Research Article

Towards Career Sustainability:
A Systematic Review to Guide Future Research

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ABSTRACT

Objective: this study analyses how international literature informs the discussion of sustainability within career scope. **Method:** we conducted a systematic literature review through the Web of Science database and analyzed 152 papers with the sustainable-career-related keywords: resilience, systems, and ecosystem. By exploring the conceptual foundations of these concepts that have evolved in the context of career sustainability over the last three decades, we identified six clusters of different theoretical approaches. **Results:** these are the interplay of social spaces in the development of sustainable or unsustainable career paths; need for an open-systems perspective for organizational career management; significance of personal attributes and individual behaviors in career sustainability development; addressing satisfaction and well-being in work and life spheres; external and internal career mobility in complex environments; and contemporary sustainability challenges and their implications for careers, cities, and governments. **Conclusion:** based on the findings, we established six assumptions that may guide future empirical research in this field.

Keywords: sustainable careers; career system; career resilience; career ecosystem; systematic literature review.

INTRODUCTION

The dynamism of current labor markets highlights the growing importance of investigating the macro-contextual influences on how individuals experience their careers (Baruch & Rousseau, 2019). Digital technology has transformed professions and presented new requirements for people and organizations, rendering the traditional, hierarchical career trajectory within the same organization a distant reality for an increasing number of workers (Greenhaus & Kossek, 2014). At the individual level, workers face the need to constantly remain employable and seek diverse alternatives for sustenance in the labor market (Forrier et al., 2015). Globally, countries have been experiencing an increase in job insecurity and precarious work, intensification of work, increased use of technology, all of which has consequently affected currency of skills and competencies (Greenhaus & Kossek, 2014; Hite & McDonald, 2020). This has been exacerbated by the economic crisis triggered by the COVID-19 pandemic (Akkermans et al., 2020; Hite & McDonald, 2020).

The sustainability dimension in career studies focuses on an individual's interaction with factors that may jeopardize their career continuity (Lawrence et al., 2015; McDonald & Hite, 2018). Considering the influence of multiple actors and contexts in developing individual career paths, it takes a systemic approach to understand contemporary careers (De Vos et al., 2020). This discussion refers to the classical definition of sustainability presented by the United Nations Brundtland Commission of 1987 based on three core interconnected dimensions. These are: (1) the principle dimension, which relates to the responsibility of all stakeholders to promote resource conservation, regeneration, and development; (2) the priority dimension, which emphasizes the focus on meeting current needs without compromising future generation needs; and (3) the progress dimension, which reflects society's obligation to achieve sustainable progress (Docherty et al., 2009). When applied to careers, it implies the shared responsibility of career stakeholders to protect and foster (rather than deplete) human and career development (De Vos & Van der Heijden, 2017). Furthermore, it involves the adoption of a continuity perspective for career understanding, in which a career is sustainable when present needs are met without compromising future needs (De Vos et al., 2016), as well as the requirement for continuous career development through lifelong learning and competence development.

The sustainability perspective offers a theoretical lens for career studies to approach complex contemporary backgrounds through a dynamic and systemic understanding of career phenomena (De Vos et al., 2020). Ideally, it implies how different work experiences can provide continual growth and renewal and intersect multiple life contexts, resulting in meaningfulness and well-being for individuals over time (De Vos & Van der Heijden, 2017; Lawrence et al., 2015). From a broader sustainability perspective, research on ecological systems is commonly grounded in resilience, systems, and concepts of ecosystem (Folke, 2016; Holling, 2001). Though recent sustainability career studies have accessed these elements (Baruch, 2015; De Vos et al., 2020; De Vos & Van der Heijden, 2017; Van der Heijden & De Vos, 2015), they have not dived deep into these or approached them in an integrative manner. Thus, despite its importance, sustainability is frequently and presumably addressed as a broad concept (Kramar, 2014). Additionally, career

sustainability is still in its infancy (Akkermans et al., 2021; Van der Heijden et al., 2020a), and there is significant room for fruitful theoretical advances.

Therefore, we argue that it is necessary to take a closer look at the literature to better understand sustainability and careers from the essential conceptual foundations of career resilience, career systems, and career ecosystems. This study aims to analyze how international literature understands and informs the discussion of sustainability within the scope of careers. We conducted a systematic literature review through the Web of Science database using Iramuteq® software as a data processing tool. A systematic review is helpful because it can shed light on the extent the literature has reached, which is not always apparent, thereby enabling the emergence of new ideas and conceptualizations (Siddaway et al., 2019). Therefore, we believe that it is possible to reconcile sustainability issues with career studies as an exclusive field of research. By exploring the basic concepts of sustainability, which have been prevalent in the last three decades, we identified six clusters representing different theoretical approaches that can be used as a starting point to understand the sustainability discussion in career research. We developed six assumptions that offer agendas for future research.

The following section discusses the theoretical premise of the terms used in the literature review. In the third section, we describe the methodological procedures used. The section four analyzes the results and maps the six main themes that support the discussion in section five. Section five introduces six assumptions that may guide future research on career sustainability. Finally, section six concludes the paper and presents the final considerations, contributions, and limitations.

A COMPREHENSIVE OVERVIEW OF CAREER SUSTAINABILITY: CAREER SYSTEM, CAREER RESILIENCE, AND CAREER ECOSYSTEM

Towards a resilient workforce and an open-system career perspective

Career systems were initially understood as a subset of career activities managed by a specific organization (e.g., status-based career systems and promotion systems), with reference to the concept of closed career systems. The systemic perspective implies how these activities fit into a larger picture of the organization. It is associated with traditional career conceptions, which are characterized by linear and hierarchical trajectories within the organization (Stovel et al., 1996). Subsequently, there was a period of expansion of career development theories, the majority of which focused on motivational characteristics aimed at facilitating adaptability in the organizational context (Baruch & Sullivan, 2022; Lawrence et al., 2015).

