



The entrepreneur's well-being: current state of the literature and main theories

Rodrigo Morency Arouca Barbosa^{1,2} · Amalia Raquel Pérez-Nebra³ · Esther Villajos⁴ · Fernando González-Ladrón-De-Guevara¹

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Abstract

This study aims to identify the main trends, theories, and possible future research directions on entrepreneurs' well-being, a topic related to venture performance and exit intentions. To achieve this, we proceeded with a scoping review of the entrepreneurs' well-being. We first identified articles that discussed the entrepreneur's well-being and used bibliometric tools to analyze trends. Secondly, we used scientific mapping to identify distinct research clusters and qualitatively analyze the main theories used in each cluster. We identified four main theoretical models on this growing subject: (a) job-demand resource model, (b) self-efficacy model, (c) stress models, and (d) entrepreneurship models. As future research directions, we identified the need to use more theories that consider contextual variables, more studies from and about developing countries, and an expansion of studies on possible interventions to improve entrepreneurial well-being.

Keywords Entrepreneurship · Well-being · Job-demand resource · Self-efficacy · Literature review

Resumen

El objetivo de este estudio es identificar las principales tendencias, teorías y posibles direcciones futuras de la investigación sobre el bienestar de los emprendedores, un tema relacionado con el rendimiento de las empresas y las intenciones de salida. Para lograrlo, realizamos una scoping review del bienestar de los emprendedores. En primer lugar, identificamos los artículos que tratan sobre el bienestar del emprendedor y utilizamos herramientas bibliométricas para analizar las tendencias. En segundo lugar, utilizamos la cartografía científica para identificar distintos grupos de investigación y analizar cualitativamente las principales teorías utilizadas en cada grupo. Identificamos cuatro modelos teóricos principales sobre este tema en crecimiento: (a) el modelo de demandas y recursos laborales, (b) el modelo de autoeficacia, (c) los modelos de estrés y (d) los modelos de emprendimiento. Como futuras líneas de investigación, identificamos la necesidad de utilizar más teorías que tengan en cuenta variables contextuales, más estudios de y sobre países en vías de desarrollo, y una ampliación de los estudios sobre posibles intervenciones para mejorar el bienestar empresarial.

Introduction

Initiating a new business is very challenging. Entrepreneurs experience more extreme working conditions than employees: greater uncertainty, stress, responsibility, longer

working hours, intense time pressures, and complexity (Cardon & Patel, 2015; Rauch et al., 2018; Stephan, 2018). Moreover, the creation and operation of a new business is a complex process that requires varying degrees of affective aspects (such as perseverance and autonomy) and cognitive aspects (such as planning and communication skills) over time (Nassif et al., 2010).

This context may bring difficult consequences to entrepreneurs and the people around them. Entrepreneurs present a greater probability to report having experienced a mental health problem in their lifetime (Freeman et al., 2019). They are also very committed, not only financially but also emotionally, to their businesses, which also affects their families

✉ Rodrigo Morency Arouca Barbosa
rmbararo@doctor.upv.es

¹ Universitat Politècnica de València, Valencia, Spain

² Universidade de Brasília, Brasília, Brazil

³ Universidad de Zaragoza, Saragossa, Spain

⁴ Universitat de València, Valencia, Spain

(Wiklund et al., 2019). The mental health of the entrepreneur has spillover implications on the mental health of their spouses (Gorgievski-Duijvesteijn et al., 2000), and the self-employed parents' stress, time demands, and work burdens negatively affect their children's well-being (Wirback et al., 2014).

In the present research, "entrepreneur" is defined as an individual who has chosen to pursue their professional aspirations independently, working on their own and assuming the risks of this endeavor (Hébert & Link, 1982), which includes self-employment. Although we understand that working for oneself on one's own terms and at one's own risk is deeply conditioned by the context in which one is employed, it is a general definition and was chosen because it is frequently used in studies of entrepreneurial well-being (Gorgievski & Stephan, 2016).

In recent times, there has been a growing interest among researchers in the subject of entrepreneurial well-being. This may be due to the challenging context that can threaten their well-being and the consequences mentioned above. The rising number of literature reviews is indicative of the expansion in the volume of articles on this subject. We will now briefly present the main contributions of these reviews, and after that, we will clarify our research problem. Stephan (2018) used only empirical studies highlighting the main research questions, consequences, and antecedents of the well-being of the entrepreneurs and presented possible future research directions, such as the development of a dedicated theory of entrepreneurial well-being. Sánchez-García et al. (2018) performed a bibliometric literature review with 373 articles and analyzed the yearly frequency of articles, the main authors and journals, and the main theoretical perspectives used. Contreras-Barraza et al. (2021) presented an update on the work of Sánchez-García et al. (2018), especially regarding database and search criteria. The most recent review is a meta-analysis on entrepreneurial well-being carried out by Stephan et al. (2023) which used 94 empirical studies that assessed entrepreneurial well-being and contrasted it with the well-being of employees. The results showed that entrepreneurs have greater well-being depending on the components of well-being under investigation and the institutional context (Stephan et al., 2023). Two more specific reviews analyzed the incidence of mental health risks and diseases among the self-employed (Willeke et al., 2021) and depression among entrepreneurs (Cubbon et al., 2021).

Although these reviews contributed significantly to the area, none of them examined the main theories and models used to investigate entrepreneurial well-being. Theories are a means of accumulating and abstracting knowledge, aiding in understanding, organizing thoughts, generating explanations that are more coherent, and making predictions more accurate (Hambrick, 2007; Suddaby, 2014). They help explain observed facts by using events occurring at different levels and employing

various observation methods (Skinner, 1950). Therefore, analyzing the main theories used to investigate entrepreneurs' well-being is fundamental to advancing the field.

Therefore, this research aims to review the studies on entrepreneurs' well-being to identify the main theories and potential future lines of research. The main contribution of this research is the analysis of which theories have been used, those which could be further explored, and those which have not been used at all and could bring new insights to the field if applied. This research also updates the data from previous reviews by describing major trends in entrepreneurs' well-being theories and models, affiliations, and journals, which may indicate new avenues of research. We used more papers than previous reviews due to the more comprehensive set of descriptors used to search the articles.

This research will be particularly useful for researchers interested in studying the well-being of entrepreneurs, as it will provide valuable information, such as the main researchers in the field and the journals that publish the most on the subject. More importantly, it will help them visualize which theories are most used and those which are not so popular and could provide thought-provoking insights into the field.

Methods

To achieve the goal of this study, we proceeded with a scoping literature review about the entrepreneurs' well-being. Scoping reviews are a method of synthesizing a body of literature to capture the breadth and scope of a domain (Levac et al., 2010). They differ from systematic reviews because they usually do not evaluate the content of the articles reviewed (Rumrill et al., 2010), and they are useful for clarifying the nature of a rapidly evolving field of study and for giving meaning and relevance to a subject that is still developing (Davis et al., 2009).

We searched for articles about this topic in the Web of Science (WoS), a well-known publisher-independent database with more than 2.5 billion cited references from over 217 million records (Clarivate, 2022). The search followed explicit and systematic steps to collect the articles about the subject under research. These steps were organized into three groups: (1) pre-analysis (steps 1 to 6), (2) exploration of the material (steps 7 and 8), and (3) treatment of the results, inference, and interpretation (step 9).

