattering (5)	
Organizational Mattering Scale (Reece et al., 2019)	1	Achievement (3) Recognition (4)	
Perceived Mattering Questionnaire for Physical Education (Richards et al., 2017)	1	Physical Education Matters (4) Teacher Matters (4)	
Perceived Interpersonal Mattering Questionnaire (Prinzing et al., 2023)	1	• (8)	

Finally, the mean effect size for the holistic group was tested across $k=11$ studies ($N=3331$). According to Cohen's classification, a medium significant positive effect size emerged in the association between mattering and holistic well-being. The Q-test indicated that the true outcomes were heterogeneous; the 95% prediction interval for the true outcomes was given by -0.33 to 1.07 (Borenstein, 2023; Hoaglin, 2016). Hence, although the average outcome was estimated to be positive, in some studies the true outcome might in fact be negative. Both the examination of the studentized residuals (a value larger than ± 2.84) and Cook's distance (Martin & Pardo, 2009; Viechtbauer & Cheung, 2010), revealed

Table 3 Description of measures used to assess well-being in the included studies

Well-being measure and reference	Number of samples to which the measures have been administered	Subscales (number of items)	Other characteristics
Hedonic			
Satisfaction with Life scale (Diener et al., 1985)	10	• (5)	
Positive and Negative Affects Scale (Watson et al., 1988)	6	Positive affects (10) Negative affects (10)	Short version I-PANAS-SF (Thompson, 2007)
Positive and Negative mood (ad hoc items; Besser et al., 2020a)	2	Positive mood (3) Negative mood (3)	Current (online didactic) or General (face to face didactic)
Subjective Happiness Scale (Lyubomirsky & Lepper, 1999)	2	• (4)	
Self-Rating Scale of Happiness (Abdel-Khalek, 2006)	1	• (1)	
World Health Organization-five Well-Being Index (WHO, 2017)	1	• (5)	
Eudaimonic			
Psychological Well-being Scale (Ryff, 1995)	5	Positive Relationships with Others Self-acceptance Environmental Mastery Autonomy Purpose in Life Personal Growth	Different versions have been used (e.g., 42 items or 18 items) Not all studies included all subscales.
Psychological Well-being Assessment (Moschella & Benyard, 2021)	2	(42) Positive Relationships with Others Self-acceptance Environmental Mastery Autonomy Purpose in Life Personal Growth	An adapted version of Ryff's (1995) Psychological Well-being Scale
Need Satisfaction Scale (La Guardia et al., 2000)	1	Autonomy (3) Competence (3) Relatedness (3)	
Basic Psychological Needs Satisfaction and Frustration Scale (Chen et al., 2015)	1	Satisfaction: Autonomy (4) Competence (4) Relatedness (4) Frustration: Autonomy (4) Competence (4) Relatedness (4)	

Table 3 (continued)

Well-being measure and reference	Number of samples to which the measures have been administered	Subscales (number of items)	Other characteristics
Basic Needs Satisfaction in General Scale (Gagné, 2003)	1	(21) Autonomy Competence Relatedness	
Holistic			
Interpersonal, Community, Occupational, Psychological, Physical and Economic Well-being Scale (Prilleltensky et al., 2015)	6	Interpersonal (3) Community (3) Occupational (3) Psychological (3) Physical (3) Economic (3) Overall (3)	Short form (Esposito et al., 2022)
Wellness Evaluation of Lifestyle (Myers et al., 2000)	3	(105) Spirituality Work Leisure Friendship Love	Teenager version (Myers & Sweeney, 2001)
Five Factor Wellness Inventory (Myers & Sweeney, 2005)	2	(73) Creative Self Coping Self Social Self Essential Self Physical Self	Teenager version

Table 4 Effect sizes for overall and different well-being's conceptualizations

	k	r	95% CI	Q	I ²	Tau ²
Overall Well-being	39	0.41***	0.33, 0.49	1 012.63***	95.91%	0.055
Hedonic Well-being	19	0.38***	0.33, 0.44	156.96***	86.42%	0.012
Eudaimonic Well-being	10	0.55***	0.46, 0.64	125.17***	88.31%	0.017
Holistic Well-being	11	0.37***	0.09, 0.65	727.81***	98.33%	0.217

Note. k is the number of effect sizes included in each analysis. *** $p < .001$

that the study by Lemon and Watson (2011) might be a potential outlier in the context of this model, being overly influential (Fig. 5).