The term 'resilience' is frequently used in line with the career system discussion to refer to London's (1993) theory of career motivation, which defines it as the ability to adapt with changing circumstances, even when they are discouraging or disruptive. Thus, resilience is understood in conjunction with the concepts of career insight and career identity. The former is the ability to be realistic about oneself and one's career to improve the clarity of one's career goals, whereas the latter is the degree to which people define themselves based on their jobs and

the organization in which they work (London & Raymond, 1997). In this context, the 1994 *The Harvard Business Review* publication "Toward a Career-Resilient Workforce" is a milestone. It highlights the emergence of new groups of workers "who not only are dedicated to the idea of continuous learning but also stand ready to reinvent themselves to keep pace with change; who take responsibility for their career management; and, last but not least, who are committed to the company's success" (Waterman et al., 1994, p. 3).

Towards the end of the 20th century, as the advancement of technological innovations facilitated globalization, the traditional understanding of the concepts of career and employability was unsettled (Baruch, 2015; Baruch & Rousseau, 2019). Organizations have benefitted from the technological advancements and the opening of markets due to liberal government policies, albeit operating in a highly competitive market environment. Eventually, the imperative of employability emerged as the dominant logic, emphasizing the individualistic need for professional development based on diverse experiences that are not always related to the organizational structure (Rickwood et al., 2004). Regarding theoretical implications, these changes are reflected in the current predominant definition of career as "the evolving sequence of a person's work experiences over time" (Arthur et al., 1989, p. 8).

New career opportunities have led to the growing need to implement practices and policies from an open-systems perspective and vice versa. Stovel et al. (1996) conducted a study to illustrate these transformations. They analyzed the career system changes at Lloyds Bank, a traditional British bank, and found that even the most rigid bureaucratic systems were being influenced by the need to change their structures to compete with other local banks. London (1993) revisited the career motivation theory and brought resilience closer to the concept of flexibility to modify resilience assumptions based on contemporary career needs. As the labor market becomes more complex, the individual ability to take necessary actions to overcome barriers is considered essential for workers to "remain marketable, either within or outside the organization" (Gowan et al., 2000, p. 914).

Contextual unpredictability and the rise of sustainability dimension in career studies

The literature underlines how the rising complexity and unpredictability of the context have promoted the non-linearity of contemporary careers and the diversity of possible trajectories in careers' construction (Lawrence et al., 2015). Companies are concerned about career continuity in the face of changing psychological contracts, which has led to declining reservation of employee loyalty for an organization (Baruch, 2004). In addition to company structures, discussions about career transitions have emerged, highlighting the various contexts that influence and result in the continuity of career paths (e.g., factors that motivate researchers or psychologists to change careers) (Carless & Bernath, 2007). New generations of professionals, who are naturalized with the need to be employable and competing with the previous generations of workers accustomed with the stability of traditional careers, are entering the labor market (Baruch, 2004). Regarding development of individual careers and human resource management (Dickmann, 2012), a proclivity for dynamism and openness in career systems has been demonstrated and discussed in

studies on labor, government, community relations (Krishnan & Maheshwari, 2011), and global relations.

Considering these significant changes, research on sustainability intensified. Newman (2011) used the term 'sustainable careers' to address the individual response to these contextual transformations. This concept emphasizes the interdependence and influence of social spaces that pervade career paths, reflecting how individuals and organizations must be open and flexible to change while seeking opportunities for renewal. The overlapping of life spheres is reflected in the fluidity of contemporary career boundaries, which are no longer limited to rigid career systems. Thus, companies must facilitate the renewal process by emphasizing its dynamics and the constant contextual interactivity of careers, particularly in non-work contexts (Newman, 2011), such as home, family, leisure, and other private life domains (Greenhaus & Kossek, 2014).

Herman and Lewis (2012) addressed the issue of sustainability through a comparison between men and women, emphasizing the importance of non-work contexts in the development of careers (e.g., influence of motherhood). Socially sustainable work "enables social reproduction and cares for future generations"; based on this understanding, sustainable career has been defined "not in terms of being able to continue in employment, but also to achieve career advancement commensurate with human capital" (Herman & Lewis, 2012, p. 768). Similarly, Greenhaus and Kossek (2014) consider the career sustainability perspective as a starting point in recognizing the interdependencies between individuals' work and home domains. Home is defined as a variety of non-work roles and settings, including nuclear and extended families, friendships, community involvement, leisure, and self-development activities. Thus, the concept of career sustainability gains space, as evidenced by discussions on career burnout and balancing professional aspects with fulfilling personal and family lives (Greenhaus & Kossek, 2014).

Current research on career sustainability and sustainable careers

In 2015, *The Handbook of Research on Sustainable Careers* consolidated the theoretical discussion on career sustainability by defining sustainable career as "the sequence of an individual's different career experiences, reflected through a variety of patterns of continuity over time, crossing several social spaces, and characterized by individual agency, herewith providing meaning to the individual" (Van der Heijden & De Vos, 2015, p. 7). Though contemporary conceptions of career primarily focus on the individual action of seeking employability (Akkermans & Kubasch, 2017), the discussion of sustainability takes us in another direction. This is predicated on the assumption that the complete understanding of career includes comprehending the influences of diverse actors and career contexts, the changes that occur in these contexts, and their dynamic nature (De Vos & Van der Heijden, 2017).

