

Psychological resilience of entrepreneurs: A review and agenda for future research

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ABSTRACT

Given that entrepreneurs face substantial adversity in initiating and developing new ventures, a burgeoning stream of research has sought to understand the concept of entrepreneurs' psychological resilience. To structure and synthesize what we know about entrepreneurs' psychological resilience, we systematically review the empirical literature to provide insights on how it has been conceptualized and operationalized, along with its key antecedents and outcomes. Based on our review, we advance a promising agenda for future research, grounded in connecting the psychological resilience of entrepreneurs to other research areas connected to the new venture development process. Overall, we point to the urgent need for theoretical precision to enhance the utility of empirical contributions, suggest promising research designs, expand on the important role of adversity, discuss potential boundary conditions, elaborate on the link between entrepreneurs' psychological resilience and organizational resilience, and address the potential dark side of resilience.

KEYWORDS

Resilience; adversity; new venture development; nascent venturing; entrepreneurial capabilities

Introduction

Successfully pursuing entrepreneurial endeavors is inherently challenging (Chadwick & Raver, 2020; Hopp & Sonderegger, 2015). Entrepreneurs frequently face setbacks and have to manage various forms of adversity, including financial difficulties, the exit of team members, and/or societal marginalization (for example, He et al., 2018; Pidduck & Clark, 2021). Moreover, exogenous shocks, such as those experienced during the COVID-19 pandemic, place additional strain on entrepreneurs' capacities to establish and lead successful new ventures (Shepherd, 2020). Therefore, it is critical to understand how entrepreneurs successfully deal with adversity to facilitate entrepreneurial health and success (Newman et al., 2018). In this regard, scholars have

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emphasized the role of entrepreneurs' psychological resources (Frese & Gielnik, 2014) and, in particular, psychological resilience (Hayward et al., 2010; Shepherd et al., 2020), which refers to positive adaptation despite adversity (Sutcliffe & Vogus, 2003). The literature on entrepreneurs' psychological resilience has grown rapidly in recent years; thus, there is an urgent need for a systematic review of previous work on this construct, synthesizing what we know about the construct and identifying gaps to guide future research (Kraus et al., 2021).

The goal of this review was to advance research on entrepreneurs' psychological resilience, contributing to broader scholarly conversations on the psychology of entrepreneurship in new or small venture development (Frese & Gielnik, 2014; Gorgievski & Stephan, 2016; Shepherd & Patzelt, 2018). Specifically, we make three important contributions. First, we discuss and synthesize current understandings of the concept of entrepreneurs' psychological resilience. A discussion of the construct adds value as scholars have argued that the concept of psychological resilience is domain specific, in other words, it may manifest itself differently in different domains (Todt et al., 2018). Thus, it is critical to understand how psychological resilience manifests in entrepreneurs. Building from our literature review, we highlight differences in how psychological resilience has been conceptualized and operationalized in the entrepreneurship domain. With these steps, we help to differentiate the individual level construct of entrepreneurs' psychological resilience from the organizational level construct of new ventures' resilience. We also enhance conceptual clarity at the intersection of resilience and entrepreneurship, and discuss the meaning and components of entrepreneurs' psychological resilience. Thus, we go beyond prior literature reviews in this area (Castro & Zermeño, 2021; Korber & McNaughton, 2018), to develop a unified perspective that moves the field forward.

Second, we synthesize and structure prior empirical work on the antecedents and outcomes of entrepreneurs' psychological resilience. To provide a comprehensive structure of this empirical work, we organize the antecedents into personal and contextual types. To structure the outcomes of entrepreneurs' psychological resilience, we integrate the meta-framework of Shepherd et al. (2019), who organize entrepreneurship research around three core outcomes in the new venture process (that is, the initiation of entrepreneurial endeavors, engagement in entrepreneurial endeavors, and performance of entrepreneurial endeavors). Based on this synthesis and categorization, we shed light on how entrepreneurs' psychological resilience influences all three foundational aspects of the new venture development process and helps advance research streams in each of these contexts.

Third, building on our literature review, we develop a comprehensive roadmap for scholars to systematically target opportunities both for theoretical and empirical advancement. We highlight important theoretical

foundations for future studies, give recommendations for empirical research designs, elaborate on the role of adversity, and discuss potential boundary conditions in the study of entrepreneurs' psychological resilience. Moreover, to enhance conceptual clarity, we discuss how the psychological resilience of entrepreneurs connects to the organizational resilience of nascent ventures and elaborate on the potential dark side of psychological resilience in entrepreneurship. Our proposed future research agenda serves to stimulate and guide future investigation of how entrepreneurs can successfully navigate adversity and exogenous shocks when immersed in new and small venture development.

Defining and conceptualizing entrepreneurs' psychological resilience

Psychological resilience incorporates two defining elements: first, the experience of adversity or significant challenges, and second, positive adaptation despite this adversity (Masten, 2001). Prior research has adopted different conceptualizations of resilience by examining resilience as either a stable personality trait, state-like developable capacity, process, or outcome (Hartmann et al., 2020; Fisher et al., 2019). In the present article, we define entrepreneurs' psychological resilience as the process by which an entrepreneur "builds and uses [his/her] capability endowments to interact with the environment in a way that positively adjusts and maintains functioning prior to, during, and following adversity" (Williams et al., 2017, p. 742). We adopt a process conceptualization because it is the most encompassing perspective of psychological resilience. It incorporates both the exposure to adversity and how entities respond to this adversity through affective, cognitive, and behavioral mechanisms, based on their inherent capacities to achieve positive outcomes as demonstration of resilience (Hoegl & Hartmann, 2021). In other words, the process perspective is inclusive of trait, capacity, and outcome perspectives, and may be used to explore the affective, cognitive, and behavioral mechanisms that evoke positive adaptation to adversity (Shepherd & Williams, 2020). In the following sections, we discuss the meaning of these elements in application to entrepreneurs.

Concerning exposure to adversity, prior research suggests that adversity may involve acute and relatively isolated events, or chronic circumstances that exert repeated and cumulative impact on individuals (Bonanno et al., 2015). Thus, we define adversity as "an unfortunate event or circumstance or the state of serious and continued difficulty" (Tian & Fan, 2014, p. 252). In the entrepreneurship domain, this could translate into losing an important investor (that is, acute event) or facing high likelihood of venture failure over extended periods (that is, chronic circumstances). Entrepreneurs draw on their individual capability endowments to cope with the experience of adversity. These

capability endowments include affective or emotional capabilities, such as positive emotions like optimism or hope and emotional regulation (Hayward et al., 2010), cognitive endowments, such as knowledge or creativity, as well as behavioral endowments, such as seeking social support (Shepherd et al., 2020). Using these capability endowments enables entrepreneurs to overcome various adversities, thereby demonstrating positive adaptation (Williams et al., 2017).

Positive adaptation (that is, outcome) refers to entrepreneurs bouncing back to, or beyond, a pre-adversity state (Hoegl & Hartmann, 2021). Thus, an entrepreneur's resilience could be demonstrated in maintained or recovered emotional, psychological, and social well-being, such as happiness or vitality, in learned capabilities, such as the ability to launch subsequent ventures, as well as in maintained or recovered performance levels, such as a successful pitch talk (Hoegl & Hartmann, 2021; Shepherd et al., 2020; Stoverink et al., 2020). It is important to highlight that the psychological resilience of an entrepreneur is conceptually distinct from the organizational resilience of the new venture, even though this distinction is often conflated or not explicitly articulated. While entrepreneurs are strongly connected to the ventures they found and/or lead, and their behavior may have imprinting effects on the venture (Klotz et al., 2014), psychological resilience is a personal construct. As such, the organizational success of the new venture may be fostered by the psychological resilience of the entrepreneur, but also involves many other mechanisms (for example, the entrepreneurial team, marketplace), and thus is not necessarily a manifestation of the entrepreneur's psychological resilience. For example, if the organizational success of the new venture comes at personal costs to the entrepreneur (for example, burn-out) then the entrepreneur did not demonstrate psychological resilience (even if the venture was resilient). In the remainder of this manuscript the term entrepreneurs' resilience refers to entrepreneurs' psychological resilience at the individual level.¹

¹It is helpful to note that entrepreneurs' psychological resilience shares some conceptual overlap with other constructs that have become popular in the entrepreneurial domain, including passion, grit, and perseverance. For example, passion – generally defined as an entrepreneur's "consciously accessible intense positive feelings experienced by engagement in entrepreneurial activities associated with roles that are meaningful and salient to the self-identity of the entrepreneur" (Cardon et al., 2009, p. 517) – shares the positive affective aspects of psychological resilience known to enhance entrepreneurial performance (Cardon et al., 2009; Newman et al., 2021). However, it differs critically in that passion does not necessarily derive from adversity (Murnieks, Mosakowski, & Cardon, 2014). Indeed, one can be passionate about entrepreneurship in general or passionate about specific products (Chen et al., 2009) irrespective of the adversity faced. In addition, grit, which refers to an individual's persistence toward long-term goals (Duckworth et al., 2007), shares some overlaps with psychological resilience. However, psychological resilience incorporates more than leveraging adversity to stick to a priori-set goals, and also involves utilizing personal capabilities "prior to, during, and following adversity" to positively adapt in general (Williams et al., 2017, p. 742). Finally, perseverance, which describes sustained goal striving despite adversity (Van Gelderen, 2012), captures the notion of hardiness against challenges. However, it does not necessarily involve the achievement of positive outcomes, which is pivotal to psychological resilience ("bouncing back"). Indeed, in many cases perseverance is an unhealthy response to adversity, whereas the resilience concept embraces adaptability and learning to achieve positive results (Hoegl & Hartmann, 2021).