Since in all the four analysis we conducted, a relevant amount of heterogeneity emerged, we tested the total sample for three possible moderators (at least ten studies are needed to test for each moderator, Littell et al., 2008; Higgins & Green, 2006), namely participants' mean age, participants' gender (percentage of women in the sample) and the region in which the study had been conducted (North America, Europe, Middle East, Other). In each model, the studies for which the data were not available were excluded. From the analyses, none of the three variables emerged as a significant moderator of the relationship between mattering and well-being (respectively, age $p=0.81$; gender $p=0.31$; region $p=0.44$).

Regarding publication bias (Table 5), fail-safe N (Rosenthal, 1979) suggests that, in all cases, a substantial number of file-drawer studies would have been necessary to alter the overall conclusions. Moreover, in no case did Egger and colleagues' (1997) regression pro-

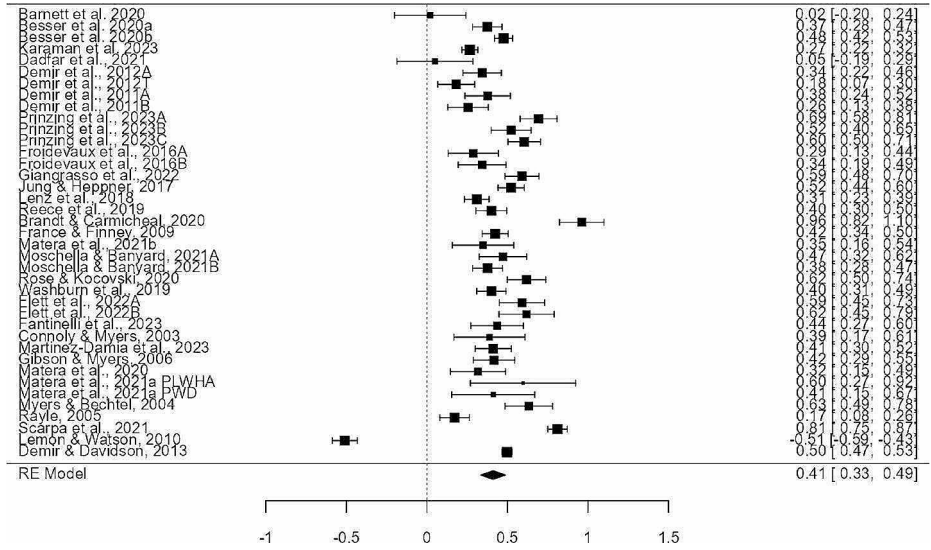


Fig. 2 Forest Plot Effect size of all included studies and general model (k=39)