The concept of sustainability in career evolves with the dynamism and interactivity of career systems (De Vos & Van der Heijden, 2017). The influences of individual (demography, personality, attitudes), organizational (strategy, policies, practices), national (law, economics, labor market, culture), regional, and global (politics, society, regionalization, globalization) contexts reinforce the need to discuss the factors that jeopardize career continuity and, therefore, sustainability (McDonald & Hite, 2018). Considering this contextual complexity, Baruch (2015)

broadened the concept of the career system by introducing an ecosystem for career understanding.

An ecosystem is a system with interconnected actors who rely on one another for the overall system's effectiveness (Iansiti & Levien, 2004). A career system is a setting in which careers are developed, such as the local, regional, sectoral, national, and global labor markets. A career actor is a person, organization, network, association, or national or global entity that participates in the career system. Career actors operate within labor markets, influencing one another in an economic constellation; they are part of a social phenomenon in a global environment (Baruch, 2015). From this perspective, resilience is directly related to the sustainability of an ecosystem. Given the dynamism of the ecosystem in which careers develop, sustainability is dependent not on stability, but on the resilience or ability to adjust, develop, and fit into an ever-changing work environment (Baruch, 2015).

Another contextual aspect of research on career sustainability is the ageing of the workforce, which is reflected in the current work configuration challenges for older workers in a broader context (Chen et al., 2019; Grip et al., 2020; Peters et al., 2019). It assumes an open-system perspective in which the workforce's well-being is approached from a lifespan perspective, as evident in studies focusing on work ability (Brzykcy et al., 2019; Stuer et al., 2019). The concept of resilience in this approach is associated with behavioral studies that emphasize the agency's role in career development (Lyons et al., 2015). Employability is also discussed in conjunction with resilience, which is understood as a behavioral aspect that contributes to adaptability in the face of constant changes and new demands in the labor market, thereby promoting career sustainability (De Vos & Van der Heijden, 2017). The next watershed moment in the discussion on career sustainability was the 2020 special issue of the *Journal of Vocational Behavior* titled "Sustainable Careers across the Lifespan: A Contemporary Perspective." In this edition, sustainability has been addressed through studies on organizational practices (Kossek & Ollier-Malaterre, 2020; Straub et al., 2020); role of non-work orientation in career sustainability (Hirschi et al., 2020); the influence of psychological resources on career sustainability (Barthauer et al., 2020; Kelly et al., 2020); the need for continuous learning to enable a sustainable career across the lifespan (Heslin et al., 2020); the role of career actors' openness and supervisor support to enhance sustainable careers (Bozionelos et al., 2020); and older workers' sustainable employment (Grip et al., 2020). It has also presented the procedural model of a sustainable career; proposed a procedural and systemic perspective for the study of careers; and introduced health, happiness, and productivity as sustainability indicators (De Vos et al., 2020). Furthermore, the editors recognize the still incipient state of sustainability as a field of career studies, highlighting the need to consider contextual elements in the individual development of contemporary careers (Van der Heijden et al., 2020a).

METHODOLOGY

To analyze how the literature understands and informs careers and sustainability, we conducted a systematic literature review using the Web of Science (WoS) database, one of the world's most

important scientific bases (Petticrew & Roberts, 2006). We divided the process into two main phases: definition of scope and analysis.

Definition of scope

Following Siddaway et al. (2019), the first step was review planning, which entails developing unambiguous search terms to operationalize the research question, defining exclusion and inclusion criteria with a careful examination of borderline cases, and revising the definition of requirements, if necessary. Robust recordkeeping was implemented to control all decisions made during the process, thereby improving the study's accuracy. We defined the scope of the systematic review based on the argument that the sustainability perspective need not be reconciled with the discussion on careers based on the pillars of resilience, systems, and ecosystems. Thereafter, using the title, abstract, and keywords as the main field of search, we performed eight independent searches of the WoS database on 14 December, 2020. The terms sustainable career*, career system*, career resilience*, career sustainability*, and career ecosystem* were used with no temporal limitation, where the asterisk symbol (*) is related to terms from the same word root.

In total, 272 publications were identified. The exclusion criteria included editorial material (7), review (7), letter (1), book review (1), meeting abstract (1), articles that did not approach the selected keywords as their primary subject (85), articles without an abstract (2), and repeated articles (16). The exclusion criterion eliminated 120 documents, leaving 152 papers eligible for full-text review. All selected abstracts were carefully read for scope analysis during the screening stage (Siddaway et al., 2019). Thereafter, we briefly read the full texts of the documents to ensure the eligibility of the findings.

Analysis process

This review was conducted using mixed methods. First, we used the quantitative approach of cluster analysis through the Iramuteq® software. Based on the results of the analysis, we used a qualitative approach to discuss the axes and structure the Discussion section.

The Iramuteq® software, commonly used to control research bias (Macke et al., 2018), is a data-processing support tool for semantic contextual analysis that helps researchers identify a database's thematic axes. It was developed in Python and uses the statistical software R features, allowing statistical analysis of various types of texts using the hierarchical decreasing classification method (HDC). HDC is a textual analysis technique in which segments of selected texts are classified according to their respective vocabularies and summarized into three lines or fewer, depending on the corpus size (the collection of texts to be analyzed). Iramuteq® then divides the corpus based on the frequency of the reduced forms and organizes it into statistically significant words of various degrees using a lemmatization process. Each chosen text is an initial context unit (ICU) that contributes to the elementary context units (ECUs). The ECU comprises classes of text segments with similar vocabulary, which are, nevertheless, significantly different from other ECU classes. Iramuteq® software recognizes the quantitative and statistical relationships between various text parts. Unlike traditional content analysis (in which the researcher encodes the text before the software calculates the quantities), this procedure identifies the structures, recurrences,

and patterns in the text. A dendrogram summarizes the main findings, revealing the classes of words based on their semantic roots and factorial analysis and illustrating their similarities and differences (Macke & Genari, 2019).

