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Revisión sistemática de método mixto sobre la medición de felicidad en el trabajo

Systematic review of the measurement of happiness at work using mixed methods

Revisão sistemática de métodos mistos sobre medição da felicidade no trabalho

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Resumen

La felicidad en el trabajo es un tema de gran interés para académicos de diversas regiones del mundo, quienes han intentado definir y evaluar este constructo mediante instrumentos que miden factores como la satisfacción laboral, el compromiso organizacional, el bienestar subjetivo, las emociones y los afectos. Sin embargo, no está claro si estos elementos, en conjunto, pueden determinar con precisión cuán feliz se siente una persona en su trabajo. Por lo tanto, este estudio llevó a cabo una revisión de literatura con un enfoque mixto sobre la medición de la felicidad en el trabajo, analizando un total de 22 artículos académicos extraídos de las bases de datos Scopus y WoS. Se identificó la evolución temporal de las publicaciones, el impacto de citación, la co-ocurrencia de

palabras clave, las estrategias de medición empleadas, así como las variables, dimensiones e instrumentos utilizados. Los resultados evidenciaron que los países hispanohablantes y asiáticos presentan una mayor productividad en este campo, predominando el uso de metodologías cuantitativas y técnicas estadísticas vinculadas a la validez de constructo. Respecto a los instrumentos de medición, se identificaron tres categorías: escalas diseñadas para evaluar la felicidad general, instrumentos que integran aspectos organizacionales y herramientas que miden la felicidad en el trabajo de manera unidimensional. Se concluye que el constructo "felicidad en el trabajo" es un concepto abstracto y subjetivo, lo que dificulta su medición precisa.

Palabras clave: Felicidad, Trabajo, Felicidad en el trabajo, Revisión de la literatura, Medición.

Abstract

The topic of happiness at work has been of great interest to scholars worldwide, who have attempted to define and assess this construct using instruments that measure factors such as job satisfaction, organizational commitment, subjective well-being, emotions, and affects. It remains uncertain whether these elements, when considered collectively, can accurately ascertain an individual's level of happiness at work. This study conducted a mixed-methods literature review on the measurement of happiness at work, analyzing a total of 22 academic articles from the Scopus and WoS databases, to identify the temporal evolution of publications, citation, co-occurrence of keywords, how it has been measured, the variables/dimensions and instruments used. The findings revealed that Spanish-speaking and Asian countries demonstrate superior productivity in this domain, predominantly utilizing quantitative methodologies and statistical techniques associated with construct validity. Regarding measurement instruments, three categories were identified: scales designed to assess general happiness, instruments that incorporate organizational aspects, and those that measure happiness at work on a unidimensional scale. It was concluded that "happiness at work" remains an abstract and subjective concept, making its measurement challenging.

Keywords: Happiness, Workplace, Happiness at work, Literature review, Measurement.

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Resumo

A felicidade no trabalho é um tema de grande interesse para acadêmicos de diversas regiões do mundo, que têm buscado definir e avaliar esse construto por meio de instrumentos que mensuram fatores como satisfação no trabalho, comprometimento organizacional, bem-estar subjetivo, emoções e afetos. No entanto, não está claro se esses elementos, juntos, podem determinar com precisão o quão feliz uma pessoa é no trabalho. Portanto, este estudo conduziu uma revisão bibliográfica de abordagem mista sobre a mensuração da felicidade no trabalho, analisando um total de 22 artigos acadêmicos extraídos das bases de dados Scopus e WoS. Foram identificadas a evolução temporal das publicações, o impacto das citações, a coocorrência de palavras-chave, as estratégias de mensuração empregadas, bem como as variáveis, dimensões e instrumentos utilizados. Os resultados mostraram que os países de língua espanhola e asiáticos apresentam maior produtividade neste campo, com predomínio do uso de metodologias quantitativas e técnicas estatísticas vinculadas à validade de construto. Em relação aos instrumentos de medida, foram identificadas três categorias: escalas destinadas a avaliar a felicidade geral, instrumentos que integram aspectos organizacionais e ferramentas que medem a felicidade no trabalho de forma unidimensional. Conclui-se que o construto "felicidade no trabalho" é um conceito abstrato e subjetivo, o que dificulta sua mensuração precisa.

Palavras-chave: Felicidade, Trabalho, Felicidade no trabalho, Revisão de literatura, Medição.

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Introduction

More than 2,000 years ago, Aristotle argued that happiness is the fundamental goal of life (Yarza, 2010). Today, happiness remains a priority for people (Fitriana *et al.*, 2022), as most strive to achieve this state (Diener, 2000), and consider it their main purpose in life (Farooq *et al.*, 2024). Although there is no consensus on its definition, this concept is highly abstract and subjective, as it encompasses different dimensions of the human being (Muriel Quintanilla *et al.*, 2022), and is studied from multiple disciplines, such as psychology, economics, philosophy, sociology, and biology (Sender *et al.*, 2021). One of the most widely used concepts of happiness at work is that of Fisher (2010), who states that "happiness at work includes, but is far more than, job satisfaction. A comprehensive measure of individual-level happiness might include work engagement, job satisfaction, and affective organizational commitment" (p. 384).