Method

We conducted a literature review on entrepreneurs' resilience by following best practice in conducting literature reviews (Short, 2009). We performed a keyword search in the databases Web of Science, EBSCO, and ABI/INFORM to identify peer-reviewed articles published in academic journals in the English language with a combination of the following keywords or derived terms in their titles, abstracts, or keywords: "entrepreneur," "small business," "SME," "venture," or "founder" and "resilience." We searched for articles that were published in print or available online by end of September 2021. We excluded articles if they (1) did not focus on the psychological resilience of entrepreneurs; or (2) were not empirical (for example, conceptual articles). We also conducted a manual search for studies on entrepreneurs' resilience in the major management and entrepreneurship journals, as highlighted by the Erasmus Research Institute of Management (ERIM) journal ranking (a list of the journals we searched manually can be requested from the authors). Based on our search we identified 86 peer-reviewed articles on entrepreneurs' resilience for inclusion in the literature review, which are marked with an asterisk in our reference list (we also identified one article that focused on an entrepreneurial team's psychological resilience (Chen & Zhang, 2021), which we did not include in the review part of this manuscript given that it was the only study that focused on the team level of analysis). Of the 86 articles, six only reported results on the second-order concept of psychological capital (PsyCap), and one only reported results on the second-order concept of core confidence, in both of which resilience is only one dimension. We systematically coded the identified articles based on a predefined coding scheme, which can be requested from the authors.

How has entrepreneurs' resilience been defined and measured?

Of the studies that provided a clear definition of resilience, most defined it as a capacity or ability (Newman et al., 2018; Renko et al., 2021). For example, Bullough et al. (2014, p. 474) built on Tedeschi and Calhoun (2004) and defined resilience as "an ability to go on with life, or to continue living a purposeful life, after hardship or adversity." Duchek (2018, pp. 434–335) provided a context-specific definition and defined entrepreneurs' resilience as "the ability of entrepreneurs to anticipate potential threats, to cope effectively with unexpected events, and to adapt to changes to become stronger than before." A few studies (for example, Chadwick & Raver, 2020; Loh & Dahesihisari, 2013) defined resilience as a trait or stable individual difference, viewing it as stable over time. In contrast, some studies specified resilience as a process (for example, Bernard & Barbosa, 2016; Daou et al., 2019). In this regard, Shepherd et al. (2020) built on Williams et al. (2017, p. 742) to define

resilience as “the process by which an actor (individual, organization, or community) builds and uses its capability endowments to interact with the environment in a way that positively adjusts and maintains functioning prior to, during, and following adversity.” In some instances, scholars offered a vague conceptualization that reflected both a process and a capacity definition, but did not clarify which definition they relied on. Moreover, several studies did not provide an underlying definition at all.

Concerning measurement approaches applied in quantitative and mixed-methods studies, 14 studies investigated resilience using items from the resilience scale of the measurement instrument for PsyCap (Luthans et al., 2007), which is based on Wagnild and Young’s (1993) resilience scale, or used Wagnild and Young’s (1993) resilience scale (for example, Chadwick & Raver, 2020; Newman et al., 2018; Obschonka et al., 2018). These scales measure psychological resilience as a state-like capacity or stable trait. Thirteen studies (for example, Bullough et al., 2014; González-López et al., 2019) relied on the brief resilience coping scale (Sinclair & Wallston, 2004), which uses four items to assess resilience as a positive coping behavior. Six studies (for example, Ayala & Manzano Garcia, 2010; Fisher et al., 2018) used the Connor–Davidson Resilience Scale (CD-RISC; Connor & Davidson, 2003) or its short version (Campbell-Sills & Stein, 2007), which treat resilience as a malleable capacity. Finally, three studies (for example, Billingsley et al., 2021; Hundera et al., 2019) used the brief resilience scale, provided by Smith et al. (2008), which conceptualizes psychological resilience as a person’s ability. These different measurement approaches have also been used in burgeoning research in the disciplines of organizational behavior and organizational psychology, and are not specific to the entrepreneurship context. Hartmann et al. (2020) and Cheng et al. (2020) provide an in-depth discussion of these measurement approaches. Although most studies measured psychological resilience using established self-report instruments, some developed new measures, operationalized it as a composite of other resources, or used other approaches to assess resilience, such as through a reflective word list (for example, Anglin et al., 2018; Franco et al., 2021; Al Mamun et al., 2018).

What research designs have been adopted in research on entrepreneurs’ resilience and in which contexts has it been studied?

Our review identified 86 empirical articles on entrepreneurs’ resilience involving over 62,000 participants. Of these articles, 48 involved quantitative research methods, 35 involved qualitative methods, and three involved mixed-method designs (see Table 1 for a summary of the key features of the articles reviewed in our study). The majority of these studies examined entrepreneurs’ resilience in the context of for-profit startups, though a few investigated the concept in the context of social entrepreneurship (for example, Nyame-

Table 1. Overview of key features of the manuscripts included in this research.

	All	Quantitative	Qualitative
Studies	86 ^a	48 (56%)	35 (41%)
Sample Size	62,874	61,913 ^b	678
Countries	36 ^c	28 ^d United States (10), Spain (5), Afghanistan (3), China (3), Italy (3), Malaysia (3), Nigeria (3), Australia (2), Germany (2), India (2), Angola (1), Canada (1), East Africa (1), Ethiopia (1), Finland (1), Ghana (1), Indonesia (1), Iraq (1), Ireland (1), Kazakhstan (1), Korea (1), Lebanon (1), New Zealand (1), Cyprus (1), Pakistan (1), Peru (1), Tajikistan (1), Turkey (1)	20 ^d United Kingdom (6), China (4), India (4), New Zealand (3), France (2), Indonesia (2), Lebanon (2), United States (2), Afghanistan (1), Australia (1), Brazil (1), Canada (1), Chile (1), Costa Rica (1), Finland (1), Germany (1), Iraq (1), Oman (1), Pakistan (1), Tunisia (1), Not Identified (1)
Theories	12	Theory of Planned Behavior (5), Conservation of Resources Theory (2), Attraction Selection Attrition (1), Broaden-and-Build Theory (1), Contingency Theory (1), Ethics of Care Perspective (1), Resource-Based View (1), Signaling Theory (1), Social Cognitive Theory (1), Social Exchange Theory (1), Socioemotional Selectivity Theory (1)	Broaden-and-Build Theory (1), Conservation of Resources Theory (1), Effectuation Theory (1)
Analytical Focus		Outcomes of ER (26), Antecedents of ER (7), ER as Moderator (7), ER as Mediator/ Antecedents and Outcomes of ER (7) ^e	Antecedents of ER (20), Process of ER (9), Outcomes of ER (6)

Note. ER = entrepreneurs' psychological resilience

^aThree studies were identified as mixed-methods.

^bOne study (Sun et al., 2011) contributed a large portion of this sample size ($n = 38,890$).

^cOne of the mixed-methods studies was conducted in South Africa.

^dSome studies were conducted in several countries (for example, Renko et al., 2021).

^eOne study developed a measure.