Iramuteq® was used to process the abstracts of the selected articles. The abstract analysis was divided into three steps: (a) initial abstract preparation and coding; (b) HDC performed by data processing based on ECUs; and (c) class interpretation. The main results are presented in the following section.

ANALYSIS OF THE SYSTEMATIC REVIEW OF SUSTAINABILITY AND CAREER-RELATED ISSUES

The 152 papers analyzed were published between 1992 and 2020 across different areas of research, including business and economics, psychology, education, and science and technology. Iramuteq® classified 581 ECUs (86.72%) of the 670 created from the corpus of 152 abstracts and generated six stable classes. Through the calculation of chi-square values (χ^2) associated with each word, Iramuteq® creates a dendrogram (distance tree) that represents the classes' semantic relevance, helping researchers understand the differences between the classes and the different distributions of content typologies (Illia et al., 2014) (see Figure 1).
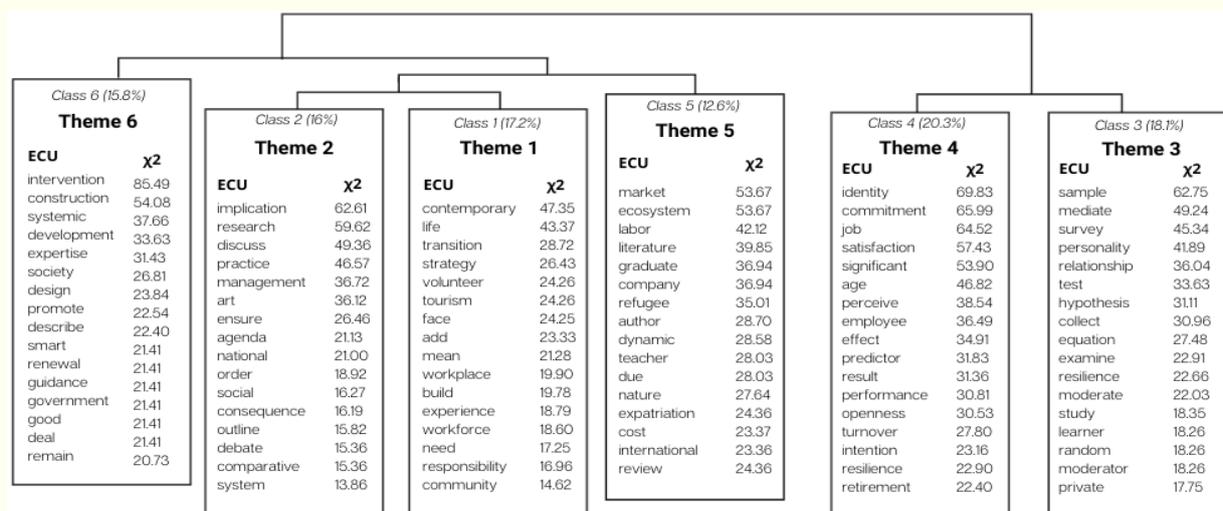

Figure 1. Dendrogram of classes/categories generated on the Iramuteq® software.

These six categories (themes) represent different approaches and offer distinct ways and theoretical paths to discuss career sustainability within the scope of career system, career resilience, career sustainability, and career ecosystem. Figure 2 illustrates the results produced by the Iramuteq® software. Despite their fundamental differences, the ECU percentages in the clusters revealed a balance, demonstrating that they may share certain similarities.

The six main themes were labeled based on the identification of the main ideas common to the selected articles. Theme 1 (17.2% of the ECUs) frames the impact of social spaces on developing sustainable or unsustainable career paths. Theme 2 (6% of the ECUs) discusses the need for an open-systems perspective as an implication for organizational career management. Theme 3 (18.1% of the ECUs) signifies the role of personal attributes and individual behaviors in career sustainability development. Theme 4 (20.3% of the ECUs) addresses satisfaction and well-being in the work and life spheres. Theme 5 (12.6% of the ECUs) involves external and internal career mobility in complex environments. Finally, Theme 6 (15.8% of the ECUs) discusses contemporary sustainability challenges and implications for careers, cities, and governments. We present these categories in detail below.
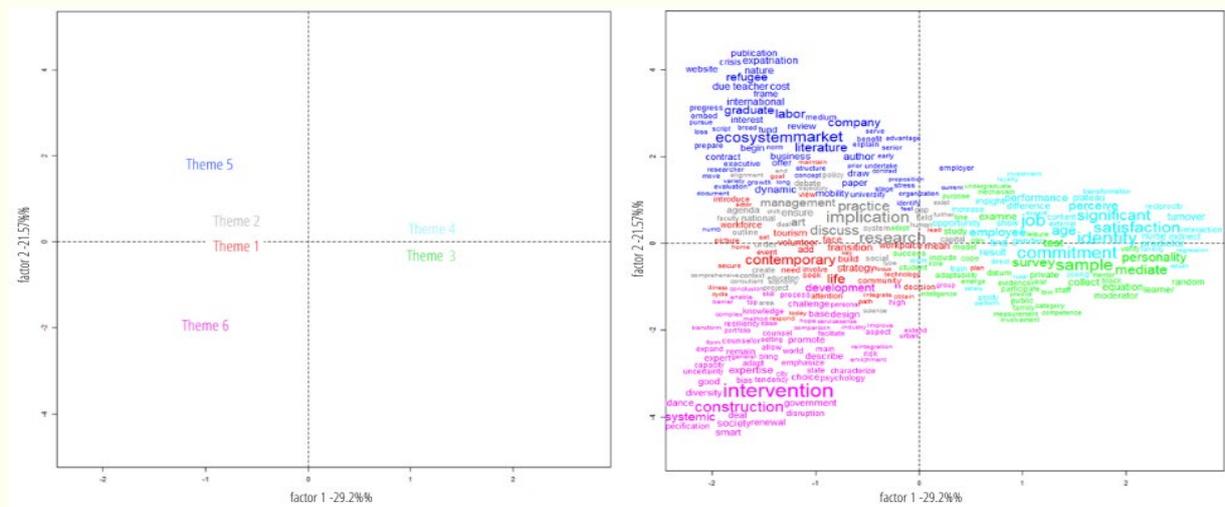

Figure 2. Iramuteq® software results.