The pre-analysis was performed in six steps. Step 1 consisted of selecting the combination of keywords referring to entrepreneurs based on terms commonly used in the literature, such as self-employed, business owner, entrepreneur, sole proprietor, freelancer, and their derivatives. We also used keywords related to well-being that were taken from different papers on this theme (Eid & Larsen, 2008; Peiró et al., 2021; Peterson et al., 2005; Stephan et al., 2020). With

Table 1 String of words used for searching the papers about the well-being of entrepreneurs

Areas*	String of words used
Entrepreneurship related	(self-employed OR “business owner*” OR entrepreneur* OR “sole proprietor*” OR “freelance*”)
Well-being related	(“mental health” OR well-being OR wellbeing OR “mental disorder” OR “psychiatric disorder” OR “life satisfaction” OR “job satisfaction” OR “work satisfaction” OR “domain satisfaction” OR “family satisfaction” OR “satisfaction with family” OR “health satisfaction” OR “satisfaction with health” OR “income satisfaction” OR “satisfaction with income” OR “satisfaction with financial situation” OR “satisfaction with finances” OR “satisfaction with social relationships” OR “satisfaction with social life” OR “satisfaction with leisure” OR “leisure satisfaction” OR “satisfaction with self” OR “satisfaction with yourself” OR “quality of life” OR thriving OR flourishing OR Eudaimonia OR “eudaimonic well-being” OR “eudaimonic wellbeing” OR “hedonic well-being” OR “hedonic wellbeing” OR happiness OR meaningfulness OR “positive affect” OR “negative affect” OR dissatisfaction OR distress OR anxiety OR phobia OR “obsessive compulsive disorder” OR OCD OR depression OR “affective disorder” OR mania OR bipolar OR ADHD OR “attention deficit hyperactivity disorder” OR “attention-deficit/hyperactivity disorder” OR “somatoform disorder” OR “personality disorder” OR “sleep disorder” OR “sleep-wake disorders” OR suicide OR “substance dependence” OR “substance abuse” OR “alcohol abuse” OR alcoholism OR “alcohol dependence” OR “substance use disorder” OR addiction OR schizophrenia OR “posttraumatic stress disorder” OR PTSD OR “positive emotions” OR “affective well-being” OR mood OR pleasure OR happy OR “psychological well-being” OR engagement OR flourishing OR flow OR unhappy OR purpose OR meaning OR enthusiasm OR worthwhileness OR hedonic OR eudaimonic OR exhaustion OR “full life” OR “empty life”)

the selected keywords, we initiated step 2, the creation of a string to search for the articles in the WoS (Table 1). The two strings presented in Table 1 were united by the Boolean operator AND, forming the entire string used to search by Topic in the WoS. Topic is an advanced field tag in the WoS, which includes four fields of search: title, abstract, author keywords, and KeyWords Plus (terms and phrases that are not explicitly present in the article title but are nevertheless recurrent in the titles of the article’s references).

With the results of this preliminary search, we began step 3, which consisted of a brief analysis of the titles and abstracts of the results to confirm if they were related to the topic of entrepreneurial well-being. Our analysis concentrated on determining whether the research objective focus was to analyze some aspect of the well-being of entrepreneurs. However, some articles were unrelated to the topic, discussing subjects like software engineering, with entrepreneurship and well-being not being the focus of the research. Therefore, we proceeded with step 4, which aimed to increase accuracy by limiting the search fields to the title, keywords, and KeyWords Plus. The new search resulted in 1750 documents (retrieved on June 2, 2023). In step 5, we applied filters after the search to further improve the quality of the results, limiting the document types to articles and excluding early access, proceeding papers, and data papers. After the filters were applied, our sample presented 1270 articles. Step 6 consisted of a second round of analysis of the titles and abstracts of the sample to verify if the articles discussed the well-being of entrepreneurs, which confirmed that the sample was much more accurate following the previous steps.

After completing the pre-analysis with the initial six steps, we explored the material through steps 7 and 8.

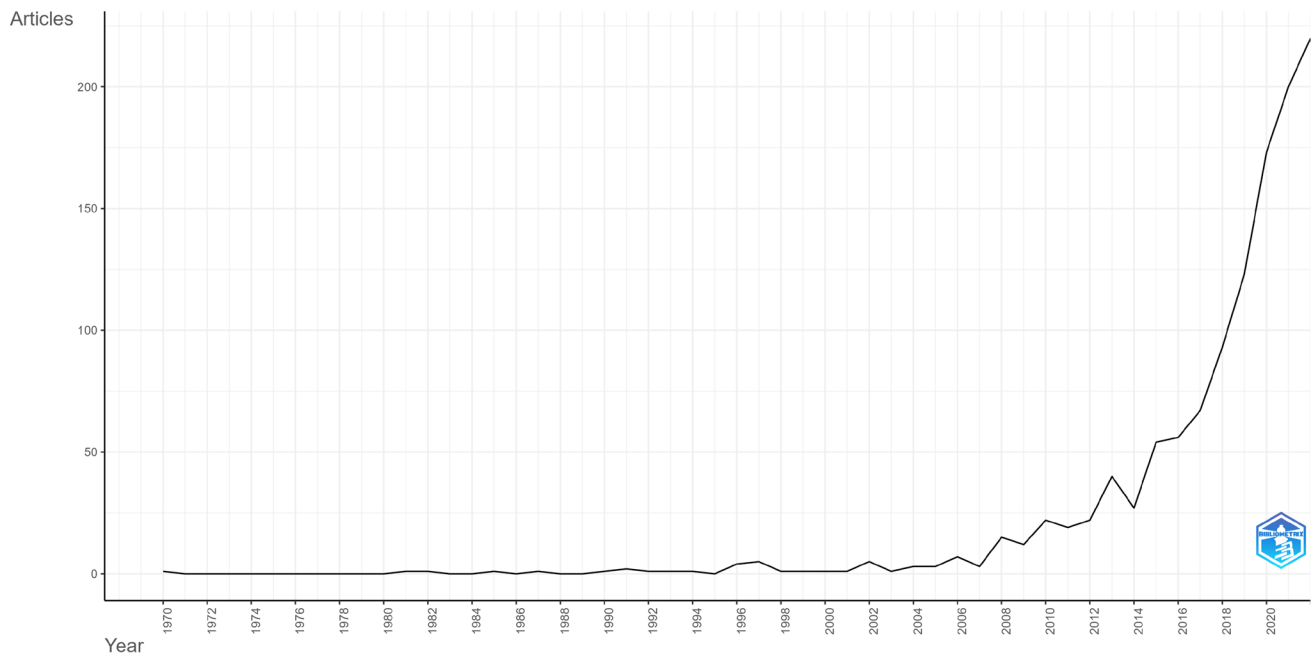
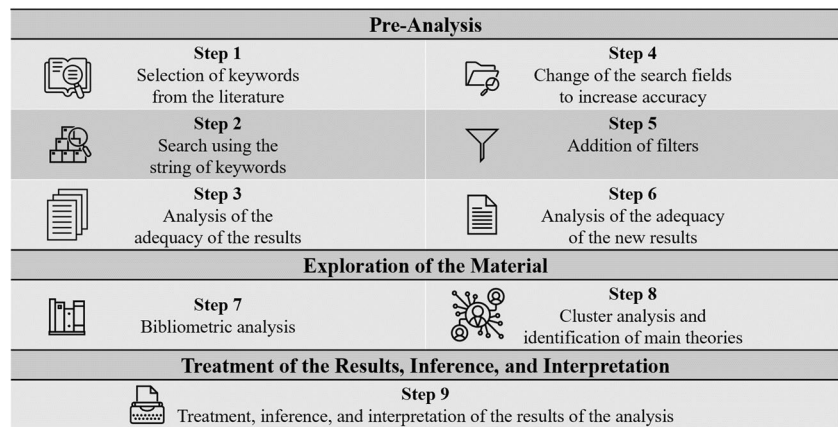
Step 7 consisted of bibliometric analysis. The analyses were performed with Biblioshiny, a science mapping tool based on R (Aria & Cuccurullo, 2017). Through the Biblioshiny, we analyzed information such as the annual scientific production, the most relevant authors, universities, and journals by the number of publications, the scientific production by country, and the most cited articles.