Asiamah et al., 2020), related to social entrepreneurial intentions (for example, Choi et al., 2021; Sana et al., 2021) or in the context of special forms of new ventures, such as ecopreneurship (for example, Kirkwood, Dwyer, & Walton, 2017). Our synthesis also revealed that research on entrepreneurs' resilience has been conducted in many different countries (and every continent but Antarctica). In addition, some studies investigated entrepreneurial resilience in multiple countries or among people with different cultural backgrounds (for example, Liu, 2020; Renko et al., 2021), while others investigated entrepreneurs that operated across cultural boundaries (for example, refugees and migrants; Alexandre et al., 2019; Huq & Venugopal, 2021; Shepherd et al., 2020). This suggests that research on entrepreneurs' resilience has wide applicability across a range of cultural contexts. Still, the psychological resilience of entrepreneurs might be influenced by their cultural background (Andri et al., 2019), as entrepreneurs with different cultural backgrounds might perceive and respond to risk and adversity differently (Liu, 2020).

We also observed notable differences regarding how quantitative versus qualitative studies addressed adversity. Most notably, many of the quantitative studies in our sample did not explicitly measure adversity, despite it being a defining element of psychological resilience (for exception, see,

Renko et al., 2021). Rather, we surmised that most quantitative studies assumed adversity based on the fact that the context of entrepreneurship involves inherent challenges. Alternatively, some quantitative studies involved adversity in that the research was undertaken in adverse contexts, such as war-torn countries or during the COVID-19 pandemic (for example, Bullough & Renko, 2013; Bullough et al., 2014; Islam et al., 2020) or with disadvantaged groups (for example, Digan et al., 2019). In contrast, the experience of specific forms of adversity was central to nearly all of the qualitative studies in our review; presumably because qualitative studies are well-suited to investigate social and context-dependent dynamics within entrepreneurship (Hlady-Rispal et al., 2021). Specifically, these studies conceptualized adversity in terms of: (a) general business challenges and uncertainties, for example, securing funding (Al-Harathi, 2017); (b) specific adverse events, for example, effects of the 2016 earthquake in Kaikoura, New Zealand (Fang et al., 2020); (c) social barriers to entrepreneurship success, for example, marginalization and gender inequality (McInnis-Bowers et al., 2017); (d) an adverse context, for example, political instability in Iraq (Daou et al., 2019); and (e) adversity in one's personal life, for example, experiences of being a refugee (Shepherd et al., 2020). One likely reason for the different approaches to assessing adversity across methods is that most quantitative studies conceptualized resilience as a capacity, which can also be assessed in the absence of adversity, as it relates to the general potential of entrepreneurs to show positive functioning when faced with adversity (Brykman & King, 2021).

Finally, our review identified that several studies failed to draw on specific theoretical perspectives to guide their research, as we only identified 12 theories used in prior work (see Table 1). The theory of planned behavior (Ajzen, 1991) was the most commonly used theory (Baluku et al., 2021; González-López et al., 2019; Maslakçı et al., 2021; Okolie et al., 2021; Pérez-López et al., 2016), which scholars invoked to argue that psychological resilience is an important competence that facilitates entrepreneurial intentions. The next most frequently used theory was conservation of resources theory (Hobfoll, 1989), which scholars invoked to argue that psychological resilience is an important personal work-related resource, that entrepreneurs strive to accumulate and protect to buffer against the negative effects of stress and to facilitate growth in connected resources (Doern, 2016; Fisher et al., 2018; Newman et al., 2018). Furthermore, two studies (Chadwick & Raver, 2020; d'Andria et al., 2018) invoked broaden-and-build-theory (Fredrickson, 2001) to explain how psychological resilience can be used as a resource to enhance cognitive flexibility and performance. Altogether, our review points to an urgent need for greater theoretical development to advance the study of entrepreneurs' psychological resilience.

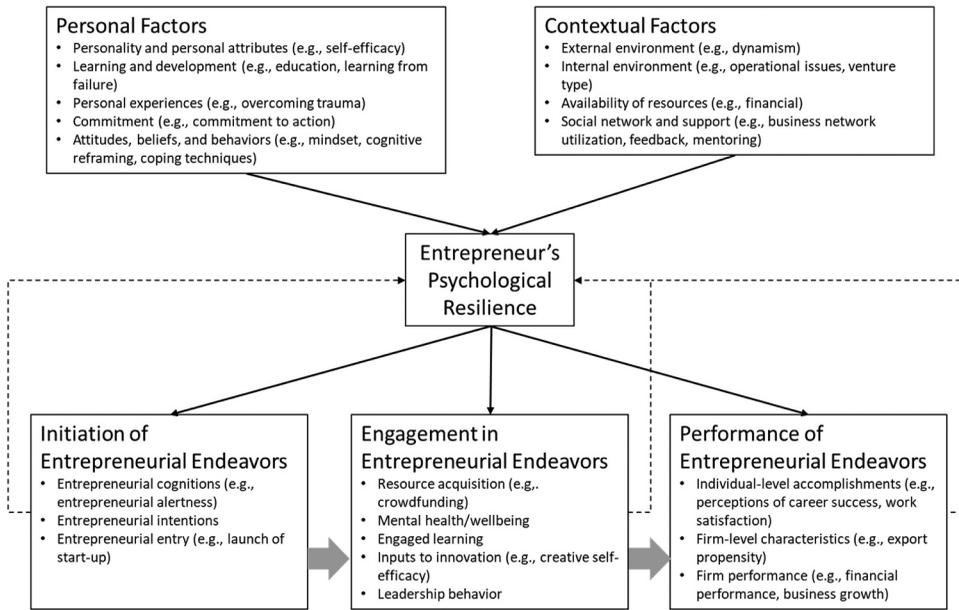


Figure 1. Overview and categorization of existing research on psychological resilience of entrepreneurs. Solid arrows illustrate empirical research reviewed in this manuscript; Dashed arrows illustrate feedback loops that are likely to exist, but have not been investigated yet; gray arrows illustrate the entrepreneurial process based on Shepherd et al. (2019).

What personal and contextual factors cultivate entrepreneurs’ resilience?

In the following section, we review the antecedents of entrepreneurs’ psychological resilience by clustering them into personal factors – including personality, learning experiences, personal experiences, commitment, attitudes, and behaviors – and contextual factors – including the external and internal environment, resources, and social networks and support (see Figure 1).

Personal factors

Several researchers have examined the personality traits and personal attributes associated with entrepreneurs’ resilience. For example, Pérez-López et al. (2016) found a positive relationship between self-efficacy in recognizing entrepreneurial opportunities and the resilience of university students. As well, Salisu et al. (2020) uncovered that perseverance of effort and consistency of interest, as two dimensions of the malleable personality trait grit, were positively related to resilience. Researchers also pointed to a positive association between perceived behavioral control (González-López et al., 2019), as well as internal locus of control (Nisula & Olander, 2020), and resilience. Complementing this research, Fisher et al. (2018) reported that both harmonious and obsessive passion are positively related to an entrepreneur’s resilience.

Others have studied how engagement in learning and development activities promote entrepreneurs' resilience, and have explored whether and how entrepreneurial education fosters resilience (Ramchander, 2019). For example, researchers have found a positive associations between entrepreneurship development programs and resilience, especially when these programs focused on collaboration, coaching, and visual facilitation (Gray & Jones, 2016). A quasi-experimental study (González-López et al., 2019) showed that students who participated in an entrepreneurship business class developed greater resilience, and that the relationship was mediated by perceived behavioral control, attitudes, and subjective norms (though Okolie et al. (2021) did not find support for this relationship). Highlighting the important role of learning, several studies found that learning from prior negative experiences and entrepreneurial failures may facilitate recovering from these challenges and foster resilience in subsequent entrepreneurial endeavors (for example, Crick & Crick, 2016; Doern, 2016; Lafuente et al., 2019; Stephens et al., 2021). Similarly, Manning et al. (2020) found that entrepreneurs' resilience developed in part from reading about how other entrepreneurs coped with crises.

Moreover, the individual experiences of entrepreneurs in private and entrepreneurial contexts have been shown to foster resilience. For example, experiencing and overcoming personal challenges or initial difficulties when starting a business have been found to strengthen resilience (for example, Al-Harhi, 2017; Naseer et al., 2020; Saxena & Pandya, 2018). Duchek (2018) further supported the importance of early childhood experiences, finding that entrepreneurs whose parents provided learning opportunities or gave their children the responsibility for dealing with challenging and difficult situations were more likely to be resilient. Entrepreneurship studies have also highlighted the importance of an entrepreneur's commitment to their development of resilience. For instance, commitment to actions that related to a specific trauma experienced in the past were a source of self-reconstruction in the process of resilience (Bernard & Barbosa, 2016). Similarly, Al-Harhi (2017) found that the ability to cope with initial difficulties in a business's startup phase increased commitment to the endeavor, which in turn fostered the entrepreneur's resilience. Moreover, developing contingency plans has been identified as a critical tool to prepare for and handle unforeseen adversities (Prah & Sibiri, 2021).