Theme 1: The interplay of social spaces in the development of sustainable or unsustainable career paths

The first thematic axis concerns work and modern life at an individual level. The systematic review of the articles demonstrated the role of non-work contexts in enhancing (or not) an individual's career sustainability, emphasizing the interplay between the individual and multiple social contexts embedded in one's career path. In the context of career, sustainability development is not only evaluated through competency development, but also interactions with other actors (Heslin et al., 2020; Li et al., 2020). This is consistent with the proposal of a systemic approach to understand sustainable career development across the lifespan of a sustainable career model (De Vos et al., 2020). Individual agencies place a premium on systemic interactions with various stakeholders, who directly and indirectly influence career and life experiences (Hirschi et al., 2020; Müller et al., 2020). Career management is needed to balance individual and corporate needs. Organizations must provide an environment conducive to edifying career experiences (Barthauer et al., 2020; Bridgstock & Cunningham, 2016), and policymakers must shift their efforts towards workforce employability and employment sustainability (Moriarty et al., 2020;

Tomlinson et al., 2018). Thus, sustainability challenges are encompassed by the unpredictable nature of contemporary careers and the complex factors embedded in individuals' lives (Baruch & Rousseau, 2019; Hite & McDonald, 2020).

Theme 2: The need for an open-systems perspective as an implication for organizational career management

This theme is centered on discussions focusing on the organization as a strategic actor in ensuring career sustainability. The central idea addressed in the reviewed articles is the current need to adopt an open-system perspective to understand career development in organizations. It emphasizes the organization as a critical player in career sustainability (De Vos et al., 2016; Van der Heijden et al., 2020a). Career customization (Straub et al., 2020) and reduced working hours (Kossek & Ollier-Malaterre, 2020) have emerged as effective practices for fostering sustainable careers by providing an opportunity to balance intrinsic needs and those related to other spheres of personal life with those required by the organization. The findings emphasize the significance of organizational practices with macro-contextual configurations as well as the company's potentials as an ally in promoting sustainable career systems that enable dynamic learning and development opportunities critical to career sustainability and labor market needs (Guo et al., 2020; Li et al., 2020).

Theme 3: The significant role of personal attributes and individual behaviors in career sustainability development

This theme encompasses career resilience discussions primarily represented in quantitative studies via metrics that emphasize individual coping strategies for career risks. It assumes a conceptual approximation with the general resilience notion present in the sustainable career concept, in which sustainability is dependent on career resilience or the ability to adjust, develop, and fit into an ever-changing work environment (De Vos & Van der Heijden, 2017; Baruch & Rousseau, 2019). Adaptability (an individual's ability to anticipate changes and construct their future in a changing context) has frequently been associated with resilience comprehension as a core meta-competence essential for employability in complex environments (Savickas & Porfeli, 2012). Resilience is related to the ability to progress towards career goals with resources and strategies already developed, whereas adaptability refers to the constant reformulation of goals and strategies to adapt to changing career realities (Seibert et al., 2016). These ideas are consistent with the core principles of the process model of sustainable careers, which emphasize the importance of a person-career fit to dynamically sustain an individual's career over time (Chudzikowski et al., 2020; De Vos et al., 2020). The influence of the important actors in an individual's family and personal sphere is emphasized as a promoter of resilient behaviors in the face of challenges encountered throughout career trajectories (Hirschi et al., 2020). Considering the influence of social spaces on career continuity, the inclusion of motivational practices at the organizational level based on both objective and subjective criteria of success comes from an open-systems perspective (Russo et al., 2014).

Theme 4: Addressing satisfaction and well-being in work and life spheres

A few articles expressed concerns about the physical, psychological, and social conditions that affect work ability at the individual level as well as workforce well-being in general (Semeijn et al., 2015). The results of this analysis demonstrate the different levels of obtaining career sustainability from a workability perspective: (1) at the micro level, considering variables related to lifestyle, functional capabilities, personal experiences, and other features intrinsic to individuals; (2) at the meso level, focusing on the organizational environment and its impact on individual health (e.g., organizational policies and practices, leadership styles, diversity support); and (3) at the macro level, focusing on the influence of the broader social context (e.g., governmental laws) (De Lange et al., 2015). Discussion on some of the most important research topics on career sustainability can be found in studies on workforce aging (Percival, 2019; Peters et al., 2019) and the workplace (Brzykcy et al., 2019; Gupta & Priyadarshi, 2020). Furthermore, by introducing health and happiness as sustainable career indicators, the sustainable career conceptual model allows for a discussion of work ability at the individual level (De Vos et al., 2020).