From the academic field, a significant increase in publications on happiness has been observed in recent years (Cueva-Estrada & Sánchez-Bayón, 2024; Kullenberg & Nelhans, 2015), reflecting the growing relevance of this variable. According to Seligman (2022), this interest has intensified with the rise of positive psychology, which, unlike traditional psychology, emphasizes human development. It is relevant to highlight that happiness is a multifaceted concept -as already mentioned- since it involves the intervention of different disciplines, but also covers different areas of the human being (*e.g.,* personal or social), the work part being a very relevant aspect because people dedicate a large part of their lives to work (Lyubomirsky, 2014).

Regarding happiness at work, the study focuses on work environments and their influence on human life (Sender, Nobre, *et al.*, 2021). The relationship between a person and work goes beyond a salary, as an analysis of vocation is also required. According to Seligman (2022), a job only "serves to collect a salary at the end of the month" (p. 246), while vocation "is a passionate commitment to work" (p. 247); which shows the complexity of the study of this variable. According to Sender, Carvalho, *et al.* (2021, p. 3), happiness at work is "a positive psychological state, which is perceived by the individual (perceptions), and its presence is influenced by some factors (antecedents). This positive state also impacts the individual's behavior in the workplace (consequences) once it serves as an incentive to perform well."

The scientific community's interest in happiness in the work environment has increased in recent years (Jambrino -Maldonado *et al.*, 2022), as reflected in various bibliometric studies. For this reason, researchers have attempted to synthesize the work of recent years on happiness in the work environment, as in the case of Sender, Nobre, *et al.* (2021), who reviewed the literature of the last two decades on the happiness of employees and their productivity through a bibliometric study, where they found that there is a multiplicity of constructs and instruments used to operationalize the issues studied, confirming the lack of congruence on the subject. In this same sense, Erazo Muñoz and Riaño Casallas (2021) expanded their inclusion criteria by analyzing a total of 936 publications on the subject, focusing more on providing scientometric data of the publications such as production per year, countries of publication, journals that publish on the subject, types of work (empirical or theoretical), definitions used, among other aspects. On the other hand, a more recent study in relation to the theory called the Happy and Productive Worker (HPW) thesis is the work of Costa *et al.* (2024), who, through a bibliometric analysis, explored how the topic has developed, in addition to the ways in which happiness and performance have been measured. The authors identified three clusters that they called: (1) HPW and positive psychology; (2) HPW and happiness

measurement; and (3) HPW and its relationship to happiness and performance measurement. Farooq *et al.* (2024) through a literature review, identified relevant topics in the research of happiness at work, such as antecedents, consequences, happiness at work as a mediator, literature reviews, case studies, and miscellaneous; In addition, the authors grouped the types of measurement scales used into three categories, which are: self-created, based on multiple scales, adapted scales, and others.

For the cluster on happiness measurement, the authors identified 16 articles (13 empirical and three theoretical/conceptual). Although there is no consensus on the definition of happiness at work, most studies assess constructs such as affect (*e.g.*, PANAS and SPANE), happiness (*e.g.*, *Subjective Happiness Scale*, *Oxford Happiness Questionnaire*, *General Health Survey*), and satisfaction with life and work, among others (Costa *et al.*, 2024). In this context, the existence of other scales that are popular for assessing happiness at work is highlighted, such as the *Subjective Happiness Scale* proposed by Lyubomirsky (2021), which consists of five items on a scale with seven Likert response options, and the *Oxford Happiness Questionnaire*, proposed by Hills and Argyle (2002), composed of 29 items with six Likert response options; while other authors, such as Lukoševičiūtė *et al.* (2022) propose assessing happiness with a single item. It should be noted that, although these instruments were designed to measure happiness in general, they have also been used in studies of happiness at work, reflecting an area of opportunity for independent measurement of happiness at work.

The problem with measuring happiness at work is essentially how complex it is to measure happiness in general. This stems from the fact that there is no consensus on the best way to measure happiness in general, as there is a great diversity of scales and methodologies (Ludwigs *et al.*, 2019). This heterogeneity of proposals for measuring happiness at work only reflects the broad interest in learning more about the topic. This has led researchers to use different instruments to measure happiness at work. In general, instruments have been used that assess factors such as organizational commitment, subjective well-being, job and life satisfaction, affects (positive and negative), moods and emotions, among others (*e.g.*, Bassi *et al.*, 2013; Mendoza-Ocasal *et al.*, 2021; Tei-tominaga & Nakanishi, 2021). However, it is not entirely clear whether these factors, taken together, can accurately determine a worker's level of happiness.