Emerging research has provided further insights by investigating the relationship between entrepreneurs' attitudes, beliefs, and behaviors and their resilience. In particular, entrepreneurs who focused on developing an ability to cope with losses and embraced adaptive responses in times of crisis were found to be more resilient. Positive attitudes toward entrepreneurship gave individuals the necessary persistence in uncertain environments and were positively associated with resilience (González-López et al., 2019; Pérez-López et al., 2016). Likewise, research showed that entrepreneurial

preparedness (Muñoz et al., 2019), a growth mind-set (Billingsley et al., 2021), or a positive mind-set (Doern, 2016) were positively related to entrepreneurs' resilience. Complementing these findings, Corner et al. (2017) identified that having other responsibilities and commitments limited disruptions in emotional and psychological functioning after experiencing venture failure. Moreover, entrepreneurs' sense of meaning, religious beliefs, and coherence between the professional project and the self were perceived as important sources of entrepreneurs' resilience (Bernard & Barbosa, 2016; Tlaiss & McAdam, 2021). Finally, concerning entrepreneurs' behaviors, research suggests that entrepreneurs can develop resilience by engaging in reflection after experiencing failure (Yao et al., 2021). Moreover, different coping techniques may facilitate entrepreneurs' resilience in the face of risk (Liu, 2020). Complementing this research, entrepreneurs' resilience has been found to moderate the relationship between business stage (novice versus established business owners) and coping strategy (Hundera et al., 2019).

Contextual factors

Researchers have started to investigate the contextual factors that foster entrepreneurs' resilience. Entrepreneurs often operate in highly volatile and dynamic environments, and being exposed to dynamic environmental conditions, such as unexpected changes in competition and client bases, has been found to relate to the dimension of resourcefulness in entrepreneurial resilience (Franco et al., 2021). Dynamism caused by natural disasters can also evoke resilient entrepreneurial responses by triggering entrepreneurial thought and action (McInnis-Bowers et al., 2017).

Researchers have also studied how organizational characteristics relate to entrepreneurs' resilience. For example, Franco et al. (2021) discovered that entrepreneurs who enjoyed greater control over their businesses' operational matters (for example, technical requirements, raw materials) also demonstrated greater resilience. Moreover, researchers found that the type of the new venture might influence entrepreneurs' resilience in that entrepreneurs of resource-based and skill-based ventures showed higher resilience than entrepreneurs of risk-taking or knowledge-based ventures (Sun et al., 2011). Yet, Quagraine et al. (2021) did not find a significant relationship between engagement in micro-entrepreneurial activities and female entrepreneurs' resilience. Scholars have also investigated the importance of external resources to resilience. For example, Doern (2016) found that entrepreneurs who had invested in accumulating resources before the start of a crisis were able to draw on financial and emotional support that enabled them to be more resilient. Furthermore, these entrepreneurs were better able to actively mobilize resources in the aftermath of the crisis (Doern, 2016).

Finally, several studies uncovered that the broader social network and social support can be an important resource for fostering entrepreneurs' resilience (Ferguson et al., 2017; Singh et al., 2021). For example, Newman et al. (2018) found that business networks, an important source of social support and learning, fostered entrepreneurs' resilience, and that the influence of social support was stronger as entrepreneurs aged. Mentors have also been shown to be an important source of support that helped individuals enhance their resilience before they engaged in entrepreneurial activity (Bernard & Barbosa, 2016; St-Jean & Audet, 2012). Similarly, research identified feedback from crowdfunders as helpful in developing entrepreneurs' resilience (Macht & Chapman, 2019). A study by Pérez-López et al. (2016) revealed that the broader social environment played a vital role in promoting resilience, in such a way that if an individual's broader social environment supported risk-taking and the individual's entrepreneurial intentions, the environment promoted resilience. González-López et al. (2019) provided additional support for the link between social norms and resilience. Researchers also identified the importance of an entrepreneur's immediate social context (that is, the entrepreneurs' family) which can facilitate entrepreneurs' resilience through respect and support (Duchek, 2018; Zehra & Usmani, 2021).

Does entrepreneurs' resilience predict entrepreneurial outcomes?

Drawing on Shepherd et al.'s (2019) framework for organizing the key sets of outcomes in the process of entrepreneurship, we cluster outcomes of entrepreneurs' resilience into entrepreneurs' initiation of entrepreneurial endeavors, engagement in entrepreneurial endeavors, and performance of entrepreneurial endeavors. These different outcome categories represent an interconnected process of new venture development, which is illustrated with gray arrows in [Figure 1](#).

Initiation of entrepreneurial endeavors

Researchers have examined whether entrepreneurs' psychological resilience affects their initiation of entrepreneurial endeavors. We reviewed research examining the link between resilience and variables that capture entrepreneurs' initiation of entrepreneurial endeavors, defined as "the first steps (cognitively, affectively, and/or behaviorally) of identifying (through recognition or co-creation) and evaluating a potential opportunity before full-scale exploitation" (Shepherd et al., 2019, p. 163).

First, researchers have explored whether entrepreneurs' resilience predicts entrepreneurial cognitions. For example, researchers have found a strong link between entrepreneurs' resilience and their entrepreneurial alertness (Obschonka et al., 2018). Second, several studies have focused on whether

entrepreneurs' resilience predicts their entrepreneurial intentions. These studies demonstrated a significant direct link between entrepreneurs' resilience and their entrepreneurial intentions (Bullough & Renko, 2013; Bullough et al., 2014; González-López et al., 2019; Jin, 2017; Pérez-López et al., 2016; Renko et al., 2021) as well as PsyCap and (social) entrepreneurial intentions (Choi et al., 2021; Maslakçı et al., 2021) and self-employment intentions (Baluku et al., 2021). Moreover, researchers have examined the factors that explain the resilience-entrepreneurial intentions link. In particular, Obschonka et al. (2018) found that the link between resilience and entrepreneurial intentions was fully mediated by entrepreneurial alertness. Complementing these findings, research uncovered that entrepreneurs' resilience as a moderator strengthened the direct positive relationship between compassion and social entrepreneurship intentions, and also strengthened the indirect relationship of loving-kindness-meditation with social entrepreneurship intentions via compassion (Sana et al., 2021). Finally, researchers have investigated whether entrepreneurs' resilience predicts entrepreneurial entry. Research suggests that more resilient entrepreneurs are more likely to launch a start-up (Bernard & Barbosa, 2016) and found new ventures in the future (Corner et al., 2017). Qualitative work by d'Andria et al. (2018) also revealed that resilience was critical to an entrepreneur's successful takeover of an existing business. Moreover, resilience strengthened the relationship between intention and the entrepreneurial actions of disabled students (Johnmark, Munene, & Balunywa, 2016).

Engagement in entrepreneurial endeavors

Scholars have also examined whether entrepreneurs' resilience predicts their engagement in entrepreneurial endeavors. We reviewed research that has examined the link between resilience and variables that capture entrepreneurs' engagement of entrepreneurial endeavors, defined as "the cognitive, affective, behavioral, and/or organizational activities of involvement in the process of exploiting a potential opportunity" (Shepherd et al., 2019, p. 167).

First, researchers have explored whether entrepreneurs' resilience predicts their ability to acquire resources for facilitating entrepreneurial endeavors. For example, Anglin et al. (2018) found that entrepreneurs' use of positive psychological language in crowdfunding campaigns, including that which captures their resilience, is positively related to crowdfunding performance. Also, research found that entrepreneurs' resilience mediates the positive effect of low mentor expectation on new venture creation (Dost et al., 2021), and is an important resource in the development of an entrepreneurial endeavor (Savolainen et al., 2019), especially for groups that face adverse conditions, such as women refugees (Huq & Venugopal, 2021). Research conducted during the COVID-19 pandemic found that resilience supported persistence

despite adverse conditions, such that resilient entrepreneurs were better able to adapt their business strategies (Sharma & Rautela, 2021) and were more optimistic about their ventures' future success (Stephens et al., 2021).

Second, researchers have examined whether entrepreneurs' resilience predicts their mental health and well-being. Newman et al. (2018) found a strong link between entrepreneurs' resilience and their subjective well-being. In addition, Baron et al. (2016) discovered that entrepreneurs' PsyCap fostered higher levels of subjective well-being by reducing the levels of stress experienced by the entrepreneurs. Similarly, Roche et al. (2014) identified that PsyCap was positively related to entrepreneurs' mental health and negatively related to cynicism and emotional exhaustion. Sergent et al. (2021) also found that core confidence predicted lower psychological distress during the opportunity identification phase.