Theme 5: External and internal career mobility in complex environments

Under this theme, the articles' central point of convergence is the dynamism of careers, viewed as complex systems embedded in the larger socioeconomic environment of globalization and their effects on career systems and career sustainability (Baruch, 2015; Baruch & Rousseau, 2019; Tran et al., 2019). Themes that pervade the discussions include expatriation and the global refugee crisis (Richardson et al., 2020), which focus on the need for policies and practices facilitating the development and continuity of the careers of those involved in these movements. Career mobility is frequently defined as any change from one position to another (Forrier et al., 2009). It can be approached from a temporal standpoint by referring to a path from the past to the future (Burton et al., 2016). Internal mobility is primarily associated with organizational practices as a form of developmental compensation and alternative to financial benefits (Chudzikowski, 2012). The organization is approached as a sustainability facilitator through internal and external succession training programs (Grip et al., 2020), with the promotion of practices allowing global careers (Baruch & Rousseau, 2019) or preventing careers from plateauing (Lin & Chen, 2020). The ecosystem theory developed by Baruch (Baruch, 2015; Baruch & Rousseau, 2019) serves as the theoretical foundation for a systemic understanding of these movements. The central idea is that multiple career settings coexist and interact with one another. External socioeconomic factors can alter the career ecosystem's dynamics, causing the actor to move until the entire system is balanced.

Theme 6: Contemporary sustainability challenges and their implications for careers, cities, and governments

The sixth theme represents the debate around the impact of structural elements and the shared responsibility of various stakeholders to promote sustainable careers. Technological innovations are regarded as transformative and disruptive contextual forces that influence career development

and nature of work (Curşeu et al., 2021; Mcdonald & Hite, 2018). Furthermore, the COVID-19 pandemic has been a significant contemporary challenge that will shape career development in the coming years (Hite et al., 2020). Cities have become a research focus because they are complex, interconnected social systems (Curşeu et al., 2021) that affect the structural development of careers; the workforce directly influences the structural development of cities (Guo & Baruch, 2021). The urban context involves discussions on social sustainability, which is inextricably linked to careers because of their reliance on work structures (Docherty et al., 2009). Among demographic aspects, the phenomenon of aging workforce reinforces the need for firms and governments to facilitate long-term career development in the face of technological disruption (Chen et al., 2019; Gupta & Priyadarshi, 2020).

The promotion of public policies focused on the inclusion and diversity of immigrants (Guo & Baruch, 2021), aging workers (Peters et al., 2019), and people with disabilities (Gupta & Priyadarshi, 2020) are critical themes among governmental concerns. Efforts for cohesive structural protection in low- and middle-income countries are meant to expand the possibilities of sustainability by facilitating the equal ability to remain economically resilient and engaging in meaningful long-term careers (Vijayasingham et al., 2020). This theme discusses the role of career counsellors as important allies in promoting career satisfaction and well-being through more sustainable paths at the individual level. Finally, given the unpredictability caused by significant structural changes, studies demonstrate the need to enhance and update the traditional theoretical models of vocational psychology that consider issues closer to mutable work reality (Argyropoulou et al., 2020; Maree & Di Fabio, 2018).

DISCUSSION AND FUTURE RESEARCH DIRECTIONS

Data analysis allowed us to identify analytical perspectives to understand career sustainability. They do so by highlighting the central conceptual points developed in career studies over time. Although fundamentally different, the ECU percentages in the clusters reveal a balance among the aforementioned themes, indicating that they present certain similarities (Figure 2).

Theme 1 (the interplay of social spaces in the development of sustainable or unsustainable career paths) and Theme 2 (the need for an open-systems perspective as an implication for organizational career management) are similar and, to a certain extent, complementary to each other when addressing the systemic ways to access career sustainability. Theme 1 focuses on the influence of non-work-related contexts on sustainable careers, whereas Theme 2 relates to organizational practices and policies that facilitate sustainable career paths. Both assume the role of the interaction between the individual and contextual broader instances, and the shared responsibility of actors in fostering sustainable careers; this leads to the possibilities of further investigation.

Theme 3 (the role of personal attributes and individual behaviors in career sustainability development) and Theme 4 (addressing satisfaction and well-being in work and life spheres) are close. An interesting point of approximation between the themes is the organizational psychology view, especially in studies adopting quantitative research methods. Theme 3 is closely related to

psychological coping and individual adaptability, whereas Theme 4 deals with more structural aspects of work and well-being.

Theme 5 (external and internal career mobility in complex environments) addresses contemporary issues related to mobilities (Richardson et al., 2020; Baruch & Rousseau, 2019) by assuming the intense dynamism of contemporary labor markets. This represents the contextual expansion of the open-systems perspective to include broader contexts, such as regional, national, and global instances (Gribling & Duberley, 2019). Theme 6 widens the implications of the social spaces discussed in Theme 1, addressing structural elements that shape career contexts, and the limiting and enabling conditions for career sustainability. Both themes present the career ecosystem perspective (Baruch & Rousseau, 2019) as a theoretical alternative to approaching complex systemic relations.

Based on the conceptual similarities within the themes, we established the following assumptions that may guide future empirical research.

Assumption 1: Non-work-related experiences influence sustainable and unsustainable career paths

Non-work-related experiences are an interesting domain for examining career sustainability at the intersection of the work domain and broader life context. Despite the increasing need for individuals to take ownership of their working lives, career development does not occur in a vacuum (Peeters et al., 2019; Greenhaus & Kossek, 2014). Individuals make several connections with multiple actors and contexts throughout their life and work experiences, which affect their career sustainability (De Vos et al., 2020). For instance, though the relationship between work and family issues can be mutually enriching (Greenhaus & Powel, 2006), there remains a considerable space for conflict (Geurts et al., 2005).