Although there are currently bibliometric publications that analyze how happiness at work has been measured (*e.g.*, Erazo Muñoz & Riaño Casallas, 2021; Farooq *et al.*, 2024; Sender, Nobre, *et al.*, 2021), the way in which these measures have been operationalized, the number of items in the scales or the reliability and validity criteria used in the studies analyzed are still not entirely clear. The work carried out by Costa *et*

al. (2024) attempted to answer these questions, but the construct of happiness was extended to include aspects of well-being and satisfaction in the analysis, where its relationship with the employee performance was sought. This included articles in the analysis that did not have a clear description of the scales (indicators), nor did they report the reliability and validity criteria. Therefore, there are authors who suggest that mixed-method systematic reviews are among the most complete, as they allow for a more complete understanding of the topic addressed, which provides more significant results (Sobrido-Prieto & Rumbo-Prieto, 2018).

From the above, the following premises emerge: (1) the measurement of happiness at work is still a topic that requires further empirical evidence; (2) an in-depth analysis is needed of how happiness at work can be measured independently of instruments that only measure happiness in general; (3) it is necessary to identify which constructs or dimensions make up the measurement of happiness at work from the instruments used; (4) to describe what kind of methodologies have been used to conduct the current studies on this variable; (5) considering that reliability and validity correspond to "consistency of scores across instances of the test procedure" (p. 33) and the "degree to which evidence and theory support interpretations of test scores for their intended uses" (American Educational Research Association *et al*., 2014, p. 11), respectively, then what validity and reliability criteria have been employed to analyze these instruments; and, finally, (6) identify in what type of population happiness at work has been studied (*e.g*., country and sample type). An analysis of these elements could provide a synthesis of what has been published on this variable, allowing researchers in the field to have a broader overview of the topic of measuring happiness at work. Therefore, considering the above arguments, the present work aims to carry out a mixed method literature review on the measurement of happiness at work, in order to identify the temporal evolution of publications, citations, co-occurrence of keywords, how it has been measured, the variables/dimensions and instruments used.

Materials and method

This literature review aimed to provide a broad overview of the evolution of happiness at work measurement over time. A systematic review was conducted using a mixed-method approach (Page, Moher, *et al.*, 2021; Sobrido-Prieto & Rumbo-Prieto, 2018). This type of review is characterized by the use of systematic methods to compile and synthesize the findings of the existing literature on a specific topic (Donthu *et al.*, 2021; Page, McKenzie, *et al.*, 2021). Using a mixed approach, we will seek to synthesize

and integrate the results of studies analyzed using qualitative and quantitative methods (Leeman *et al.*, 2015).

According to Petticrew and Roberts (2006), a systematic literature review should follow a set of strategies, including: (1) clearly defining the question or objective of the review; (2) establishing inclusion and exclusion criteria; (3) conducting an exhaustive literature search to locate the documents; (4) critically analyzing the included studies; (5) synthesizing and evaluating the heterogeneity of the studies; and (6) presenting and disseminating the findings. For this purpose, the following inclusion and exclusion criteria were established (see Table 1).

Table 1. Inclusion and exclusion criteria for the literature review

Components	Inclusion criteria
What? (topic)	Measuring Happiness at Work
Who? (population)	Workers
When? (period)	No time period will be set, but the search will be completed by July 9, 2024.
Language	Spanish and English
Databases	Scopus and Web of Science
Types of study included	Original scientific articles published in peer-reviewed journals. Articles that validate or propose instruments for measuring happiness at work.
Exclusion criteria	Books, book chapters, papers, theses, conference proceedings or letters to the editor were not considered. Literature reviews, bibliometrics or documentary articles will not be considered. That the article is not open access, is not available for download, or that the authors do not respond to emails requesting the document for analysis.

Note: Own elaboration.

As sources of information, two of the databases with the greatest global impact were used: Web of Science (WoS) and Scopus. These databases were selected due to their selective coverage of the most relevant journals (De Battisti & Salini, 2013). WoS, for example, has quality indexes such as JCR, which cover wide time periods and allow simultaneous downloading of stored references. Scopus, for its part, has the SJR index, which offers approximately 20% more coverage than other databases and allows simultaneous downloading of references (Rojas-Sánchez *et al.*, 2023). The search strategy applied included advanced equations through the use of Boolean operators and field labels, as well as filters by document type, language and open access (see Table 2).

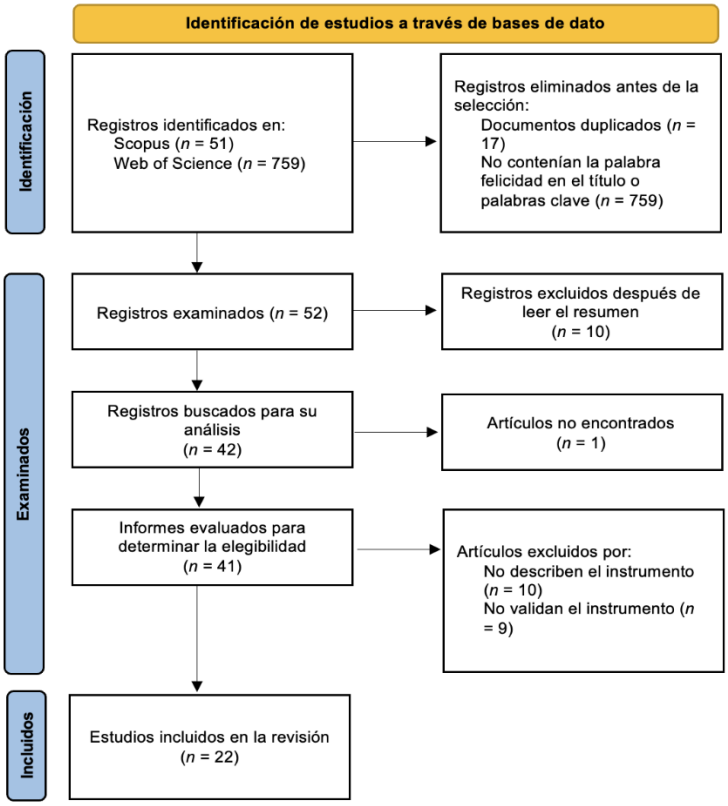
Table 2. Records according to combination of criteria