We also analyzed the clusters of keywords used by our sample in step 8, aiming to catch a glimpse of the main theories used by different clusters of articles. These analyses were done with the software VosViewer, a software program that enables the construction of bibliometric networks based on data extracted from bibliographic databases such as WoS (Perianes-Rodriguez et al., 2016). Through VosViewer, we used the keywords and KeyWords Plus to build the clusters. To identify the main theories, we analyzed not only the words that composed each cluster, but also the most cited articles that belonged to each one, reading mainly the title, abstract, introduction, and methods of these articles.

The treatment, inference, and interpretation of the results obtained from the material exploration were carried out in step 9. A summary of all nine steps is shown in Fig. 1. The interpretation of the results is presented in the following three sections.

Bibliometrics’ results

The 1270 articles from our sample were published in 570 scientific journals by 3110 different authors, which gives an average of 0.408 documents per author. Only 11.1% of the authors wrote more than one paper, and just 3.7% wrote

Fig. 1 Steps of the present research**Fig. 2** Annual scientific production

three or more, indicating that most of the authors just occasionally investigated the well-being of entrepreneurs and did not have this theme as their research focus.

The first article in our sample dates from 1970. It focused on agricultural entrepreneurs in Delhi, India, and the relationship between risk-taking and anxiety among them (Singh, 1970). However, from 1970 until the early 2000s, the scientific production on this theme was sparse (Fig. 2). This started to change around 2008, with a considerable expansion starting in 2016, reaching the mark of 220 publications in 2022. At the beginning of June 2023, we already had 81 articles published, which could indicate another strong year in the number of publications.

This increase in publications on entrepreneurs' well-being may reflect the growth in interest in well-being. The United

Nations celebrated the International Day of Happiness for the first time in 2013, with the aim of promoting well-being worldwide (Wiklund et al., 2019). Different institutions implemented efforts to establish psychological well-being as a key societal objective (Wiklund et al., 2019). The business and entrepreneurship research domain has also followed this trend. For instance, the theme of the 2018 Academy of Management Annual Meeting was "Improving Health and Well-Being in Society: How Can Organizations Help?" and some of the journals with the highest impact factor of the field published special issues about the well-being of entrepreneurs, including the *Journal of Business Venturing* and the *Journal of Business Research*.

The academic journal with the largest number of studies on entrepreneurial well-being was the *Journal of Business*

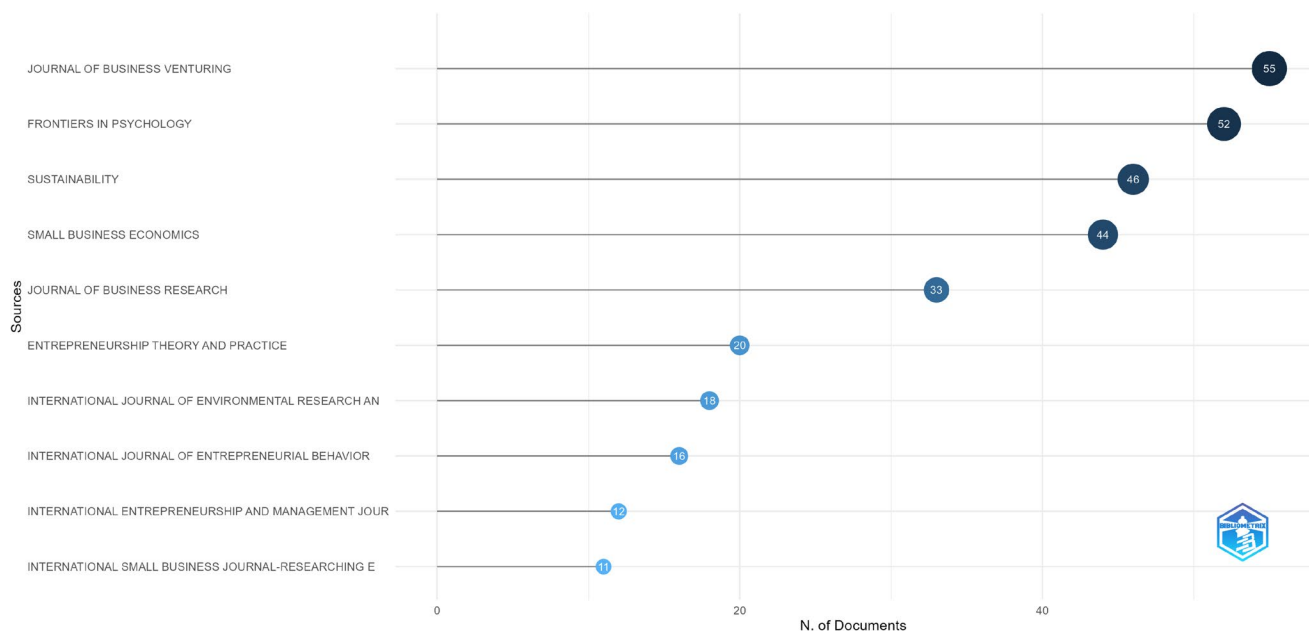


Fig. 3 Most relevant sources

Venturing, with 55 articles (Fig. 3). This journal has one of the highest impact factors in entrepreneurship, 13.139, and published a special issue titled “Entrepreneurship & Wellbeing in 2019.” The second source in the number of publications is *Frontiers in Psychology*, with 52 papers published. This journal explores psychological sciences and has an impact factor of 4.232. Until 2019, this journal had published only five papers on the well-being of entrepreneurs, accelerating the publications on this subject in the last 3 to 4 years. The third journal on the list is *Sustainability*, with 46 publications. This is a more cross-disciplinary, open-access journal with an impact factor of 3.889. The list also includes journals in psychology, business, environmental science, and other fields.

As mentioned, only a small percentage of the authors from our sample published more than one paper about this matter (we propose new avenues of research in the “Discussion” section). Analyzing the authors that published the most significant number of articles, it is possible to observe that only professors Hessels, Shepherd, and Thurik published ten papers or more (Fig. 4). Professor Jolanda Hessels, from the Netherlands, is tied with the highest number of papers with Professor Dean Shepherd, with 11 publications each. Her first paper in our sample is from 2011 and analyzes how entrepreneurial exit relates to future engagement in entrepreneurship (Hessels et al., 2011). The last one was published in 2020 and investigated how subjective well-being and freelancing could relate (van der Zwan et al., 2020).