A systematic review shows an increasing number of approaches that highlight the need to consider non-work-related experiences in career management (Heslin et al., 2020; Hirschi et al., 2020; Kelly et al., 2020; Müller et al., 2020). The interdependence of work-life domains in career development has traditionally been investigated from the perspective of nuclear families, friendships, community engagement, and leisure and self-development activities (Greenhaus & Kossek, 2014). Studies have highlighted issues such as parenting and work-home role balance (Carlotto, 2017; Yu, 2016). However, in the last few decades, sociodemographic transformations have changed how individuals live their careers, thereby bringing new challenges to career research. For example, younger generations have fewer long-term relationships and decide to build a family later in life. People live longer and search for new experiences during their free hours. For some researchers, this scenario is related to an increased emphasis on leisure experiences, an aspect that significantly permeates the sustainability of contemporary careers (Kelly et al., 2020).

Assumption 2: Individual non-work-related needs influence organizational policies and practices oriented towards career sustainability

Organizations are nested within an institutional context that has the potential to affect an individual's capacity to develop sustainable careers that meet their needs and preferences over their life course (Tomlinson et al., 2018). This conjuncture emerges from the interplay between life and career and reconfigures individual-organization relations, introducing new challenges for career management through organizational policies and practices. Though organizational careers have been traditionally studied in the context of career systems, they have been limited to organizations' strategic goals and, thus, do not consider other parts of employees' lives (Greenhaus & Kossek, 2014). However, with the individual responsibility of performing in their careers, there is a growing appreciation for subjective career rewards as a possibility for organizational development and recognition.

In this sense, traditional career systems are inadequate to motivate employees who decide to leave their current organizations when their career expectations are not fulfilled (Baruch & Rousseau, 2019). Thus, an open-systems perspective on sustainability policies and practices is fundamental for fully considering individual needs in the organizational environment. The COVID-19 pandemic has accelerated several tendencies for individuals and organizations. Along with more flexible work arrangements and remote work, the movement of "recontextualization of work" (Donnelly & Johns, 2021, p. 89) points towards significant trends that are here to stay in the long term. Aspects such as saving commute time, convenience of local and temporal flexibility, need for increased autonomy, cost reductions, and minimized carbon emissions (Molino et al., 2020; Thulin et al., 2019; International Labour Organization [ILO], 2021) are within the scope of concerns for workers in organizations.

Future studies should analyze organizational career models that emphasize the organization as a facilitating actor on sustainable career paths. Previous research suggests that career customization is a corporate strategy to achieve the satisfactory integration of work and non-work commitments (Valcour, 2015; Kelly et al., 2020).

Assumption 3: Career sustainability involves the interplay between psychological and external factors

Psychosocial career attributes are usually located at the psychological and social intersection of the person. Individual interaction with contextual elements is not always an obstacle to career development and can drive psychological responses and foster meta-competencies, such as resilience, adaptability, and self-efficacy (Lyons et al., 2015; Richardson & Mckenna, 2020). These aspects are central to career sustainability and trigger learning processes in response to situations and events that necessitate change and adaptation (De Vos et al., 2020).

In this regard, sustainability is understood as a process that involves a broad lifespan perspective and is not limited to a temporarily demarked career decision. As possibilities for investigation, we suggest longitudinal studies to comprehend the interaction between psychological factors and

contextual elements as well as how these aspects facilitate or hinder access to career opportunities during individual trajectories (Kelly et al., 2020). To support this proposal, we suggest two theoretical approaches to inform career sustainability. First, the understanding of resilience is a holistic concept (Kossek & Perrino, 2016). Second, the social cognitive career theory affirms that both personal input and contextual factors affect career expectations and decisions (Brown et al., 2011).

Assumption 4: Career sustainability pervades social, cultural, and structural well-being in work-related issues

Health and well-being in work-related issues have been widely discussed in career research (Akkermans & Kubash, 2017; Bulinska-Stangrecka & Bagienska, 2021; Clark et al., 2020; Ingusci et al., 2021; Molino et al., 2020). The main topics are often concerned with general health in the workplace, including the negative and positive effects of work contexts on mental and physical health (e.g., Akkermans & Kubash, 2017; Van den Tooren & De Jong, 2014). Some examples are research on structural work organization aspects in individual well-being perception (e.g., Clark et al., 2020; Molino et al., 2020) and the COVID-19 pandemic has been included as an aggravating factor recently (e.g., Bulinska-Stangrecka & Bagienska, 2021; Ingusci et al., 2021; McDonald et al., 2022). In addition, vocational psychology career studies add occupational stress, such as burnout and exhaustion, as a research concern (e.g., Laughman et al., 2016; Van der Heijden et al., 2020b).

Regarding career sustainability, health and well-being issues are commonly addressed in work-ability research (De Lange et al., 2015). In a general sense, "work ability is a holistic concept that refers to people's ability to do their work healthily and productively given the balance between a person's resources — including their health and functional abilities, education and competence, and values and attitudes — and their work demands" (Stuer et al., 2019, p. 2). In terms of structural influences, the work-ability discussion encompasses themes of the aging population at the organizational policy level (Brzykcya et al., 2019; Grip et al., 2020) and, more broadly, through innovative strategies to unravel the complexities of an aging workforce (Moriarty et al., 2020).

In developed nations, retirement age is no longer a statutory requirement for job exit, and the older employees can continue with their existing careers or transition to new ones (Moriarty et al., 2020). However, the common unemployment scenario in developing countries may imply prioritizing public policies to generate youth job opportunities (Baruch & Rousseau, 2019). This brings crucial challenges for middle-aged and older individuals who face early involuntary retirement and may have limited career options to secure their livelihoods (Moriarty et al., 2020). Future studies should explore the social and cultural aspects of work ability, delving into questions about the meaning of aging beyond chronological age and the role of organizations and governments in facilitating the sustainability of older workers' careers.