Source	Equation	Number of items
WoS	happiness at workplace* (Topic) OR happiness at work* (Topic) OR happy-worker* (Topic) OR workplace happiness* (Topic) OR happy-productive worker* (Topic) OR Job happiness* (Topic) AND scale* (Topic) OR psychometric validation* (Topic) OR measurement* (Topic) OR validation* (Topic) and Psychometric Validation (Search within topic) and Scale (Search within topic) and Measurement (Should – Search within topic) and Article (Document Types) and English or Spanish (Languages) and Open Access	759
Scopus	TITLE-ABS-KEY ("happiness at workplace" OR "happiness at work" OR "happy-worker" OR "workplace happiness" OR "happy-productive worker" OR "job happiness" AND "scale" OR "psychometric validation" OR "validation" OR "measurement") AND (LIMIT-TO (DOCTYPE , "ar")) AND (LIMIT-TO (LANGUAGE , "english") OR LIMIT-TO (LANGUAGE , "spanish"))	51

Note . Prepared by the authors, last search carried out on July 9, 2024.

The metadata obtained from the academic search engines Scopus and WoS were exported to spreadsheets (Excel and CSV) for further analysis. In a first stage of selection, the articles were selected based on the titles and keywords, then the abstracts were reviewed to discard those that did not meet the inclusion and exclusion criteria. The full documents of the remaining articles were then downloaded and imported into the reference manager Zotero for analysis and synthesis. Through a detailed review, further publications were excluded because the authors did not provide the full document upon request or because the articles did not report the instruments, methods or indicators of reliability and validity necessary to synthesize the information. This systematic process of article selection and review ensured the quality and scope of the information included (see Figure 1).

Figure 1. PRISMA article inclusion and exclusion process

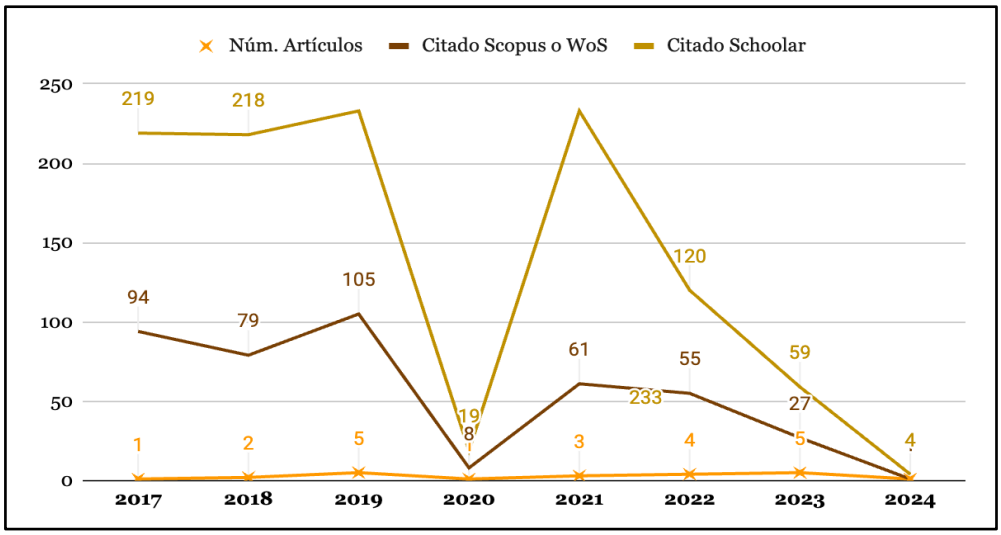


Note. Own elaboration based on Page, McKenzie, et al. (2021). CC BY-NC. https://doi.org/10.1136/bmj.n71

Results

Initially, 42 scientific articles on the measurement of happiness at work were analyzed using an adaptation of the PRISMA checklist (Page, McKenzie, *et al.*, 2021). Twenty publications were excluded because they did not report validity indicators or did not include a clear description of the measurement instrument used, an essential criterion for their inclusion. Consequently, 22 publications were included in the final analysis. When analyzing the findings, it was found that the papers with the highest number of citations are those by Salas-Vallina *et al.* (2017) and Singh and Aggarwal (2018). The studies analyzed cover the period from 2017 to 2024, with a decrease observed in 2020 and a subsequent increase with the publication of the short version of *Short Happiness at Workplace* (SHAW) by Salas-Vallina and Alegre (2021; see Figure 2).