Professor Shepherd, from an American university, also has 11 papers. Among other subjects, he researches about

responding with resilience to adversity. His first paper in our sample is from 2003, and it discusses how a business failure can lead the self-employed to feel grief and suggests a grief recovery path so they can recover quickly and enhance the learning from this experience (Shepherd, 2003). The latest is from 2022, and it examined the well-being of women from the bottom of the economic pyramid who are involved with entrepreneurship and how their well-being experiences differ, especially regarding previous work experience and family support (Chatterjee et al., 2022).

Only two of the ten most prolific authors are not from universities in the USA and the Netherlands. Even in the top 20, more than half of the researchers are from these two countries. These two countries are important not only in the area of entrepreneurs’ well-being, but also in entrepreneurship research as a whole. In a recent bibliometric analysis of entrepreneurship research, García-Lillo et al. (2023) show that the two universities with the most publications come from the US and the Netherlands.

Also, it is worth highlighting that none of the authors in the top 20 is from a university in a poor or developing country. This may also indicate a lack of research in these regions, which are highly dependent on entrepreneurship and self-employment.

In Fig. 5, we have the country of the corresponding author of the articles from our sample. It can be observed that the majority of articles were written by authors from Europe and North America, with Australia and China also appearing among the top countries. It is also possible to note some areas without publications, including parts of Africa, Asia,

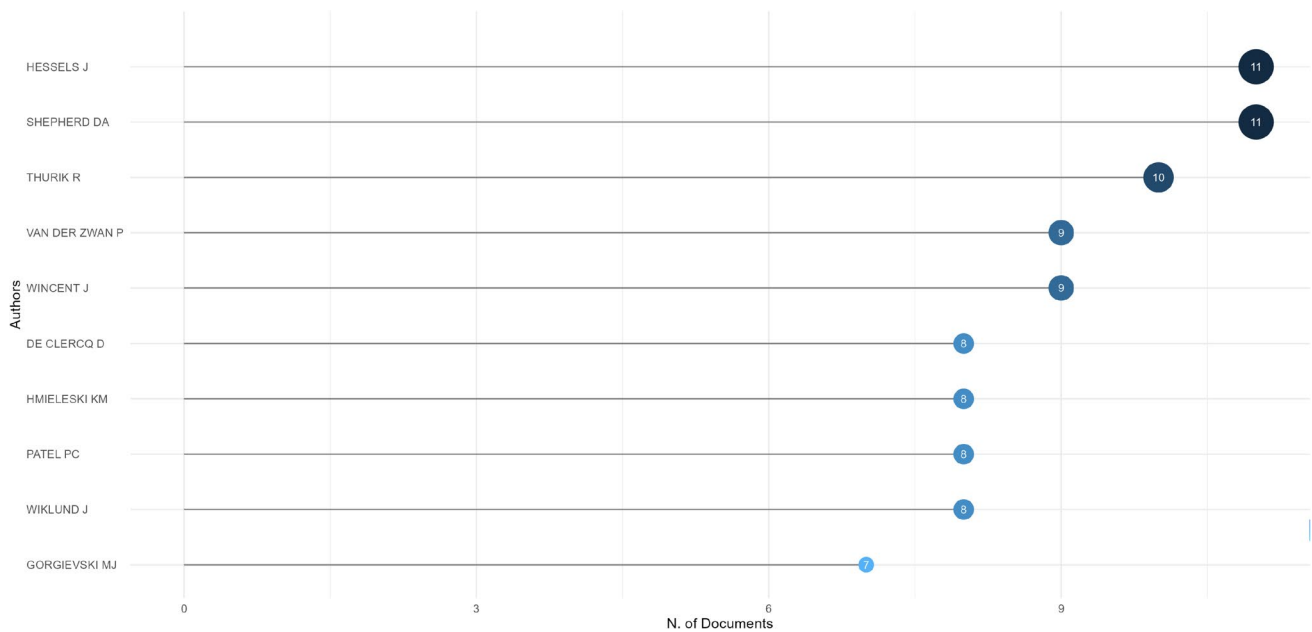


Fig. 4 Most relevant authors

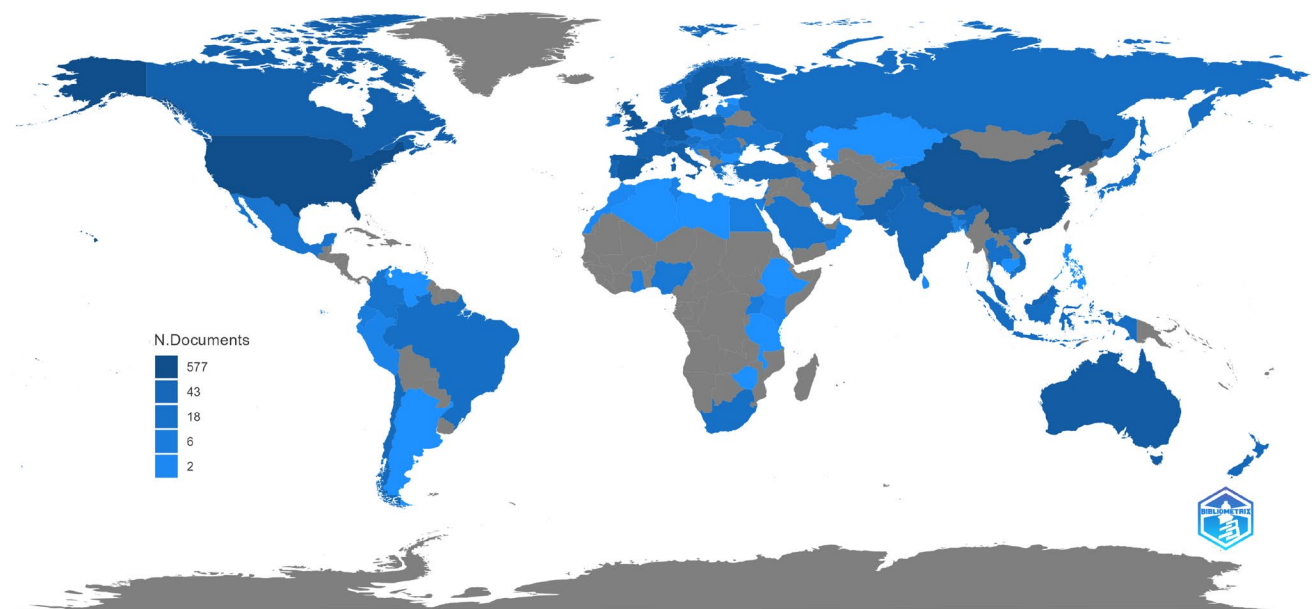


Fig. 5 Country scientific production

Eastern Europe, and Latin America. This may indicate a greater focus of research on entrepreneurs from developed countries, leaving a gap in research on entrepreneurs from poor or developing areas, a significant proportion of entrepreneurs worldwide (we propose new avenues of research in the “[Discussion](#)” section). This focus is also reflected in the most cited countries in our sample, with the top 10 consisting almost entirely of countries from North America and

Europe, with the only exceptions being China, Australia, and Singapore.

Compared to the other two reviews that also used bibliometric analysis (Contreras-Barraza et al., [2021](#); Sánchez-García et al., [2018](#)), the present study shows some similarities, such as the growth pattern of articles published, the map with the scientific production by country, and there are three journals that appear in the top ten of all reviews: *Small*

Business Economics, *Journal of Business Venturing*, and *Entrepreneurship Theory and Practice*. Our broader keywords and more recent analysis may explain the differences in our analysis. One analysis not performed by the other two reviews is that of the most relevant authors and the country of their university.