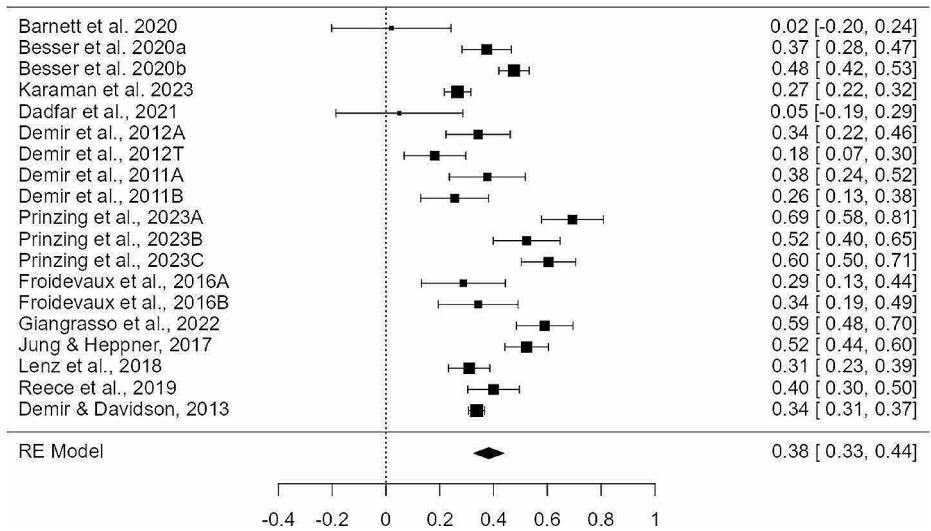


Fig. 3 Forest Plot Effect size of included studies in the hedonic well-being group (k=19)

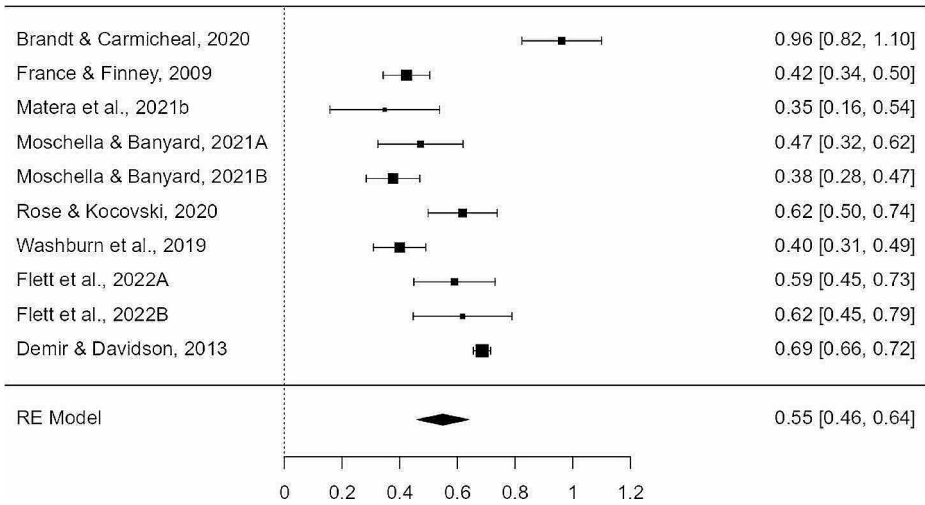


Fig. 4 Forest Plot Effect size of included studies in the eudaimonic well-being group (k=10)

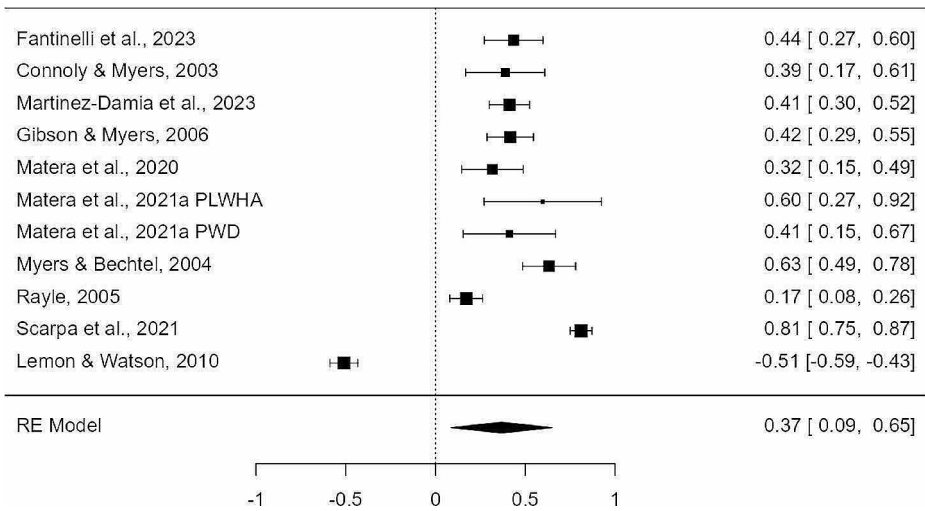


Fig. 5 Forest Plot Effect size of included studies in the holistic well-being group (k=11)