Figure 2. Temporal evolution of the analyzed publications and citations

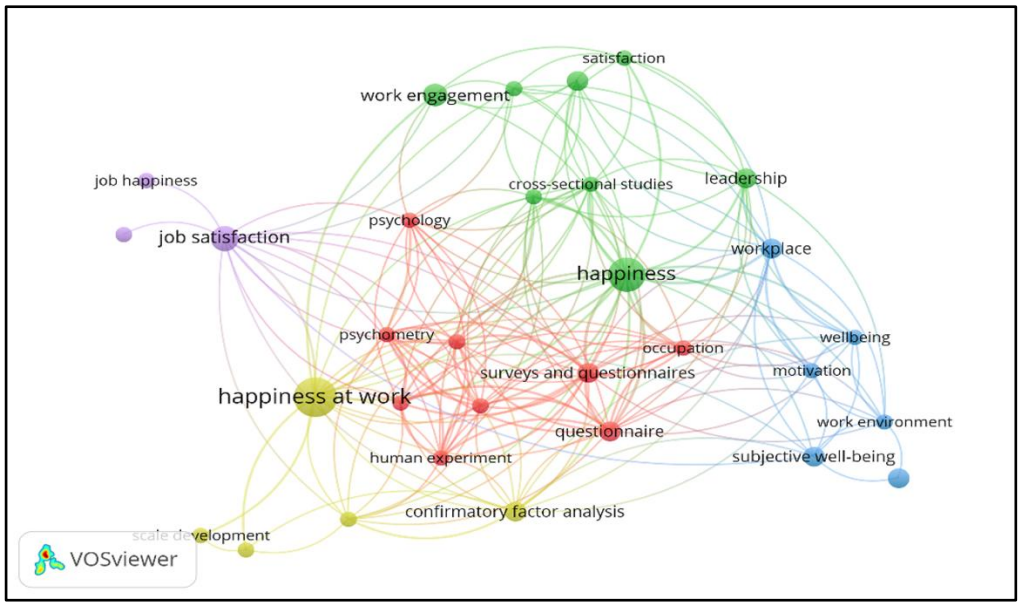


Note. Prepared by the authors based on the information analyzed.

From a quantitative approach, a bibliometric analysis was carried out to explore, organize and synthesize information over time (Zanjirchi *et al., 2019).* The software VOSviewer v.1.6.20 was used which uses data mining to create bibliometric maps that provide visual representations of the most frequently mentioned words in the selected publications (Romero-Valenzuela & Camarena-Gomez, 2023). Co-occurrence analysis was used to count all keywords (Van Eck & Waltman, 2023), with a minimum of two occurrences per word, identifying 200 keywords, of which only 41 had the minimum co-occurrence. Terms not relevant to the analysis were discarded, such as "humans", "female", "male", "article", "adult", "Emerald", "University of Zulia" and "Inderscience Publisher". Figure 3 shows five interrelated clusters: "*human experiment"*, "*happiness"*, "*workplace"*, "*confirmatory factor analysis"*, "*job", "*job *satisfaction"*.

Cluster 1, "human experiment," contains nine items associated with psychometrics, reproducibility, questionnaires, and psychology. Cluster 2, "happiness," contains eight items related to happiness, cross-sectional study, leadership, quality of life, satisfaction, and work engagement. Cluster 3, "workplace," contains six items: motivation, subjective well-being, well-being, work environment, and happiness at work. Cluster 4, "confirmatory factor analysis (CFA)," consists of five items: CFA, exploratory factor analysis (EFA), scale development and validation, and happiness at work. Finally, cluster 5, "job satisfaction," is composed of three items: happiness at work, happiness, and job satisfaction. According to Velarde-Flores and Velázquez-Contreras (2023), the circles represent the strength of the keywords within the analysis. In this study, the terms happiness at work and happiness are the ones that are observed with the greatest strength.

Figure 3. Co-occurrence analysis of happiness at work keywords



Note. Figure created using VOSviwer software version 1.6.20 (0), with the data analyzed

In Table 3, the following can be highlighted: (a) The majority of the research found was quantitative, while only two were mixed: Dutschke *et al.* (2019) and Sender, Carvalho, *et al.* (2021); (b) the most frequent studies were carried out in Spanish-speaking countries (*e.g.*, five studies in Spain and two in Mexico), as well as in Asia (*e.g.*, three in India and two in Indonesia), respectively, the region with the highest number of studies was Europe (11 studies), where, in addition to the Iberian country already mentioned, studies carried out in Portugal (*f* = 3) and Italy (*f* = 3) stand out, as well as in other countries such as the Netherlands and Lithuania; (c) in terms of the most common type of sample, there is a diversity of workers studied, ranging from health professionals (*f* = 3), education professionals (*f* = 6), technology professionals (*f* = 4), and others; (d) in terms of authors, there is a diversity, with Salas-Vallina and Ravina Ripoll being those who have had the most publications on the subject under study. In the case of the former, the following publications stand out: Salas-Vallina *et al.* (2017); Salas-Vallina and Alegre (2021); and Salas-Vallina and Elvira-Soria (2022); while the second is Ravina -Ripoll *et al.* (2022, 2023, 2024).