The theoretical clusters

We analyzed the clusters formed by the keywords from the sample to map the area. The clusters are formed by the amount of papers in which the terms occur together. Therefore, the keywords that form a cluster may indicate common themes explored by the papers from which the keywords were taken. Using this analysis, we highlighted the main topics discussed in each cluster and the main theories employed by the articles that studied that topic.

We used three steps to identify the most frequent theories from each cluster. First, we looked to see if a theory appeared as a keyword of the cluster, indicating a high frequency of use of that theory. This was also the situation with regard to self-efficacy in the blue cluster. The second step was to look for keywords that pointed to specific theories. To ensure that the theory was frequently used, we looked for it in the articles that made up the cluster and compared its frequency with the frequency of other theories in the cluster. The last step was to analyze the abstract and methods section of the most cited articles that comprised the cluster. Then, we would verify the frequency of the identified theories to highlight the most frequent ones.

Theories related to well-being could be categorized in different ways to facilitate analysis. Erwandi et al. (2021) presented one way to categorize these models, which inspired the present work. They divide them between psychosocial models and work redesign models. The psychosocial models usually describe a dynamic interaction between individuals and their environment and are often influenced by existing issues of individual fit with the environment as well as emotional responses and their interactions (Erwandi et al., 2021). Under this category, we have theories such as job demands-resources, self-efficacy, and person-environment fit. The work redesign category relates to how work structures influence employee behavior and attitudes toward working conditions, and we can cite as examples the effort-reward imbalance and the job characteristics model (Erwandi et al., 2021).

In Fig. 6, it is possible to identify 119 different keywords divided into four clusters marked red, green, blue, and yellow. It is important to mention that keywords that differed only in spelling were combined for ease of analysis, such as “well-being” and “wellbeing.” The two

clusters with the smallest number of keywords, the yellow and blue clusters, have a single theoretical model among the highlights, job demands-resources and self-efficacy, respectively. The largest clusters have not only one model as their most prominent but groups of models, stress models in the green cluster and entrepreneurship models in the red one.

We start our discussion with the smallest cluster by the number of keywords, the yellow one.

The yellow cluster — job demands-resources model

The yellow cluster is the smallest in the number of keywords, with 20 terms that resemble keywords of the job demands-resources model (JD-R). Some keywords are more related to the research design and the variables used. “Antecedents” is one of these words and is generally used in articles that examine the antecedents of a variable of interest, for example Williamson et al. (2019), which highlighted that sleep quality is an antecedent of entrepreneurs’ innovative behavior. Similar words in this cluster are “consequences,” “mediating role,” and “moderating role,” which also refer to types of variables analyzed by the articles.

A model used by many of these papers is the JD-R (Demerouti et al., 2001), derived from the job demands-control model (JDC) from Karasek (1979). The incidence of mental strain at work is explained by JDC through the use of two dimensions related to the job: demands and control (Häusser et al., 2010). Job demands could come from a discouraged work environment, characterized by workload, abusive leadership, time pressure, role conflicts, emotional demands, and physical demands (Häusser et al., 2010; Karasek et al., 1998). Job control is the amount of control an individual has over work activities in general (Häusser et al., 2010; Karasek et al., 1998). When a job presents high demands and low control, it is referred to as a “high strain job,” with reduced well-being and a heightened risk of disease, whereas jobs characterized by reduced demands but with heightened levels of control are referred to as “low strain jobs,” with a lower likelihood of experiencing adverse reactions (Häusser et al., 2010; Karasek, 1979).

Over time, different researchers proposed variations of the JDC model. Johnson and Hall (1988) included work-related social support, because it modifies the impact of job demands, diminishing the levels of stress perceived and job strain on both mental and physical health. Nevertheless, the JD-R model is the most broadly used variant by the articles from our sample and is even more frequently used than the JDC itself. As a comprehensive approach, it considers not just job control as a crucial resource for mitigating the negative impacts of job demands, but also feedback, rewards, and participation, among others (Sonnentag & Frese, 2013).

The blue cluster — self-efficacy model

The blue cluster presents 22 keywords, and one model stands out, also appearing as a keyword: self-efficacy. The construct of self-efficacy is future-oriented, focusing on projections about future performance. It has been a major prospective construct within the field of industrial and organizational psychology over the past few decades (Schmidt et al., 2013). Proposed by Albert Bandura, this theory refers to the beliefs that a person has about their ability to accomplish behaviors that are fundamental to generate specific performance attainments and how this belief is related to coping behaviors and the effort the individual will put in while facing adversities (Bandura, 1977).

Self-efficacy has four primary sources: (1) mastery experiences, the accumulation of successes that serve to reinforce a strong belief in your own efficacy; (2) vicarious experiences, which involve witnessing the success of individuals who are similar to yourself succeed through sustained effort; (3) social persuasion, which involves the verbal persuasion of an individual that he or she has the ability to master a particular activity; and (4) physiological states, which mitigate stress responses and modify emotional tendencies that are negative and misconceptions of physical states (Bandura, 1994). With the given definitions, it is possible to notice that many of the keywords from this cluster are somehow related to self-efficacy and to the classical theory of planned behavior, such as perceptions, experience, and behavior (Ajzen, 1991).

Primarily viewed as a positive enabler of various beneficial processes and outcomes, self-efficacy has been employed in a diverse array of contexts, such as the workplace, academics, and sports (Schmidt et al., 2013). However, it has also faced some debate on its magnitude and, sometimes, even if its influence is positive or not (e.g., Judge et al., 2007; Richard et al., 2006; Vancouver & Kendall, 2006; Wanberg et al., 2010). Nevertheless, it has been used by many different articles to study the well-being of entrepreneurs.

Typically, articles that utilize the keyword “self-efficacy” indicate a positive association with well-being. For instance, one highly cited article using this keyword concluded that entrepreneurs frequently experience diminished stress levels, which derive partly from elevated levels of psychological capital, which could be described as a blend of self-efficacy, optimism, hope, and resilience (Baron et al., 2016). Another study highlighted that self-efficacy is essential to have an enabling environment for well-being and intrapreneurship (Souto et al., 2022).

Self-efficacy has also been used in studies about the relationship between attention-deficit hyperactivity disorder (ADHD) and entrepreneurship, especially how they influence entrepreneurial behavior or intention. These studies

essentially examined the interrelationship between self-efficacy, ADHD symptoms, and a number of variables related to entrepreneurship, like orientation and intention (e.g., Gunia et al., 2021; Isfahani et al., 2022; Tran et al., 2023).

Nevertheless, the findings suggest that self-efficacy does not invariably exert a beneficial effect. In dynamic environments, the results align with the predictions, indicating that high levels of entrepreneurial self-efficacy exert a positive influence on firm performance when coupled with moderate optimism. Conversely, a negative impact is observed when high optimism is present, thereby demonstrating a curvilinear relationship (Hmieleski & Baron, 2008). In contrast, in contexts of stability, the impact of self-efficacy was relatively limited and not moderated by optimism. In conclusion, the findings indicate that high self-efficacy is not inherently advantageous for entrepreneurs and may, in specific circumstances, result in adverse outcomes (Hmieleski & Baron, 2008).