Third, researchers have explored whether entrepreneurs' resilience predicts their engaged learning and inputs to innovation. For instance, Corner et al. (2017) found that resilient entrepreneurs experienced more high-level learning than less resilient entrepreneurs, and were in a better position to apply learning from failure. Further, Hallak et al. (2018) found that entrepreneurs' resilience predicted higher levels of innovation through fostering creative self-efficacy. Finally, research has also considered whether entrepreneurs' resilience predicts how entrepreneurs engage in entrepreneurial endeavors. For example, Peterson et al. (2009) found that start-up leaders' positive psychological traits including resilience predicted their use of transformational leadership.

Performance of entrepreneurial endeavors

We reviewed research examining the link between resilience and variables that capture entrepreneurs' performance of entrepreneurial endeavors, defined as "the accomplishments (or lack thereof) from exploiting a potential opportunity or multiple potential opportunities" (Shepherd et al., 2019, p. 174).

First, researchers explored whether an entrepreneur's resilience predicts individual-level accomplishments. For example, several studies found that entrepreneurs' resilience fostered career success, and was needed to persist in the entrepreneurial employment despite challenges (for example, Chen & Liu, 2019; Croteau et al., 2021; Loh & Dahesihsari, 2013; Nyame-Asiamah et al., 2020; Salisu et al., 2020). Further, studies established a positive relationship between entrepreneurs' resilience and work and/or career satisfaction (Owens et al., 2013; Santoro, Ferraris et al., 2020), and uncovered that entrepreneurs' resilience moderates the relationship between entrepreneurs' self-efficacy and career satisfaction (Santoro, Ferraris et al., 2020). However, prior research could not establish a significant relationship between entrepreneurs' resilience and their growth intentions (Hizam-Hanafiah et al., 2017).

Second, studies have explored the relationship between entrepreneurs' resilience and firm-level characteristics. For example, Brown and Kasztelnik (2020) investigated the relationship between entrepreneurs' resilience, measured based on the CD-RISC (Connor & Davidson, 2003), and climate for financial innovation, but found that only one of the five dimensions of the CD-RISC was related to a venture's climate for financial innovation. Lafuente et al. (2019) found that the ventures of experienced and resilient entrepreneurs showed higher international orientation in terms of export propensity than novice entrepreneurs.

Third, and finally, the relationship between entrepreneurs' resilience and firm performance outcomes is of growing interest. Studies have found a positive relationship between entrepreneurs' resilience (or entrepreneurs' PsyCap) and the financial performance of the venture (for example, Digan et al., 2019; Islam et al., 2020; Peterson et al., 2009), as well as entrepreneurs' subjective perceptions of entrepreneurial success (Fisher et al., 2018; Santoro, Bertoldi et al., 2020). Investigating the moderating effect of entrepreneurs' resilience, some studies have found that entrepreneurs' resilience moderated the effects of entrepreneurs' self-efficacy (Santoro, Ferraris et al., 2020), and employees' resilience (Santoro et al., 2021) on venture performance, and that entrepreneurs' PsyCap bolstered the positive relationship between empowerment and venture performance (Digan et al., 2019). Complementing these findings, research has revealed that entrepreneurs' resilience (and PsyCap) may facilitate venture growth, a key indicator of venture performance (for example, Agarwal et al., 2022; Ayala & Manzano Garcia, 2010; Ayala & Manzano, 2014; Okonji et al., 2020), especially when industry dynamism is high (Hmieleski et al., 2015). Furthermore, scholars have found an indirect effect of entrepreneurs' resilience on sustainability of the venture, as mediated by venture performance (Al Mamun et al., 2021). Finally, some research shows that entrepreneurs' resilience may nurture business survival and may form the basis for venture resilience (Branicki et al., 2018; Chadwick & Raver, 2020; Kogut & Mejri, 2021). For example, Chadwick and Raver (2020) found a strong relationship between entrepreneurs' resilience and business survival via the enhancement of their positive appraisal of challenges faced and proactivity.

Discussion and agenda for future research

Given that entrepreneurs face many different forms of adversity in initiating, establishing and maintaining successful ventures (Chadwick & Raver, 2020; Pidduck & Clark, 2021), there are growing calls for more research on entrepreneurs' psychological resilience (Patzelt et al., 2021; Shepherd & Williams, 2020). The fact that 45% of our sample was published since 2020 shows that research interest in entrepreneurs' psychological resilience is rapidly growing.

Our review not only discusses the concept of entrepreneurs' resilience, but also sheds light on the network of constructs to which it is related. Research suggests that psychological resilience might be central to the entrepreneurial process, as it influences the initiation of, the engagement in, and the performance of entrepreneurial endeavors. Thus, knowledge about the antecedents of entrepreneurs' psychological resilience is of value to understand how to support entrepreneurial endeavors. Grounded in our literature review, and drawing on the broader literature on psychological resilience in the workplace (Hartmann et al., 2020; King et al., 2016), psychology of entrepreneurship (Frese & Gielnik, 2014; Gorgievski & Stephan, 2016), and the entrepreneurial process (Shepherd et al., 2019), we derive specific recommendations to guide future research on entrepreneurs' resilience, which are summarized in Table 2.

Opportunities for theoretical advancement

One finding of our review was that entrepreneurs' resilience has been defined and conceptualized in multiple ways. Scholars have explored entrepreneurs' resilience as a stable trait-like phenomenon, malleable personal capacity, process, and outcome. Different conceptualizations may equally nurture our knowledge on this important phenomenon. However, we noticed that several studies either provided a vague definition or no definition of the construct. This is unfortunate, as the advancement of this field requires scholars to be specific about how they understand and study entrepreneurs' resilience to ensure consistent knowledge synthesis and translation (Hartmann et al., 2020). Thus, we encourage scholars to be more specific about their underlying definition and conceptualization of entrepreneurs' resilience in future research, and to align their conceptualization with their study design.

Another significant finding was that scholars rarely invoked established theories to frame and explain their research. Thus, our review points to an urgent need for theoretical grounding and integration to build a cohesive body of knowledge about the antecedents, outcomes, and processes of entrepreneurial resilience. In the following sections, we highlight a number of theoretical perspectives that will be useful to explain how entrepreneurs' resilience develops and fosters their initiation, engagement, and performance of entrepreneurial endeavors. Specifically, we focused on theories that are prominent in the broader stress and resilience literatures, but have not been applied to their full potential in the study of entrepreneurs' resilience, along with theories that can account for the inherent dynamics of entrepreneurs' resilience.

Social cognitive theory

Social cognitive theory suggests that personal factors, environmental events, and individuals' behavior interact to predict individuals' psychosocial functioning (Bandura, 1986). As such, this theoretical perspective is well suited to

Table 2. Overview of future research directions.

Research directions	Current limitations and/or arising opportunities	Example research questions
<i>Theoretical advancements</i>		
Conceptualization	Some extant studies either do not clearly define psychological resilience or provide a vague definition that fails to clarify whether a trait, capacity, or process perspective was adopted. Providing a clear conceptualization in line with the chosen empirical method is vital to advance our understanding of entrepreneurs' psychological resilience.	<ul style="list-style-type: none"> • How can different conceptualizations inform the study of entrepreneurs' psychological resilience?
Social cognitive theory	Social cognitive theory is well suited to explore how the exposure to adversity, entrepreneurship-specific characteristics, and entrepreneurs' capabilities and behaviors interplay in building entrepreneurs' psychological resilience and how entrepreneurs' psychological resilience influences entrepreneurial outcomes in a given context.	<ul style="list-style-type: none"> • How do the personal factors of the entrepreneur interact with exposure to adverse events and behaviors within the specific entrepreneurial phases (that is, initiation, engagement, performance) to predict the development of psychological resilience? • How will psychological resilience dynamically change over time based on the conditions, personality, experiences, and behaviors of the entrepreneur?
Integrated resources theory	More work is needed to understand the potential of resilience as a personal resource to maintain and foster well-being and to reduce the negative impact of challenges during entrepreneurial endeavors.	<ul style="list-style-type: none"> • What roles do resource gains and losses play in the resilience process? • How can entrepreneurs draw on resilience as a personal resource to reduce stress levels and increase their well-being when initiating, engaging in, and performing entrepreneurial endeavors?
Effects of emotions	As research considering the role of emotion when studying entrepreneurs' psychological resilience is scarce, there is a need to integrate affect-based theories (for example, broaden-and-build theory, affect-as-information theory) in future research studies to advance our understanding of entrepreneurial resilience.	<ul style="list-style-type: none"> • What role(s) do emotions play in developing resilience, and how does resilience, in turn, foster positive emotional states? • How can emotions help (or hinder) entrepreneurs assess and respond to threats when initiating, engaging in, and performing entrepreneurial endeavors?
<i>Empirical advancements</i>		
Empirical research designs and methods	Prior research studying resilience has relied upon existing measures that were developed in domains other than entrepreneurship. A measurement scale that acknowledges the specific domain of entrepreneurship provides an opportunity for a more nuanced understanding of entrepreneurs' psychological resilience. Extant research has largely used cross-sectional designs and measured resilience at only one point in time. Thus, current research misses the opportunity to study the dynamic nature of entrepreneurs' psychological resilience. As most ventures are founded by teams, future work should study the psychological resilience of entrepreneurial teams.	<ul style="list-style-type: none"> • What are the context specific characteristics of entrepreneurs' psychological resilience? • How does entrepreneurs' psychological resilience develop over time and prior, during, and after adverse events? • How can entrepreneurial teams develop a collective resilience to help them respond to adversity?