Finally, (d) regarding the validity and reliability of the quantitative instruments used, there are different strategies to check validity, such as content validity, which examines that the items accurately and completely reflect the concept that is intended to be measured (Valdés-Cuervo *et al.*, 2019), where only three authors used this technique. Regarding construct validity, which is composed of the internal structure of the variables (*e.g.*, EFA and CFA), as well as convergent validity, which refers to the relationship between scores on the scale of interest and other similar variables or constructs, and

discriminant validity, which requires that the relationships between variables show that they are empirically distinct from each other (American Educational Research Association et al., 2014). In the articles analyzed in this paper, the use of the EFA (*f* = 9), CFA (*f* = 16), as well as the measurement of other types of validity such as convergent (*f* = 13), discriminant (*f = 11)* was identified. It should be noted that other reliability and validity analysis strategies were identified, such as the response process, which provides an analysis of how the construct and the response provided in the scale fit (Ramirez-Garcia *et al.*, 2019); as well as the narrative and sentiment analysis, which are discourse analysis strategies that allow for an approach to the analysis of emotions (Lopéz *et al.*, 2022). Finally, it is highlighted that these statistical analyses were applied to already standardized instruments, mostly aimed at measuring general happiness, life satisfaction, and other organizational variables (*e.g.*, commitment, job satisfaction).

Table 3. Sample characteristics and methodology used to measure happiness

Authors (year)	**Country / Sample**	**Sample type**	**Methodology**	**Type of reliability and validation**
Salas-Vallina *et al.* (2017)	Spain (*n* = 666)	Health sector employees	Quantitative	Reliability CFA Convergent Discriminating
Singh & Aggarwal (2018)	India (*n* = 539)	Workers	Quantitative	Reliability CFA Convergent Discriminating
De Waal (2018)	Netherlands (*n* = 624)	HPO Center Workers	Quantitative	Reliability CFA
Rastogi (2019)	India (*n* = 226)	Knowledge workers	Quantitative	Reliability EFA CFA Convergent Discriminating
Al- Hawari *et al.* (2019)	United Arab Emirates (*n* = 321)	Service sector employees	Quantitative	Reliability CFA Convergent Discriminating
Omar *et al.* (2019)	Malaysia (*n* = 393)	Information and Communication Technology Professionals	Quantitative	Reliability EFA CFA Convergent
Beneveno *et al.* (2019)	Italy (*n* = 282)	Full-time professors	Quantitative	Reliability
Ramirez-Garcia *et al.* (2019)	Spain (*n* = 262)	Workers	Quantitative	Content test Response process Reliability EFA CFA

				Convergent Discriminating
Dutch *et al.* (2019)	Portugal (n_1 = 969) (n_2 = 1079)	Professionals of the Portuguese Human Resources Association	Mixed	EFA CFA
Salas-Vallina & Alegre (2021)	Spain and Italy HAW (n_1 = 234) SHAW (n_2 = 251)	Workers from various sectors	Quantitative	Reliability CFA Convergent Discriminating
Sender, Carvalho, *et al.* (2021)	Brazil (*n* = 167)	Employees	Mixed	Narrative Analysis Sentiment Analysis
Stankevičiūtė *et al.* (2021)	Lithuania (*n* = 350)	Real estate workers	Quantitative	Reliability
Ravina -Ripoll *et al.* (2022)	Spain (*n* = 397)	Student Inspectors of the National Police School	Quantitative	Reliability EFA CFA
Galvan Vela *et al.* (2022)	Mexico (*n* = 603)	Workers	Quantitative	Reliability EFA
Fitriana *et al.* (2022)	Indonesia (*n* = 370)	Private University Workers	Quantitative	Content Validity Reliability EFA CFA Convergent
Salas-Vallina & Elvira-Soria (2022)	Spain (*n* = 218)	Secondary and vocational training teachers	Quantitative	Reliability CFA Convergent Discriminating
Feitor *et al.* (2022)	Portugal (*n* = 113)	Nurses	Quantitative	Reliability CFA
Handayani *et al.* (2023)	Indonesia (*n* = 200)	Teachers with a master's degree, married in the last year and with children	Quantitative	Reliability Content validity Discriminating
Ravina-Ripoll *et al.* (2023)	Mexico (*n* = 156)	Employees in the industrial, commercial and service sectors	Quantitative	Reliability EFA CFA Convergent
Gonçalves & Curado (2023)	Portugal (*n* = 321)	Health sector professionals	Quantitative	Reliability CFA Convergent Discriminating
Goel & Singh (2023)	India (*n* = 500)	Information and Communications Technology Employees	Quantitative	Reliability EFA CFA Convergent Discriminating
Ravina-Ripoll *et al.* (2024)	Costa Rica (*n* = 502)	Education workers	Quantitative	Reliability EFA CFA Convergent Discriminating

Note. Prepared by the authors based on the authors analyzed. EFA = Exploratory Factor Analysis; CFA = Confirmatory Factor Analysis

The instruments used to measure happiness at work come from three types of sources: (a) those based on questionnaires that aim to measure happiness in general; (b) those that measure this variable through organizational dimensions (*e.g.*, commitment, job satisfaction, teamwork, leadership, among others); (c) and those that aim to measure happiness at work in a unidimensional way. Each of these is described below.