The green cluster — stress models

The green cluster is the second largest in terms of keywords, with 34 keywords summarizing what we interpret as stress models. Some of the terms in this cluster are expected to have a high frequency in our sample, as they are almost synonymous with “entrepreneur” in the literature, like “business owners” and “self-employed/self-employment.” However, some central keywords appear with all other green cluster terms. Stress is one of these central keywords. It is also an important issue for individuals and organizations, with widespread health and economic consequences, drawing an enormous amount of attention from researchers (Sonnentag & Frese, 2013).

Stress is a comprehensive term that could include different meanings. It could be distinguished between stressor, an internal or external stimulus that threatens homeostasis, and stress response/strain, various physiological and behavioral adaptive reactions with the objective of regaining homeostasis (Chrousos, 2009). Despite nearly four decades of investigation into the influence of stress on entrepreneurship, the findings have yielded inconclusive and contradictory results (Lerman et al., 2021), which can also be noticed in our sample. Some studies have concluded that transitioning to self-employment can positively impact health, while others have advised against characterizing self-employment as a “healthy” career choice (Nikolova, 2019; Stephan et al., 2020).

Stressors could be related to the work schedule, the task, or even to the role, or roles, assumed by the person (Sonnentag & Frese, 2013). One example from our sample pointed out that the conflict between work and family and also role ambiguity are stressors for entrepreneurs and antecedents of emotional exhaustion and subsequent intentions

to exit entrepreneurship (Sardeshmukh et al., 2021). Another article emphasizes that some stressors may not be bad for entrepreneurs. Lerman et al. (2021) present that challenge stressors, such as cognitive demands and knowledge demands, enhance entrepreneurs' performance, while hindrance stressors, like role conflict and interpersonal conflict, harm entrepreneurs' well-being. Ryff (2019) also highlighted that challenge stressors could increase entrepreneurs' eudaimonic well-being while hindrance stressors reduce it.

From the papers that studied the stress response of entrepreneurs, one of the most cited underscored that the psychological detachment from work of entrepreneurs is inhibited by hindrance and challenge stressors, which increase reflections about problem-solving and affective rumination about work during the evening, jeopardizing their well-being the next morning (Wach et al., 2021). Another article found that self-employment is a path more likely to be taken by people with poorer mental health, which is temporarily enhanced due to reduced stress related to work, but returns to the same low level as before after an extended period (Stephan et al., 2020).

One of the theoretical models used in this cluster, even appearing as a keyword, is the self-determination theory (SDT), an important theory of motivation (Deci & Ryan, 1985). It suggests that autonomy, competence, and relatedness are psychological needs satisfied by intrinsic instead of extrinsic goals (Gagné et al., 2014; Schmidt et al., 2013). Furthermore, it is intimately connected to well-being, as SDT posits that when individuals engage with tasks imbued by a sentiment of ownership, agency, and choice, it is positively linked with perseverance, performance, and also well-being (Ryan et al., 2022). For SDT, a person requires awareness, intrinsic goals, self-regulation, and need satisfaction to be healthy; these characteristics are also crucial for stress processes (Weinstein & Ryan, 2011). Some central elements for this theory are also keywords in the green cluster, for example "autonomy" and "satisfaction."

Employing a model that incorporates both passion and SDT, Bayraktar and Jiménez (2022) highlight that strain and harmonious passion are negatively related, whereas obsessive passion is positively related not only to strain, but also to loneliness. The appraisal of social loneliness differs between entrepreneurs, and if not effectively addressed, it can have adverse effects on their well-being (Cardon & Arwine, 2023). The SDT was also used to evaluate the effects of prosocial motivation on commercial entrepreneurs (Kibler et al., 2019). The authors conclude that entrepreneurs' life satisfaction could be negatively affected by prosocial motivation, but that high work autonomy reduces this effect. Another study applied SDT to propose that resource-induced coping heuristic (RICH), in combination with autonomy and job security, is part of the explanation for why new entrepreneurs can enjoy enhanced well-being despite the addition

of potential stressors, which was supported by their findings (Lanivich et al., 2021).

Another theory used by the papers that discussed stress and the well-being of entrepreneurs was the person-environment fit (P-E fit). The fundamental premise of the P-E fit theory is that stress is precipitated by the congruence between the individual and the environment, rather than by either factor in isolation (Edwards et al., 1998). To best understand this theory, Edwards et al. (1998) highlight the importance of making some distinctions: between the person and the environment, in order to observe mutual causation; between the person's objective attributes and the person's subjective perception of these attributes; and between the objective environment, which comprises physical and social situations as they exist, and the subjective environment, how the person perceives these situations and events (Edwards et al., 1998).

There are also two types of P-E fit theory, and it is important to highlight their differences. The first type analyzes the fit between environmental demands and the person's capabilities (Edwards et al., 1998). On the other hand, the second type concerns the fit between the person's needs, including biological and psychological needs, and the environment's supplies that can satisfy the person's needs (Edwards et al., 1998).

Among the articles in the green cluster are studies that employ P-E fit theory to examine how life satisfaction differences between employees and entrepreneurs are influenced by informal and formal institutional environments (Brieger et al., 2020) and the association between entrepreneurship and individuals with ADHD symptoms (Wiklund et al., 2017).

There are also some articles from our sample that discuss entrepreneurs' coping efforts to deal with stress. Coping can be defined as the efforts made by an individual to deal with the demands of a stressful circumstance, which are perceived as exceeding their available resources (Lazarus & Folkman, 1984). The coping strategies may be classified into two categories: active coping and avoidance coping. Active coping entails confronting the stressor directly by taking action to alter the situation, whereas avoidance coping consists of momentarily distancing from the stressor or momentarily disconnecting from it (Uy et al., 2013).

The studies from our sample explored the coping strategies of small business owners in a rural area (Simmons & Dalton, 2023), and how well-being and business performance can be impacted by coping strategies (Drnovsek et al., 2010), and analyzed the coping strategies of specific types of entrepreneurs, such as migrants and micro-entrepreneurs of peer-to-peer accommodation (Tschirhart et al., 2019; Xu et al., 2021). However, we found fewer articles discussing this topic than the others in this cluster.

The Red cluster — entrepreneurship models

The red cluster is the largest, with 42 keywords. In contrast to the other clusters, this one contains a smaller number of psychology-related terms and a greater proportion of terms related to the entrepreneurship domain. These include social entrepreneurship, entrepreneurship education, and academic entrepreneurship. The same can be observed with the theories used in this cluster, with low use of models from the field of psychology and the use of many traditional entrepreneurship theories, such as effectuation, causation, and bricolage. However, it is difficult to point to a single model that is most used by the articles in this cluster due to the wide variety of models used. In summary, this cluster seems less cohesive than the others.

Looking at the traditional entrepreneurship terms in this cluster, social entrepreneurship occurs frequently, appearing in more than 50 papers from our sample. Zahra et al., (2009, p. 522) bring a thorough definition of social entrepreneurship as “the activities and processes undertaken to discover, define, and exploit opportunities in order to enhance social wealth by creating new ventures or managing existing organizations in an innovative manner.” Briefly, social entrepreneurship encompasses ventures whose main mission is to help others (Kibler et al., 2019).

The selected literature examined the nexus between social entrepreneurship and well-being from different perspectives. Some analyzed the antecedents of social entrepreneurship, for instance Kim et al. (2020), who looked at the psychological origins of social entrepreneurial behavior. Another group of papers looked at the consequences of social entrepreneurship, like Torres and Augusto (2020), which examined the influence of social entrepreneurship and digitalization on national well-being.