(Continued)

Table 2. (Continued).

Research directions	Current limitations and/or arising opportunities	Example research questions
Role of adversity	Most studies did not specify the role of adversity in resilience. There is a need to better understand how the characteristics of adversity affects entrepreneurs' psychological resilience.	<ul style="list-style-type: none"> • How does the type, severity, and duration of adversity affect entrepreneurs' psychological resilience? • How do several adverse events (for example, the interplay between chronic contexts and acute events) exacerbate the entrepreneur's perception of adversity and entrepreneur's perception of adversity and the ability to adapt positively despite these adverse conditions?
Boundary conditions	Research on entrepreneurs' psychological resilience has pointed to important personal and environmental contingency factors, and suggests that the study of resilience is applicable to a variety of countries and cultural contexts. Future studies should explore the role of cultural and country-specific elements as important boundary conditions.	<ul style="list-style-type: none"> • How do cultural and country-specific factors (for example, values) influence the relationship between psychological resilience and outcomes? • How can country-specific responses to the same global adversity affect an entrepreneur's psychological resilience?
Link to start-up resilience	Because entrepreneurs' psychological resilience is seen as vital for the survival of a new venture, researchers may consider how entrepreneurs' psychological resilience relates to organizational resilience of ventures.	<ul style="list-style-type: none"> • How can psychological resilience during initiation, engagement in, and performance of entrepreneurial endeavors help to facilitate the sustainable functioning of the new venture?
Dark side of entrepreneurs' psychological resilience	Entrepreneurs' psychological resilience has been described as a positive phenomenon, with research remaining silent about the potential dark side of resilience. To develop a more holistic understanding of entrepreneurs' resilience, we need to advance our understanding of potential negative effects.	<ul style="list-style-type: none"> • Does successfully coping with adversity result in entrepreneurs perceiving themselves as invulnerable when exposed to future adverse conditions and events? • Can entrepreneurs' capacity for resilience have negative effects in the absence of adversity? • Can highly resilient entrepreneurs negatively affect a new venture?

shed light on the dynamic nature of entrepreneurs' resilience with respect to how exposures to adversity, entrepreneurship-specific characteristics, and entrepreneurs' capabilities and behaviors interplay in building entrepreneurs' resilience. It can also explain how entrepreneurs' resilience influences entrepreneurial outcomes in a given context. For example, Bullough et al. (2014) used social cognitive theory to explain the effect of entrepreneurs' resilience on entrepreneurial intentions in a war-torn country. Accordingly, we encourage scholars to draw on social cognitive theory to examine the extent to which personal factors (for example, personality), environmental events (for example, economic crises), and prior entrepreneurial experiences influence the initiation, engagement, and performance of entrepreneurial endeavors through fostering resilience. We expect those with certain personality traits and prior entrepreneurial experience to exhibit higher levels of resilience

under certain environmental contexts, and exhibit a greater likelihood to initiate, engage in, or perform entrepreneurial endeavors as suggested by our framework.

Integrated resources theory

Another opportunity is to draw from integrated resource theories, such as conservation of resources (COR) theory (Hobfoll, 1989) and job demands-resources (JD-R) theory (Demerouti et al., 2001). These are two of the most frequently cited resource-based theories concerning how to positively deal with stress and prevent burnout (Bakker et al., 2014; Hobfoll et al., 2018), and have received increasing attention in the literature on psychological resilience in the workplace (Hartmann et al., 2020; King et al., 2016). As our review has uncovered, some scholars have started to build on COR theory to investigate entrepreneurs' resilience (Doern, 2016; Fisher et al., 2018; Newman et al., 2018). Future applications of these theories can help to explore how entrepreneurs cope with the adversities that they face when initiating, engaging in, and/or performing entrepreneurial endeavors. For example, scholars might consider building on recent research that applies COR theory to examine how psychological resilience helps entrepreneurs overcome adversity and maintain their psychological well-being (Doern, 2016; Newman et al., 2018). Researchers may also consider drawing on the key tenets of COR theory to highlight the processes through which psychological resilience both protects entrepreneurs from resource loss and assists in acquiring additional resources (Bardoel & Drago, 2021; Hobfoll, 1989). In addition, researchers may consider drawing on the JD-R theory (Demerouti et al., 2001) to examine whether and how psychological resilience acts as a personal resource that reduces the negative impact of challenges faced when initiating, engaging and/or performing entrepreneurial endeavors (that is, job demands) on entrepreneurs' well-being and success.

Theories on the effects of emotions

A myriad of research underlines the important role of emotions, such as passion, joy, or grief, in the entrepreneurial process (for example, Breugst et al., 2012; Jiang et al., 2019; Shepherd et al., 2009). The role of emotions has also been established in research on psychological resilience (Cohn et al., 2009; Hartmann et al., 2020). Yet, to date, there has only been limited research on how entrepreneurs' emotions influence or are influenced by their psychological resilience. Broaden-and-build theory (Fredrickson, 2001), which argues that positive emotions facilitate psychological resilience, is one promising theory to integrate in this literature. Broaden-and-build theory states that positive emotions buffer the negative effects of negative emotions (undoing effect), and broaden and build momentary thought-action repertoires (Fredrickson, 2013). Through these processes, positive emotions are

conducive in building psychological resilience (Tugade & Fredrickson, 2004). In the longer term, these processes may cause upward spiraling effects, in that positive emotions can build resources, such as psychological resilience, which builds positive emotions in turn (Fredrickson & Joiner, 2002). As such, broaden-and-build theory may help to create a deeper understanding of how positive affect may foster entrepreneurs' resilience, and how entrepreneurs' resilience reduces distress and enhances their well-being. Researchers could also draw on the affect-as-information theory (Clore et al., 2001), which argues that "affective cues of mood and emotion influence judgments directly by serving as experiential and bodily information regarding how one feels about the object of judgment" (Clore & Huntsinger, 2007, p. 394). As such, it can help to explain why emotions may have a strong impact on how entrepreneurs evaluate a perceived threat, independently of cognitive awareness and evaluation (Schwarz, 2001), thereby affecting entrepreneurs' resilience.

Opportunities for empirical advancement

Empirical research designs and methods

Concerning quantitative research, an interesting endeavor for future research could be developing a resilience measure that is specific to the entrepreneurship context, as prior research has suggested that psychological resilience may be domain specific. For example, Todt et al. (2018) developed a measure of psychological resilience capacity specifically for the innovation context, which demonstrated incremental validity beyond a general measure of resilience capacity. As the entrepreneurship context is unique from typical organizational contexts (Klotz et al., 2014), an entrepreneurship specific measure of psychological resilience may provide a more nuanced understanding of the underlying mechanisms of entrepreneurs' resilience.

Prior quantitative studies also demonstrated strong reliance on cross-sectional data. While some of the studies in our sample applied a time-lagged design (for example, Roche et al., 2014), we did not identify any study that measured resilience multiple times. While these studies can provide valuable insights on psychological resilience capacity, capturing entrepreneurs' resilience and resilient responses over time would be a valuable avenue for future research. One exemplary way forward would be the use of a longitudinal design to investigate how an entrepreneur's resilience changes after failing to acquire necessary funding, and how such adversity affects an entrepreneur's motivation to procure another funding source. Future studies could investigate entrepreneurial activities over longer periods to shed light on the process of resilience, uncovering the mechanisms and behaviors that enable resilient outcomes in response to adverse events (for example, team member exit), as well as general entrepreneurial challenges and uncertainties.