Firstly, some studies were found based on measurement of general happiness, as in the case of Handayani *et al.* (2023) and Galván Vela *et al.* (2022), which are based on the Happiness Scale proposed by Alarcón (2006), which, in the first case, considered the measurement of personal elements -not related to work- such as the meaning of life, satisfaction with life, personal fulfillment and joy of living; also highlighted here are Benevene *et al.* (2019) and Sender, Carvalho, *et al.* (2021), who measure subjective happiness, happiness in school based on Lyubomirsky and Lepper (1999), as well as Ivens (2007), respectively. Regarding the second group, the studies conducted by Salas-Vallina *et al.* (2017), Goel and Singh (2023), de Waal (2018), Salas-Vallina and Alegre (2021), Fitriana *et al.* (2022), Rastogi (2019), Salas-Vallina and Soria (2022), Feitor *et al.* (2022), and Gonçalves and Curado (2023), which used three dimensions to measure happiness at work: commitment, job satisfaction and affective organizational commitment, highlighting that the last four sources used the S-HAW proposal of Salas-Vallina and Alegre (2021), while the first ones were based on different sources. Finally, regarding the third group, Ravina-Ripoll *et al.* (2023; 2024) studied organizational happiness through an instrument proposed by Junco *et al.* (2013), which consists of 15 items. It is important to highlight that most of the studies used instruments with different operationalizations, while Omar *et al.* (2019) and Ravina-Ripoll *et al.* (2021) used scales that tried to measure this variable through a single item.

Table 4. Instruments used and number of items in the measurement scales

Theoretical/methodological basis	Dimensions / No. items	Articles analyzed
Based on Fisher's conceptualization of happiness at work	*Commitment* Utrecht Work Enthusiasm Scale (Vigour, dedication and absorption) 17 items	Salas-Vallina *et al.* (2017) Goel and Singh (2023)
	Job satisfaction Job Satisfaction Index (Schriesheim and Tsui, 1980) 6 items	
	Affective organizational commitment Allen and Meyer (1990) 8 items	
Salas-Vallina *et al.* (2017) HAW 31 items	*Commitment* Utrecht Work Enthusiasm Scale (Vigour, dedication and absorption) 17 items	de Waal (2018) Salas-Vallina and Alegre (2021) Fitriana *et al.* (2022)
	Job satisfaction Job Satisfaction Index (Schriesheim and Tsui, 1980) 6 items	
	Affective organizational commitment Allen and Meyer (1990) 8 items	
Salas-Vallina and Alegre (2021) S-HAW 9 items	*Commitment* 3 items	Rastogi (2019) Salas-Vallina and Soria (2022) Feitor *et al.* (2022) Gonçalves and Curado (2023)
	Job satisfaction 3 items	
	Commitment organizational affective 3 items	
Ramirez-Garcia *et al.* (2019)	*Organizational happiness* Del Junco *et al.* (2013) 15 items	Ravina -Ripoll *et al.* (2023) Ravina -Ripoll *et al.* (2024)
Variants of the Alarcon scale (2006)	Happiness Scale (Positive Sense of Life, Life Satisfaction, Personal Fulfillment, Joy of Living) 27 items	Handayani *et al.* (2023)
	Happiness Scale 5 items	Galvan Vela *et al.* (2022)
Own creation based on other authors	26 items 10 items - Self-realization 6 items - Group work 3 items - Achievement of objectives 3 items - Leadership 3 items - Sustainability and work-life balance	Dutch *et al.* (2019)
	8 items Based on Albano (2009) and Salas-Vallina *et al.* (2017)	Al- Hawari *et al.* (2019)

	Study 1 - Interview and item creation 65 items Study 2 - EFA 45 items Study 3 - CFA 15 items	Singh and Aggarwal (2018)
	4 items about happiness subjective The Subjective Happiness Scale (SHS) (Lyubomirsky and Lepper, 1999)	Beneveno *et al.* (2019)
	33 items on happiness at school School Children's Happiness Inventory (Ivens, 2007)	
	Happy Level (HL) Narrative Analysis and Sentiment Analysis	Sender *et al.* (2021)
Single item scale	*Happiness in general* Fordyce (2005)	Omar *et al.* (2019)
	Happiness in general Ravina -Ripoll *et al.* (2019)	Ravina -Ripoll *et al.* (2021)

Note: Prepared by the authors based on the authors analyzed.