Table 5 Test for Publication Bias

	Fail-safe N	Egger et al.'s regression (two-tailed)	Funnel Plot asymmetry	
			Rank Correlation p	Regression Test p
Overall Well-being	33 191***	-0.14	0.71	0.89
Hedonic Well-being	8 920***	-2.11	0.58	0.034
Eudaimonic Well-being	5 374***	-0.10	1.00	0.92
Holistic Well-being	1 233***	0.63	1.00	0.53

Note. *** $p < .001$

duce a significant result. Finally, neither the rank correlation nor the regression test indicated any funnel plot asymmetry, so it is unlikely that our results were due to publication bias.

4 Discussion

In the last two decades, mattering has received increasing attention in the psychological field and has been studied in relation to both positive (e.g., well-being) and negative (e.g., depression) outcomes (for a review, see Flett, 2018). The present research focuses on the association between mattering and well-being, analyzed from a positive perspective. Generally, research shows that these two constructs are positively associated (Giangrasso et al., 2022; Matera et al., 2021b; Scarpa et al., 2021); however, due to the heterogeneity of definitions of both mattering and well-being, we felt the need to analyze this relationship systematically. In this context, the aim of the present research is to detect if there are any differences in the association between mattering and well-being, depending on the perspective adopted to define the two constructs. The hypothesis that guided the study is that mattering is associated with well-being, regardless of the way the two constructs are conceptualized, since perception of being important, either to other people or the broader society, might equally contribute to happiness (hedonic well-being), to meaning and self-realization (eudaimonic well-being), and to satisfaction across all life domains (holistic well-being). To this end, we conducted a meta-analysis of the studies that explored the association between mattering and well-being, based on the PRISMA model (Page et al., 2021).

The results of our study reveal that the association between mattering and well-being was studied more often from a hedonic perspective, and participants were mostly adults and university students, while just a few studies involved adolescents and elders. The most adopted research design was the cross-sectional one; only three samples were studied with a longitudinal design, making it difficult to infer any causal explanations.

Almost all the studies used measures of interpersonal mattering, and only a few assessed mattering in reference to different life contexts, such as work or university. Societal mattering was assessed in only one study (Jung & Heppner, 2017); for this reason, we were unable to calculate the mean effect sizes based on mattering conceptualizations. Regarding the assessment of well-being, the most used measure in the eudaimonic group was the Psychological Well-being Scale (Ryff, 1995), but many studies failed to include all the six subscales. These differences in the use of instruments makes the nature of the association between the two constructs somewhat unclear.

The analyses reveal that mattering and well-being were generally positively associated with a medium effect size. This suggests that feelings of being important can contribute to increases in both the number of experiences that a person values as positive (Diener & Lucas, 1999) and the satisfaction toward individuals' different life domains (Prilleltensky et al., 2015). Mattering was found to be relevant in the process of pursuing the realization of the authentic self (Ryff, 1995). Among the different conceptualizations of well-being, the highest effect size was observed in the eudaimonic group, with a large positive correlation between mattering and well-being. This result indicates that, while mattering can contribute to an increase in life satisfaction (both affective and in different life domains), its role is even more relevant when a more existential dimension of well-being is considered. Hence, when people feel that their life is important to others, that they add value in their context,

and that their value is recognized and acknowledged by others, individuals then feel an increased sense of purpose in life, appreciating significant interpersonal relationships, perceiving themselves as more autonomous and with higher control over their environment, are more accepting towards their own faults, and feeling that their experiences contribute to their personal growth. These results are in line with the seminal work by Rosenberg (1985), according to whom the perception of mattering significantly contributes to the development of a self-concept that can provide well-being and satisfaction through an increased sense of worth and self-realization.

Nevertheless, we note that some contradictory findings emerged regarding outliers and heterogeneity. Firstly, two studies were flagged as possible outliers through the analyses. Brandt and Carmichael (2020) found a very strong positive association between mattering and eudaimonic well-being in a sample composed of men who do not identify as heterosexual. This strong association can be reconducted to the features of the population investigated. Since non-heterosexual men are more likely to experience discrimination and marginalization due to their sexual orientation, mattering could be especially relevant for their well-being; the perception of being important to others and recognized can nurture one's sense of worth, despite the negative experiences that an individual can face due to their sexual orientation.