Another opportunity is to assess entrepreneurial resilience from multiple sources. Both qualitative and quantitative research designs largely relied solely on responses from the entrepreneur, without considering other perspectives, such as an assessment of the direct business and personal contacts (for example, spouse, business partner, coach) (for exception, see, Shepherd et al., 2020). Considering perspectives from different groups of stakeholders can help to triangulate the information provided by entrepreneurs. For example, capturing the perspectives of business or personal contacts provides a unique lens to understand resilient behaviors as perceived by those with close relationships to the entrepreneur.

Furthermore, while prior research has shed light on several antecedents and outcomes of entrepreneurs' resilience, we encourage future studies to put an even stronger focus on variables that are established and important in the entrepreneurship context. For example, based on meta-analytic findings, Frese and Gielnik (2014) found that variables like the need for achievement, risk taking propensity, and need for autonomy are highly related to business creation and success. Risk-taking propensity has also been shown to be highly relevant to psychological resilience in innovative contexts (Moenkemeyer et al., 2012), such as entrepreneurship. Thus, it would be interesting to assess whether and how these variables relate to entrepreneurs' resilience. Furthermore, it is likely that outcomes in the entrepreneurial process feed back to an entrepreneur's resilience, which is illustrated by dashed arrows in Figure 1, as prior experience may influence a person's resilience (Sutcliffe & Vogus, 2003). We encourage future research to shed light on these feedback loops.

Finally, our review only identified one manuscript that studied the psychological resilience of entrepreneurial teams (Chen & Zhang, 2021). As researchers have suggested that the majority of new ventures are founded and led by teams (Klotz et al., 2014; Lazar et al., 2020), future research would benefit from studying the psychological resilience of entrepreneurial teams to offer insights on how they can successfully overcome performance threats and exogenous shocks (Patzelt et al., 2021). Future research in this regard can build on the established literature concerning the processes and group dynamics of entrepreneurial teamwork (Bolzani et al., 2019; Klotz et al., 2014; Knight et al., 2020), as well as on the nascent research on team resilience (Brykman & King, 2021; Hartmann et al., 2021; Stoverink et al., 2020).

The role of adversity

Another opportunity for future research is to more explicitly integrate and discuss the entrepreneurial context (Johns, 2006; Welter, 2011; Welter & Smallbone, 2011), specifically as it relates to the various types of adversity that entrepreneurs face, and how the specific adversity shapes entrepreneurs' resilience. Adversity is central to the definitions of resilience

(Sutcliffe & Vogus, 2003; Williams et al., 2017). Therefore, an interesting finding of our review was that many studies did not specify the form, or elaborate on the role of adversity. Many of the studies implicitly assumed that adversity is intertwined with the entrepreneurial experience due to the heightened uncertainty and increased failure rates of launching and leading a new venture. Moreover, while many of the qualitative studies in our sample investigated diverse forms of adversity, they did not discuss how the specific type of adversity influenced their conclusions. Yet, as context shapes organizational phenomena, we cannot be sure that findings from one study translate across other contexts and forms of adversity, without information about contextual nuance or analogs (Johns, 2006).

Altogether, we see a significant opportunity to advance research by accounting for the characteristics of the adverse events that entrepreneurs experience because the antecedents, outcomes, and processes of entrepreneurs' resilience likely vary depending on the type, severity, and duration of adversity (Bonanno et al., 2015; Hoegl & Hartmann, 2021). On the one hand, the entrepreneurship context is characterized by substantial uncertainty, complexity, ambiguity, and failure (Lamine et al., 2014), which can affect entrepreneurs' resilience despite being more "typical" in nature (for example, insufficient resources, uncertainty over long-term viability). On the other hand, entrepreneurs encounter various discrete adverse events, which can range in terms of severity, predictability, duration, speed of onset, controllability, novelty, disruption, and criticality (Morgeson et al., 2015). We urge scholars to capture and consider this important nuance in this research. Another layer of complexity is that while some adverse events may be bound in time, the consequences of adversity can persist much longer. For example, the challenges of major events such as the COVID-19 pandemic may affect an entrepreneur's resilience for many years following this extreme event (Hoegl & Hartmann, 2021).

One recommendation is for scholars to contextualize entrepreneurial resilience and adversity in terms of either omnibus contexts (inherent challenges of entrepreneurship) or discrete contexts (specific crises, setbacks, or challenges; Johns, 2006; Welter, 2011). Interestingly, as noted above, our review revealed that much of the qualitative literature has implicitly contextualized entrepreneurs' resilience around discrete adverse events (for example, the 2016 earthquake in Kaikoura; Fang et al., 2020), whereas much of the quantitative literature has implicitly contextualized it around everyday challenges (that is, omnibus contexts). Alternatively, scholars can provide more information by contextualizing their research within a typology of entrepreneurial adversity. We offer a helpful framework to consider in this regard (see Figure 2), as informed by prior research (for example, Bonanno et al., 2015; Fisher et al., 2019; Williams et al., 2017), which distinguishes adversity based on duration (chronic

		<i>Duration</i>	
		Chronic Contexts (Examples)	Acute Events (Examples)
<i>Severity</i>	Major	Operating a business in a difficult environment (e.g., war-torn country; (Bullough et al., 2014)); Launching and running a business as a refugee (Shepherd et al., 2020)	Black swan events, such as the COVID-19 pandemic (e.g., temporary closure of business activities as a result of a (global) pandemic and the governmental restrictions) (Shepherd, 2020)
	Moderate	Financial pressures (e.g., securing funding (Al-Harhi, 2017)); Facing discrimination due to lack of social resources (Pidduck & Clark, 2021)	Core team member exit (Gregori & Parastuty, 2021); Failed funding pitch (Jiang et al., 2019)
	Mild	High responsibility and low job security in entrepreneurial endeavours (Chadwick & Raver, 2020)	Abrupt increase in costs of raw material for key product; Losing a key supplier (Greene & Rosiello, 2020)

Figure 2. A typology of entrepreneurial adversity based on severity and duration.

context vs acute events) and severity (major vs moderate vs minor). Both approaches offer much-needed clarity about whether a study’s conclusions speak to general entrepreneurial challenges or a specific and unexpected event, thus translating across contexts. It also introduces interesting questions about the interplay between chronic contexts and acute events, such as how losing a major client (event) may exacerbate financial pressures (omnibus), just as how financial pressures can be resolved by gaining a new client.

Overall, we argue that attention to adversity can help to synthesize results based on adversity types. In so doing, we can focus more on entrepreneurial agency in the face of adversity, thereby explaining how entrepreneurs become resilient or exercise their resilience. Drawing from research on coping (Lazarus, 1993) and entrepreneurial perseverance (Lamine et al., 2014; Van Gelderen, 2012), we propose that characteristics of adversity (for example, severity, duration, controllability) affect entrepreneurial strategies of adversity management in terms of: (a) problem solving (for example, addressing the adversity, such as by devising a plan to overcome it), (b) reappraisal (for example, changing perceptions of the adversity, such as acknowledging possibilities for improvement because of adversity), (c) goal adaptation (for example, changing how one views the goals that the adversity affected, such as by adjusting objectives to focus on short-term wins), and (d) increasing self-regulatory strength (for example, rebuilding psychological resources, such as by devoting time toward

restorative actions). For example, reappraisal may be a more typical response to chronic and mild stressors that entrepreneurs consistently encounter. In contrast, problem-solving may be a more typical response to acute and major stressors that require immediate attention and action.

Alternatively, scholars may explore entrepreneurs' perceptions and attributions of adversity, based on the understanding that individuals' appraisals of a stressor, as opposed to objective characteristics, are what fundamentally affects how they cope with and overcome setbacks (Lazarus, 1993). Indeed, Corner et al. (2017) found that some entrepreneurs viewed business failure as a major disruption leading to suicidal thoughts, whereas others viewed it as a minor inconvenience that passed after several days, thanks largely to social support mechanisms (a resilience capability). Moreover, Chadwick and Raver (2020) found that challenge appraisals mediated the effects of entrepreneurs' resilience on proactivity, which in turn affected business survival. Scholars can address these ideas in a few ways. For one, they can adopt a context-approach, by focusing on entrepreneurs' perceptions during an adverse event or prolonged period (compare, Bullough et al., 2014). For example, scholars can ask entrepreneurs to describe their perceptions, behaviors, and feelings in response to a particular event of varying severity (for example, COVID-19 versus missed performance; Backmann et al., 2021), or speak to general entrepreneurial challenges, and chart business (for example, profitability) and personal (for example, burnout) outcomes. Alternatively, scholars can ask entrepreneurs to report on previous or current levels of adversity (Renko et al., 2021), followed by questions pertaining to their entrepreneurial pursuits and successes. This approach can be supplemented with longitudinal techniques that enable scholars to examine how changes in experienced adversity affect entrepreneurs' resilient outcomes. At the very least, we urge scholars to offer more description of the types of adversities inherent in their studies, ideally within our proposed taxonomy, so that we can develop a more cohesive body of knowledge.