Assumption 5: External and internal mobilities are fundamental to the sustainability of individuals' careers and career ecosystems

Career ecosystem theory recognizes the dynamic flux of individuals in labor markets and the role of institutions that operate in mutually interdependent relations (Baruch & Rousseau, 2019). External and internal mobilities are at the core of career ecosystem. Contemporary career ecosystems are characterized by "a constant flow of human capital, prompted and influenced by push/pull factors; spiral learning processes, required for continuous adjustments and adaptation to new situations; ongoing change processes influencing the directions and magnitude of human capital flow; global labor markets, influenced by factors at many levels" (Baruch, 2015, p. 366). Internal mobilities, understood as transitions between functions and career positions in the same company, might be a source of productive learning experiences and enhanced employability, which are central to career sustainability (De Vos & Van der Heijden, 2017). External mobilities, in turn, are necessary to transfer knowledge between different labor markets (regional, national, and global) and organizations, contributing to overall ecosystem effectiveness (Baruch & Rousseau, 2019). On a contextual level, future research could examine the influence of push/pull factors on multiple labor market levels in individuals and the entire ecosystem. As shown in the literature review, career ecosystem theory provides a useful framework for analyzing different career mobilities (between companies, labor markets, and organizational positions) (Richardson et al., 2020) in line with the sustainability discussion.

Assumption 6: Cities form career ecosystems that constrain or facilitate career sustainability

The career ecosystem theory captures both the structural and agentic nature of careers. Recent studies have shed light on structural issues by assuming cities to be career ecosystems (Curseu et al., 2021; Guo & Baruch, 2021; Tams et al., 2021). Cities have a high density of organizations of various segments and different sectoral specialties that drive specific work opportunities and access to resources that foster the sustainability of different types of careers (Kozhevnikov, 2021; Montanari et al., 2021). Traditionally, global cities are more receptive to immigrants (Kozhevnikov, 2021). Furthermore, urban contexts tend to attract professionals seeking opportunities in the creative industry (Montanari et al., 2021), whether in large or small cities offering symbolic and social resources. Smart cities, characterized by the intense technological development of their infrastructure and services, offer highly educated and skilled individuals a particularly attractive lifestyle and career opportunity. However, smart cities have limited career opportunities for those without adequate technologically responsive qualifications (Curseu et al., 2021). Future research may widen these discussions by situating urban contexts as starting points for analyzing career sustainability and broader structural issues from a career ecosystem perspective.

CONCLUSIONS

The career field is a complex, dynamic space crossed by multiple elements ranging from individual to temporal and macro-contextual factors (Akkermans et al., 2021; Baruch & Sullivan, 2022). In this sense, career sustainability offers rich possibilities for theoretical and empirical studies (Van der Heijden et al., 2020a). The six themes revealed by a systematic literature review of 152 papers over three decades showed how sustainability has been addressed in career studies from its conceptual foundations. Additionally, they guide the creation of assumptions representing several perspectives for future research. The assumptions are not exhaustive, but highlight areas that can be further explored. There is much to investigate when comparing countries, types of work, workers, companies, cities, and cultural realities, and considering a time dimension in the context of continuous change, particularly through longitudinal studies.

One of the major contributions of this study is the possibility of analyzing the sustainability of careers beyond the individual perspective. In particular, the interaction of the individual, contextual, and social aspects invites the reader to reflect on broader contextual aspects involving discussions on well-being and health in the work environment and societies. As these premises demonstrate, under the theoretical lens of the career ecosystem, the dimension of sustainability allows the analysis of movements of individuals or groups (e.g., institutions, organizations, governments, cities, and refugees) between local, global, sectoral, regional, and international labor markets. This theoretical possibility elucidates the shared responsibility of different actors (e.g., institutions, organizations, governments, and cities) in promoting contexts that favor social and career sustainability.

Our research agenda also suggests practical implications for organizations and public policymakers in terms of systems thinking to guide strategic actions for career and social sustainability. For instance, non-work contexts influence sustainable and unsustainable career trajectories. Therefore, it is crucial to invest in organizational policies and practices that value professional well-being, such as reduced working hours (Kossek & Ollier-Malaterre, 2020) and remote work (McDonald et al., 2022). From an urban-context perspective, the premises of career sustainability can underpin public policies to promote liveability (Appleyard et al., 2019). This can be done, for example, by investing in affordable and diverse housing linked to employment, education, open public spaces, local shops, health and community services, and leisure and cultural opportunities via convenient public transport, walking, and cycling (Villanueva et al., 2015). Career and AGE (age, generation, experience) learning network set up by the European Social Fund project has made a seminal effort in this direction by applying the theoretical foundations of career sustainability in private and public companies located in Europe and North America (De Vos et al., 2016). We believe that our study may provide the basis for transposing the fundamentals of sustainability to the reality of contexts such as Brazil and other Latin American countries, allowing practical actions to be applied to these realities.

However, this study has some limitations due to the chosen terms and designs. In this sense, using the Iramuteq® based on the papers' abstracts can be pointed out, although this is a common practice among researchers that use this software as an analytical tool. Together with the six themes explored in this study, these considerations make space for further investigation

that could contribute to the consolidation of a sustainable career field. Furthermore, we recognize that every theoretical perspective that explains a social fact has gaps (Baruch & Vardi, 2016). Therefore, instead of generalizing sustainable career to any career design, this study aims to strengthen the basic concepts of sustainability, which, we believe, reinforces the importance of contextual elements.

Research on careers lacks theoretical perspectives that contemplate the different actors in constructing career sustainability at macro-contextual levels, wherein the role of policymakers, government institutions, and the expansion of gender issues stands out, considering these multiple stakeholders are essential to understanding career sustainability at the broadest level. Moreover, the concern with the long-term impacts of individual careers on the entire working-class expansion in understanding careers is the first step towards rethinking contemporary careers beyond individual and organizational influence as the primary actors in developing sustainable career paths.

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