Discussion

Measurement is a fundamental tool for consolidating the theoretical and empirical maturity of a field of knowledge (Núñez Ramírez *et al.*, 2021). In the case of the study of happiness at work, although this concept has a historical journey that ranges from the first attempts to understand its foundations in Greek and Roman philosophical doctrines (*e.g.*, Aristotelian eudaimonism, stoicism, cynicism) to the emergence of positive psychology, there is still no clear consensus on how to measure this variable in the workplace. Therefore, there is a need not only to increase the theoretical and empirical evidence that helps to understand what makes workers happy in their work environment, but also to conduct in-depth analyses of what has already been published through literature reviews and bibliometrics. This would allow us to have a broader overview of the progress made in the study of happiness at work, and to identify the gaps and opportunities that still need attention to improve our understanding of the issue.

With the results presented in this bibliographical research, the objective was achieved, which was to carry out a mixed-methods literature review on the measurement of happiness at work, to identify the temporal evolution of publications, citations, co-occurrence of keywords, how it has been measured, the variables/dimensions and instruments used. Some studies were not included in the analysis because, although they assessed happiness at work, the authors did not clearly describe in their methodology the origin of the instrument and/or did not report reliability and validity indicators of the scales used, which were inclusion and exclusion criteria for the present study.

After analyzing the existing publications in the field, it was identified that the study period spans from 2017 to 2024, with a total of 22 publications. Among them, the works of Salas-Vallina *et al.* (2017), Salas-Vallina and Alegre (2021), and Singh and Aggarwal (2018) stand out, which have the highest number of citations in both Scopus and WoS as well as in Google Scholar. Five specific clusters were also identified: "human experiment", "happiness", "workplace", "confirmatory factor analysis" and "job satisfaction". The keyword "happiness at work" appeared in all of them, except in the first cluster, which focuses mainly on the psychometric properties of the instruments. These advances are related to the findings reported by Sender *et al.* (2021), who identified the constructs that could measure this variable (*e.g.*, affects, job satisfaction, well-being, burnout, life satisfaction, development and purpose, quality of life at work) and the most used instruments (*e.g.*, PANAS scale, Circumplex Model, Maslach Burnout Inventory - MBI, Satisfaction with Life Scale - SWLS, among others); the present study being stricter in its inclusion and exclusion criteria, where only scientific articles that measured the variable happiness at work were analyzed, leaving aside those that, although they said they did measure happiness at work, were actually oriented towards variables such as well-being, affection, or satisfaction with life or work.

Regarding the methodological and measurement aspects, it was found that some Spanish-speaking and Asian countries are the ones with the most publications providing empirical evidence on the psychometric properties of happiness at work. It was also found that the instruments have been applied to workers from different sectors (*e.g.*, health, technology, education, among others), with the quantitative methodology standing out as the most used, as well as the reliability techniques, EFA and CFA as the most used by the authors. In particular, the analysis of the instruments used to measure happiness at work distinguishes the present study from other contributions, such as those by Erazo Muñoz and Riaño Casallas (2021), and Sender *et al.* (2021), which focused on the study of scientometric data (*e.g.*, authors, countries, journals), and the description of the characteristics of the researchers who have published on the subject (*e.g.*, universities, countries), respectively. For its part, the present study differs from Costa *et al.* (2024) in that it tries to show how happiness at work has been operationalized and validated, since they focused on the thesis of happiness and performance of workers (HPW), considering other variables such as well-being and satisfaction in the analysis of the articles.

Conclusions

Finally, the findings presented in this study show that, although the measurement of happiness at work has advanced significantly in recent years, there are still essential aspects to be clarified, including: (a) how to operationalize this variable and which indicators should be included in it, since a certain heterogeneity has been found in this area; (b) how to measure it independently with respect to happiness in general, life satisfaction or well-being; (c) how to study it without confusing it with similar variables such as organizational climate (e.g. organizational commitment, teamwork, leadership or job satisfaction); (d) and finally, although most studies support the measurement of the validity of the instruments used through different statistical tests (*e.g.*, EFA and CFA), this is not enough to support whether happiness at work was really measured, therefore, as an area of opportunity, the need to build an instrument that is exclusively oriented to this variable through qualitative and quantitative methods was found, which start from an exhaustive consideration of the validity of content, which could be through techniques such as semantic networks, expert judgment and Aiken's V. In this case, only Ramirez-Garcia *et al.* (2019) and Fitriana *et al.* (2022) did so through expert judgement, while Handayani *et al.* (2023) used the content validity ratio technique.

Future lines of research

For future research, it would be advisable to extend the analysis of the available literature to examine the relationship between happiness at work and other related variables. This could be achieved through meta-analysis, a statistical technique that allows the results of multiple studies to be combined into a single quantitative estimate (*i.e.*, summary effect size [Petticrew y Roberts, 2006]). This could show how much progress has been made in understanding how this has affected or been affected by other variables in the work context, not only those corresponding to organizational behavior (*e.g.*, leadership, organizational climate, job satisfaction, personality, attitudes, emotional intelligence, etc.), but also other issues more related to other organizational domains, such as performance, productivity, absenteeism, turnover, and so on. In fact, Costa *et al.* (2024) conducted a bibliometric study to analyze the thesis of the happy-productive worker and found that happy workers are more productive. Therefore, meta-analysis could contribute to this area.

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