Another typical theme from the entrepreneurship area that appears as a keyword in the red cluster is entrepreneurship education. Entrepreneurship education is important for sustainable development and beneficial in resource-poor contexts (e.g., Huang et al., 2020; Tingey et al., 2020). Governments have also employed entrepreneurship education to stimulate economic activity (O'Connor, 2013). The articles that employed the keyword “entrepreneurship education” assessed the influence of such education on three key areas: entrepreneurship knowledge, economic empowerment, and social well-being among Native American adolescents (Tingey et al., 2020), the influence of entrepreneurship education on the level of satisfaction among teachers and students (Huang et al., 2020), and how the achievement of intangible outcomes associated with entrepreneurship is impacted by mentoring and self-efficacy (Baluku et al., 2020).

Academic entrepreneurship is another relevant keyword in the red cluster. It refers to entrepreneurial activities in

universities, such as start-up creation and partnerships between industry and university (e.g., Grimaldi et al., 2011; Rothaermel et al., 2007). One of the most frequently referenced articles on academic entrepreneurship examined the potential moderating role of job satisfaction in the relationship between outcome expectations and the entrepreneurial intention of academic researchers (Blaese et al., 2021). Another study examined the influence of selected individual and organizational determinants on the academic scientists' widely defined academic entrepreneurial intentions through the lens of the theory of planned behavior (Wang et al., 2020). A third paper investigated the relationship between academic entrepreneurial preference and ADHD symptoms (Canits et al., 2019). Another article employed social identity theory to posit that three distinct dimensions of venture value creation contribute to the psychological well-being of student entrepreneurs (Hahn, 2020). However, the extent of this contribution is contingent upon the university's commitment to academic entrepreneurship.

As mentioned at the beginning of this section, unlike the other clusters, there is no single most used model in this one. Therefore, we will highlight the entrepreneurship theories that are used here and how they were used to examine the entrepreneurs' well-being, starting with causation and effectuation, two entrepreneurship models that appear in the red cluster. Described as two types of decision processes by Sarasvathy (2001), causation is the more traditionally accepted paradigm for the creation of a new venture, where the person has a specific effect, or goal, in mind and chooses between the means to achieve that effect. On the other hand, in the effectuation paradigm, the person chooses between possible effects that they can achieve using the set of means available (Sarasvathy, 2001).

Basically, effectuation theory differs from causation in four ways. Effectual logic starts with means instead of starting with establishing end goals; it analyzes how much loss is affordable instead of the expected return; it pursues the establishment and leveraging of strategic relationships instead of doing competitive analysis; and it leverages contingencies instead of trying to control the future (Fisher, 2012). One example of a study from our sample compared how these two different decision processes are dynamically related to emotional and cognitive dimensions of resilience during an entrepreneurial project (d'Andria et al., 2018). The authors highlighted that strong resilience and a shift of logic from causation to effectuation might help to achieve success in an entrepreneurial project like a business takeover.

Bricolage is another theory from the entrepreneurship field used by papers with the keywords from the red cluster. In the event that entrepreneurs are confronted with novel challenges in an environment that lacks the requisite resources, they may resort to bricolage, which may be defined as “making do by applying combinations of

the resources at hand to new problems and opportunities” (Baker & Nelson, 2005, p. 33). Although it shares some similarities with effectuation, bricolage differs in two ways: it takes place in a resource-poor environment, while effectuation can take place in rich or poor environments, and for bricolage, the entrepreneur begins with an objective in mind and uses whatever is at hand to achieve it, while effectuation starts with the means to choose among possible ends (Essig, 2015).

In our sample, Jørgensen et al. (2021, p. 11) used the principles from bricolage to propose the Collective Tourism Social Entrepreneurship, which is “the process of using tourism activities as a means for collaborative social problem solving between similar and diverse actors.” This framework starts with resource limitations that the community could address by using tourism as a framing technique, initiating a collective social entrepreneurship process. With the resources available, the community can be mobilized to find solutions through collective action that can make a lasting difference in the community and achieve a level of social transformation (Jørgensen et al., 2021).

Discussion

The bibliometric results show some interesting issues regarding the number of articles and studies from developing countries. Firstly, the percentage of just 3.7% of the authors of articles in our sample who wrote three or more papers on the topic is noteworthy. Some possibilities could help to explain this low percentage. For instance, some of these authors’ research may focus on aspects of well-being, and the samples used are of entrepreneurs just for convenience. It could also indicate that the authors are publishing articles not only in journals indexed in the WoS. It is difficult to constantly publish in indexed journals, especially for authors from poor and developing countries outside Europe and North America who do not have English as their first language or money to pay publication fees (Orhan et al., 2023). This percentage could also be a positive sign of a significant variability of authors publishing in these indexed journals. In other words, it is not only the same authors that publish about this subject in these journals, but different authors have an opportunity, too. Possibly, the interpretation of this percentage lies partly in all these possibilities.

We tested the hypothesis presented above in a brief exploratory analysis of the authors who published only one paper in our sample. We found a higher concentration of authors from developing countries such as Pakistan, Malaysia, and South Africa. In comparison, when we look at the authors who published five or more papers, none of them was affiliated with universities in developing countries. Many of the authors who published only one paper in our

sample also published in journals that were not indexed in WoS. Furthermore, some had only one paper on entrepreneurial well-being, with their research focus on other aspects of entrepreneurship, supporting our alternative hypothesis provided in the previous paragraph.

Another practical issue that stands out from the results of our bibliometric analysis is the tiny number of studies from and about developing countries. For example, all of the top 20 authors in our sample are from developed countries, especially the USA and the Netherlands; the top 10 countries by number of publications are all developed, with few or no publications from countries in Latin America, Africa, Eastern Europe, and Asia; also, the most cited countries in our sample are from Europe and North America. The problem is that the environment faced by entrepreneurs from developing countries is challenging, with less support from the government, and many entrepreneurs start their ventures out of necessity, with few resources (Acs et al., 2008). Including entrepreneurs from these areas of the globe is aligned with the call made by Stephan’s (2018) previous literature review to consider the heterogeneity among entrepreneurs. A better understanding of the well-being of entrepreneurs from developing countries is a rich research topic and essential for the development of sustainable entrepreneurship in these countries, which are more dependent on it. For example, most theories in industrial psychology are exclusively oriented toward Western, educated, industrialized, rich, and democratic (WEIRD) countries, making it highly likely that these theories will fail to adequately describe human behavior in the work environment in a globalized world where the majority of the population is preoccupied with meeting essential necessities like food, bills, and shelter (Henrich et al., 2010; Muthukrishna et al., 2020; Pérez-Nebra et al., 2021).

It is also noteworthy that developing countries constitute a significant proportion of the global population and exhibit a higher prevalence of entrepreneurial activity compared to developed countries (Hill et al., 2022). Therefore, we should not think that entrepreneurs from developing countries are “strange and exotic samples,” as they better reflect the global population. Conversely, using samples from developed countries when trying to understand the well-being of entrepreneurs is using the “exception rather than the rule.” However, we understand that studying the well-being of entrepreneurs in developing countries is challenging, particularly when trying to reach more vulnerable entrepreneurs. They usually distrust science in those contexts, having limited access to and familiarity with technology. The lack of experience with surveys makes it still more difficult. As a result, researchers are sometimes led to focus on entrepreneurs from developed countries, where data collection is more accessible, to meet the demands of the current scientific paradigm that prioritizes productivity. The problem is that this paradigm often results in elitist research, disconnected from global reality.