The second outlier is the study by Lemon and Watson (2011). They reported the most contradictory result, namely a significant negative association between mattering and all the dimensions of wellness among a group of adolescents, and was the only study to do so. Lemon and Watson (2011) explained this result to be a consequence of living interpersonal relationships largely online for the new generations. Relationships mediated by virtual environments are characterized by the continued search for a higher status (Nesi & Prinstein, 2019). Following this hypothesis, youth's perception of importance is not only unable to promote well-being, but becomes a stressor that decreases their wellness. Schlossberg (1989) reported that for people in a caregiving position, the feeling of mattering can be so strong as to become a source of distress. Similarly, it is possible that the participants in the Lemon and Watson (2011) study could experience higher levels of mattering as a social pressure, which decreases their wellness.

For both complete and sub-groups samples, a relevant amount of heterogeneity was detected that was not explained through moderator analysis. According to Borenstein (2023), the most informative index of heterogeneity in a meta-analysis is the prediction interval (PI) for the true outcomes. In the hedonic and in the eudaimonic group the PI indicates that, even if there is a substantial heterogeneity between studies' effect sizes, it is likely that mattering and well-being are positively correlated since the interval extremes are both higher than zero. On the other hand, when analyses were conducted on the total sample or the holistic group, the PI describes a more ambiguous situation, since the interval includes both positive and negative possible associations between mattering and well-being. However this unexpected result could be due to the presence in the holistic group of Lemon and Watson's (2011) study, which emerged also as an outlier, being the only study to report a negative significant association between mattering and well-being. Future research should try to explain if there exist some specific conditions or populations for whom mattering can be a source of unease or stress (e.g., caregivers; Schlossberg, 1989). On the contrary, if nothing emerges, and Lemon and Watson's (2011) study remains the only one to report this negative association, it could be addressed that there were some criticalities in the study.

Anyway, in the present research, a more qualitative interpretation of the collected results indicates that, excluding one exception out of 39, mattering is positively associated with well-being.

Despite these interesting results, the present research is not free from limitations. The choice to conduct the research on databases only through keywords in the English language reduced the possibility of finding studies that are not published internationally; an integration of studies published on national journals could have added more information on cultural differences. Although we decided to include data from the grey literature to reduce publication bias, no such report was actually included. Moreover, due to the meta-analysis nature of the present research, studies were excluded as they did not report any direct association between mattering and well-being. Many studies conducted in Malaysia were excluded, for example, as they only described mediation or moderation models. In addition, some studies were excluded from the hedonic group due to a lack of the correlation between mattering and a composite measure of the PANAS. To integrate those data, we contacted the authors, but only a few provided the additional information we required. We also note that contacting leading scholars in the field could potentially allow us to access unpublished materials, further reducing publication bias. Having access to more studies and results would increase our understanding of the association between mattering and well-being. Similarly, due to the nature of the present study, we excluded all qualitative studies; however, to have a complete view of individuals' experience of mattering in relation to well-being, a qualitative or mixed method approach should be considered. Finally, almost all the research projects we examined adopted a cross-sectional design, which does not allow for the inference of causal explanations.

A few future directions for the research emerged from this meta-analysis. First, it is important to conduct an investigation with populations that are rarely studied in this context, such as elders, an increasing proportion of the population in many Western nations. Their well-being is always more important, and mattering could play a pivotal role in protecting them from losing their sense of worth and purpose in life, or from isolation and loneliness, which can lead to depression (Flett, 2022). It could also be interesting to deepen the association between mattering and well-being among marginalized groups, given their migration status or ethnicity (e.g., Martinez-Damia et al., 2023) or life conditions such as sexual orientation, gender identity, or those suffering from chronic health conditions (e.g. Matera et al., 2021a; Brandt & Carmichael, 2020). Moreover, only a few studies explored the association between mattering and well-being among adolescents, although for this population mattering could be particularly relevant, as youth is a period of life in which self-concept is developing (Rosenberg, 1985). Studying how mattering can foster positive functioning in adolescence could be important to guide intervention aimed at increasing youths' psychological resources. In addition, future research could adopt experimental or longitudinal designs with the aim of understanding the causal association between mattering and well-being, as well as the underlying mechanisms. Moreover, a meta-analysis which includes studies that explore the association between mattering and negative outcomes for mental health, such as depression, anxiety, or suicidal ideation, should be conducted to provide a more complete view of the role of mattering in determining individual functioning. This could contribute to integrating a focus on mattering into therapeutic interventions. Similarly, in the present research, all measures of anti-mattering have been excluded since, according to Flett (2020), it does not correspond merely to lower levels of mattering, but it