Boundary conditions

A few studies have started to explore the boundary conditions that influence the relationship between entrepreneurs' psychological resilience and outcomes of interests. These studies have shed light on how personal aspects, such as personal characteristics, capacities, or social capital (Anglin et al., 2018; Bullough et al., 2014; Newman et al., 2018), and macro-level factors, such as industry (Hmieleski et al., 2015) and institutional environments (Renko et al., 2021) influence the relationship between resilience and outcomes at the individual and organizational level of analysis. These studies revealed that the effect of psychological resilience might vary depending on personal and environmental factors.

In this regard, while the concept of entrepreneurs' resilience is applicable across a broad variety of countries and cultural contexts, research suggests that how psychological resilience develops and exerts effects on important outcomes may depend on cultural background and the country-specific context (Andri et al., 2019; Liu, 2020). Thus, we encourage future research to explore the role of cultural and country-specific elements as important boundary conditions. For example, scholars could consider how cultural and country-specific elements moderate and influence the relationship between entrepreneurs' resilience and outcomes at the individual and organizational levels. Indeed, sensemaking of risk and adversity and forms of positive adaptation may vary across cultures (Horn et al., 2021; Liu, 2020; Ungar, 2013). Moreover, there are substantive differences in how multicultural contexts influence and alter psychological aspects of pursuing new ventures (for example, Pidduck, 2022; Pidduck et al., 2020; Pidduck & Zhang, 2021). Thus, further research is needed to illuminate the nuanced roles of national, institutional, or social norm differences as boundary conditions. Hofstede et al.'s (1997) cultural dimensions, or social norm frameworks such as cultural tightness-looseness (Gelfand et al., 2006) might be a good starting point for these investigations. For instance, examining countries differing in their uncertainty avoidance or cultural tightness may present a promising future research endeavor. Countries with low uncertainty avoidance, for example, may culturally inculcate individuals to be more inclined to take risks and accept ambiguous situations (Hofstede et al., 1997) making their entrepreneurial orientation more pronounced (Lumpkin & Pidduck, 2021; Mueller & Thomas, 2001). Thus, entrepreneurs socialized or immersed into such cultural values or norms may be more resilient when presented with adversity. Moreover, the country-specific environment and institutional context provide a potentially illuminating research avenue. When countries are exposed to the same or similar adversity (for example, COVID-19), the trust in institutions or support resources provided may explain when entrepreneurs' resilience is more (or less) strongly related to new venture survival.

Linking entrepreneurs' psychological resilience with organizational resilience

As noted earlier, we focused on the psychological resilience of entrepreneurs, which is conceptually distinct from organizational-level resilience. Organizing our synthesis of this growing literature in [Figure 1](#), we position our findings within a multilevel framework that incorporates wider scholarly conversations in entrepreneurship research. Specifically, we posit that as initiating, engaging, and performing aspects of new venture development are crucial elements for any entrepreneurial organization to progress through, there is a strong rationale for expecting the psychological resilience of founders to permeate each of these three elements. Indeed, upper echelons and founder imprinting research (Carr et al.,

2021; De Cock et al., 2021) suggests that firm-level behaviors in new and small ventures are reflective of the founders, unlike large established firms which dissipate the salience of individual attributes into wider governance and decision-making structures. Thus, while we acknowledge that general organizational resilience is a distinct construct, we view entrepreneurs' psychological resilience to be highly influential at the firm level.

For example, the initiation phase of new venture development requires entrepreneurs to develop and advocate for prototype ideas. This ideation phase occurs pre-launch and, most relevantly, during the initial stages after a firm's founding, which attracts intense scrutiny and pushback to an entrepreneur's new venture ideas (Kier & McMullen, 2018). Thus, we expect entrepreneurs' resilience to be particularly important in this context, which entails heightened risk of setbacks. Furthermore, the engaging phase of new venture development involves, among other factors, attracting resources for growth. While we identified some research in our review that probed aspects of entrepreneurs' resilience in domains such as crowdfunding (for example, Anglin et al., 2018), it is likely that experimental studies in fundraising contexts could unveil interesting insights into how an entrepreneur's resilience attracts resources over sustained periods. For example, studies suggest that the personal capabilities of the entrepreneur displayed in campaigns and pitches can reflect organizational-level future prospects (Chen et al., 2009). Psychological resilience in this nascent context may function as a direct proxy for firm-level resilience and may help to attract investors. Finally, performing endeavors in new venture development are invariably firm level in nature, as factors such as financial performance, social impact, or firm survival are prevalent outcomes of interest. As our review revealed, psychological resilience – especially in micro-firms or for self-employed traders – is vital for developing the sustained efforts needed to either gain initial traction or survive in the face of external shocks and competition. In particular, psychological resilience may enable entrepreneurs to handle higher stress levels (Harker et al., 2016; Sergent et al., 2021), thus counteracting burnout and potentially enhancing the long-term viability of the venture as well. In summary, while entrepreneurs' psychological resilience is indeed an individual-level construct, it holds numerous direct and indirect implications for each core phase of the entrepreneurial process in firms.

The dark side of entrepreneurs' psychological resilience

In the literature we reviewed, entrepreneurs' psychological resilience was described as an essentially unequivocally desirable and positive phenomenon. However, as scholars have noted that there may be a dark side of psychological resilience (Williams et al., 2017), research is needed to theorize and investigate

the potential negative effects of psychological resilience in the entrepreneurship context to develop a more holistic understanding of the phenomenon. To that end, it would be worthwhile to explore how the experience in one resilience process influences entrepreneurs' future behavior in the face of adversity and challenges (Sutcliffe & Vogus, 2003). For example, broaden-and-build theory suggests that positive emotions can drive psychological resilience and are also an outcome of psychological resilience (Fredrickson, 2001). Hopeful entrepreneurs who could positively handle a challenging situation, such as securing one-year funding for their new venture, might underestimate the challenges of securing future funding, which could lead to future challenges.

Importantly, the underlying conceptualization of entrepreneurs' resilience must be considered when investigating its potential dark side. For example, while a process perspective implies the exposure to adversity and positive adaptation despite this adversity, entrepreneurs' resilience capacity describes the potential of an entrepreneur to be resilient if and when adversity strikes (Hartmann et al., 2020). Thus, in the absence of adversity, entrepreneurs' resilience capacity might create negative effects (Datzler et al., 2021). Building on a person-environment fit perspective (Kristof, 1996), entrepreneurs with a high resilience capacity that are not exposed to adversity might feel that they underutilize their abilities. Thus, they might lose motivation to pursue their business opportunity. Moreover, prior research has found that while entrepreneurs' hubris might promote their perceived resilience capacity, this may lead to false perceptions of invulnerability, endangering the actual demonstration of resilience when adversity strikes, thus fostering venture failure (Sundermeier et al., 2020). Entrepreneurs' narcissism is another potentially influential "dark side" attribute that a growing body of research suggests can influence entrepreneurs' perceptions of their capabilities (Hmieleski & Lerner, 2016). False perceptions of entrepreneurs' resilience capacity might threaten venture success.

Finally, we encourage scholars to consider negative second-order effects. Second-order effects describe the effects entrepreneurs exert on connected levels of analysis, such as new ventures (organizational level of analysis). We believe that this area is fruitful because of the strong connectedness of the entrepreneur with the new venture. For example, entrepreneurs who have demonstrated their resilience in the past, might mistakenly assume that venture employees hold similar capacities. In their role as organizational leaders, these entrepreneurs might not sense their employees' struggles and/or need for support mechanisms when experiencing adversity (Todt et al., 2018). In other words, resilient entrepreneurs could underestimate the important role of social support systems for organizational resilience (Kahn et al., 2018), which could endanger the functioning of their organizational venture system.

Conclusion

As entrepreneurs must positively manage and overcome adversity to establish and lead successful new ventures, research on the psychological resilience of entrepreneurs is highly needed. Our review of the extant literature suggests that entrepreneurs' resilience is central to the entrepreneurial process, as it influences the initiation of, engagement in, and the performance of, entrepreneurial endeavors. By highlighting opportunities for theoretical and empirical advancement of the literature, this paper provides a valuable foundation from which future studies can draw.

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