Looking at the main theories used by the papers in our sample, it can be observed that some theories appear frequently, while there are some less-used theories that could bring interesting insights to the field. Using the categories presented by Erwandi et al. (2021), it is possible to note that most of the main theories in our sample are from the category of psychosocial models, while the work redesign models category was much less used. Models like job-demand resources and person-environment fit were widely used and are from the psychosocial category. These theories were mainly employed to help in the understanding of some of the principal antecedents of the well-being/ill-being of entrepreneurs, such as personal and job resources, job demands, work values, work-family conflict/synergy, and passion (Bayraktar & Jiménez, 2022; Beutell et al., 2019; Dijkhuizen et al., 2016; Shevchuk et al., 2018). However, even in the psychosocial category, there are some less-used theories that can bring new perspectives to the field. For example, the vitamin model from Peter Warr (1990) and its non-linear relationship between work characteristics and well-being could help to understand some conflicting results that we have in the area.

The models from the work redesign category were much less used and can also bring fresh insights into the study of the well-being of entrepreneurs. The models in this category focus more on contextual variables, the work structures, and their influence on the worker. The effort-reward imbalance (Siegrist, 1996) is one example from this category, and it could help understand why some entrepreneurs persist in conditions of high effort and low reward that could jeopardize their well-being. The use of theories from this category also helps to answer the call from Stephan's (2018) literature review for the use of more context-sensitive theories in the field, which has yet to be addressed.

From the theoretical perspective, it is also possible to note that there are just a few studies using coping or recovery models to examine how entrepreneurs can keep or even improve their well-being. Starting a new venture is a very intense activity, filled with uncertainty, long working hours, responsibility, and complexity. It is important to understand the factors that interfere with the well-being of entrepreneurs, but it is also fundamental to think about what entrepreneurs can do to keep their well-being so they can not only start a new venture, but also run it sustainably without becoming physically and mentally ill. Some studies from our sample made efforts to start this discussion, such as Drnovsek et al. (2010), who analyzed the effectiveness of coping strategies that entrepreneurs use to manage work-related stress and showed that problem-based coping improves not only well-being but also venture performance. Williamson et al. (2019) discovered that the quality of sleep is a predictor of the

entrepreneur's innovative behavior, and Obschonka et al. (2023) employed a recovery approach to ascertain that personal agency and a positive job demands-resources pattern result in superior psychological utility, which can benefit the venture and prevent burnout.

However, there is still a need to further this discussion, such as which strategies used by employees to maintain or restore their well-being are effective for entrepreneurs and which are not. What strategies are useful for different types of entrepreneurs (social vs. commercial, opportunity vs. necessity, developed vs. poor/developing countries)? Are there strategies that are specific to entrepreneurs? Answering these and many other questions about how entrepreneurs can maintain their well-being may have significant economic and social implications and could also help in the development of a dedicated theory of entrepreneurial work and well-being, as called for by Stephan's (2018) literature review.

Future research directions

From the discussion above, we can identify at least three possible avenues that future research can follow to bring new insights to the field. The first possible research direction relates to the regions in which the research takes place. We believe that studies conducted by researchers from developing countries and on the well-being of entrepreneurs in developing countries would enrich the field for the reasons outlined above. Comparisons between the well-being of entrepreneurs from developed and developing countries could help advance the field by answering questions such as the following: Is the well-being of entrepreneurs from developing countries different from that of entrepreneurs from developed countries? If so, why? Do the variables that affect the well-being of entrepreneurs differ across countries (developed vs. developing)? Are the strategies used by entrepreneurs from developing countries to maintain their well-being the same as those used by entrepreneurs from developed countries?

The second and third possible research directions are related to the theories used to study entrepreneurial well-being. Less-used theories, such as work redesign models, coping and recovery perspectives, and some psychosocial models, such as the vitamin theory (Warr, 1990), could be very useful in bringing new perspectives to this issue. They offer an interesting avenue of research. The third possible direction relates more specifically to the strategies for maintaining or restoring the well-being of entrepreneurs. Which strategies are effective for entrepreneurs, and which are not? Which strategies are useful for different types of entrepreneurs (social vs. commercial, opportunity vs. necessity, developed vs. developing countries)? Are there strategies that are specific to entrepreneurs?

Table 2 Main gaps, questions, and possible future research directions

Research on entrepreneurial well-being by country (country of affiliation of the most relevant authors, countries' scientific production, and most cited countries)	
Predominant countries	Countries from North America and Europe, with the notable exceptions of China and Australia
Less frequent countries	Countries from Latin America, Africa, Eastern Europe, and Asia
Future research directions	<p>More research is needed from and about developing countries</p> <p>Does the well-being of entrepreneurs from developing countries differ from that of entrepreneurs from developed countries? If so, why?</p> <p>Do the variables that affect the well-being of entrepreneurs differ depending on the country (developed vs. developing)?</p> <p>Are the strategies used by entrepreneurs from developing countries to maintain their well-being the same as those used by entrepreneurs from developed countries?</p>
Theories most and least used by entrepreneurial well-being papers	
Most frequently used theories	Mainly psychosocial models, such as job-demand resources (Demerouti et al., 2001), self-efficacy model (Bandura, 1977), self-determination theory (Deci & Ryan, 1985), and person-environment fit (Edwards et al., 1998)
Less-used theories	Work redesign models, coping and recovery perspectives, and some psychosocial models, such as the Vitamin theory (Warr, 1990)
Future research directions	<p>Explore the possible insights that less-used theories could bring to the area</p> <p>Which strategies used by employees to maintain or restore their well-being are effective for entrepreneurs, and which are not?</p> <p>What strategies are useful for different types of entrepreneurs (social vs. commercial, opportunity vs. necessity, developed vs. developing countries)?</p> <p>Are there strategies that are specific to entrepreneurs?</p>

A summary of the key gaps, questions, and possible future research directions identified by this study and discussed in this section is presented in Table 2.

Conclusion

Our goal with this study was to conduct an overview of the studies about entrepreneurs' well-being in order to recognize the main theories and possible future directions of research. We found that the number of publications about this topic has been rapidly increasing, especially in the last decade, and the articles could be arranged into four theoretical clusters: (a) job demands-resources model, (b) self-efficacy model, (c) stress models, and (d) entrepreneurship models. We also found that a very small percentage of the authors published more than one paper in the field, that we almost do not have publications from and about poor and developing countries (which are more dependent on entrepreneurship), and we have just a few publications using theories from the work redesign category, like effort-reward imbalance theory, and using the coping and recovery perspectives. The conclusion is that the research on entrepreneurial well-being would benefit from greater heterogeneity in the theories and samples

used and also from encouraging the inclusion of researchers from different regions.

Author contribution RMAB analyzed and interpreted the bibliometric data, analyzed the clusters, and developed the future research directions. ARPN constructed the methods (the type of review and the steps followed), the analysis, and interpretation of the clusters; made substantial contributions to the future research directions (such as the final table); and was instrumental in drafting the manuscript. EV made substantial additions to the interpretation of the bibliometric data and the clusters. FGLG helped with the interpretation of the clusters and made substantial contributions to the future research directions. All authors read and approved the final version of the manuscript.

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Declarations

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