reflects a different construct, namely the perception of being not important to anyone and marginalized, thereby leading to different consequences on well-being. Future meta-analyses should explore the presence of any differences in the association between mattering or anti-mattering and well-being to gain a complete view of how different aspects of mattering can affect individual functioning. Finally, very few studies analyze the role of societal mattering and the perception of being important in different life contexts. Future studies should investigate this aspect to increase our understanding of how the feeling of adding value to the broader society, and being recognized for it, affects individuals' well-being, and how it may contribute to increasing our knowledge of the contextual factors that have an impact on psychological well-being (Arcidiacono & Di Martino, 2016).

The present study indicates how relevant mattering is, and how it can incorporate a focus on the perception of being important to others, in order to value the self and promote well-being, into classical therapeutic programs and health promotion interventions. Increasing the awareness in an individual of how important they are to the people in their life may improve their appreciation of their own self and existence. Increasing well-being through mattering would be especially useful for those people who have difficulties in achieving their potential and valuing their true self. Learning to recognize and nurture one's perception of being important to others may ameliorate one's sense of self and the drive to find a purpose in life.

Since mattering is positively associated with improved well-being, organizations, schools, universities and society in general should promote policies and practices that promote individuals' perception of being important to the institution and to other members of that environment in order to increase their academic and professional achievements (Huerta & Fishman, 2014), or to reduce the intention to withdraw (Jung & Heppner, 2017) or engage in antisocial behaviors (Schmidt, 2018).

5 Conclusions

The present meta-analysis shows how mattering is positively and significantly associated with well-being, especially when the eudaimonic perspective is adopted. It suggests that when studying factors that can affect individuals' well-being, their perception of being recognized and valued within their social network should be considered, since it could increase their sense of worth and realization of their true selves. Our findings contribute to shifting attention from strictly individual to interpersonal and contextual elements that can affect well-being and positive functioning (Arcidiacono & Di Martino, 2016), which is important, especially in Western societies, where individualism is often considered to be an entirely positive value (Prilleltensky & Prilleltensky, 2021). The positive association between mattering and well-being that emerged from the present meta-analysis, indicates that the feeling of being important to others affects all aspects of individuals' lives from the self-concept (Rosenberg, 1985) to, in some cases, physical satisfaction (Matera et al., 2021a). Moreover, it emerged how people's positive functioning, flourishing, self-realization and life satisfaction are strictly related to the quality of their interpersonal relationships (Waldinger & Schulz, 2023). As James (1890) affirmed, individuals' self-concept is built through the interaction with the people around them; our meta-analysis clearly shows that happiness, satisfaction and self-realization are strictly linked to these interactions, and especially to the

way individuals feel they are valued and contribute to these relationships. In conclusion, our results demonstrate that the link between mattering and happiness is unique and deserves much more emphasis both in the literature and in interventions aimed at improving people's lives.

Funding Open access funding provided by Università degli Studi di Firenze within the CRUI-CARE Agreement. No funding was received for conducting this study.

Open access funding provided by Università degli Studi di Firenze within the CRUI-CARE Agreement.

Declarations

Conflict of interest The authors declare that they have no conflicts of interest concerning this article.

Informed Consent Given the nature of the study (no primary data collected) no informed consent was needed.

Ethical Approval In this article no primary data were collected with human participants or animals by any of the authors.

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