Fear of failure as a mediator of the relationship between obstacles and nascent entrepreneurial activity—An experimental approach☆

Tobias Kollmann, Christoph Stöckmann, Julia M. Kensbock

Department of Economics and Business Administration, University of Duisburg-Essen, Universitaetsstr. 9, 45141 Essen, Germany

Abstract

The present study introduces fear of failure as a responsive avoidance motive to the entrepreneur literature and demonstrates its relevance as a psychological process in three experimental studies with nascent entrepreneurs. Drawing upon a social cognitive perspective on achievement motives, we show that fear of failure explains how obstacles encountered in the nascent phase affect individual entrepreneurial activity. We demonstrate that the perception of obstacles activates fear of failure, which, in turn, has a detrimental impact on opportunity evaluation and exploitation. Fear of failure's mediating effect generalizes across different samples and various obstacles (resource-oriented, market-oriented, and social-capital-oriented obstacles), and contributes to entrepreneurship research and practice by explaining individuals’ decisions to withdraw from an entrepreneurial endeavor.

Keywords: Fear of failure, Nascent entrepreneurship, Achievement motivation, Obstacles, Opportunity evaluation

Executive summary

In the early phases of founding a new business, withdrawal from entrepreneurship is a frequent phenomenon—nonetheless, prior research has not yet convincingly answered the question why nascent entrepreneurs abandon the business ideas they once decided to pursue (Khan et al., 2014; Hsu et al., 2016). The present study argues that obstacles encountered during the nascent phase are responsible for triggering a basic psychological avoidance motive—fear of failure—which then leads nascent entrepreneurs to devaluate and to withdraw from their business opportunity. Our approach to fear of failure is theoretically based on a social cognitive perspective on achievement motives and extends prior research viewing fear of failure primarily in an isolated and static way (Cacciotti and Hayton, 2015; Cacciotti et al., 2016). While prior conceptualizations of fear of failure (especially the view of fear of failure as a “fixed trait”; e.g., Mitchell and Shepherd, 2011) might explain why individuals start entrepreneurial activities, they fail to adequately explain why nascent entrepreneurs withdraw from recently started entrepreneurial endeavors when they encounter obstacles. By showing that nascent entrepreneurs’ fear of failure is activatable by failure-relevant obstacles encountered during nascent entrepreneurship, our approach is integrative and responsive—it enables us to explain dynamic individual reactions to business-related threats. At the core of our study, we propose a mediation model in which fear of failure serves as the critical mechanism through which obstacles affect individuals’ entrepreneurial activity (i.e., opportunity evaluation and exploitation).
subsequent opportunity exploitation). Three categories of exogenous loss-related obstacles are derived from seminal theories on venture success: Specifically, we examine the effects of resource-based, market-based, and social-capital-based obstacles.

We test our theoretical propositions in three experimental studies with nascent entrepreneurs. In Study 1, we use a reaction time experiment to demonstrate that fear of failure is responsive to (i.e., activatable by) failure-relevant situational cues in an entrepreneurship setting and consequently affects entrepreneurial decision-making. In Studies 2 and 3, we empirically test the hypothesized mediation model assuming that fear of failure mediates the effects that obstacles have on nascent entrepreneurs’ entrepreneurial activity. Across both studies, we find an overall consistent support for the mediating role of fear of failure (full mediation effects). In other words, being confronted with resource-based, market-based, and social-capital-based obstacles significantly triggers individuals’ fear of failure, which, as a central driving force, made individuals evaluate their business opportunities less favorably and eventually led to a reduced likelihood of exploiting that business opportunity.

From both theoretical and practical angles, our study helps to understand why so many nascent entrepreneurs withdraw from business opportunities in the face of obstacles. On the one hand, it highlights the importance of considering obstacles that nascent entrepreneurs face when founding a new business—obstacles threatening the success and survival of the new venture. On the other hand, our findings show that taken alone, obstacles cannot fully explain individuals’ entrepreneurial activity. Instead, it is a psychological process—the activation of fear of failure—that is triggered and is in turn responsible for individuals’ avoidance reactions in the face of obstacles.

As a theoretical contribution, our study complements traditional management approaches that have mainly relied on objective characteristics relating to the business opportunity itself and the business environment. Our findings highlight that shedding light on the role of the individual in the nascent process and considering a novel intra-psychological mechanism in response to obstacles allows for novel insights to understanding entrepreneurial activity. In addition, our study introduces a new perspective on fear of failure that provides future research with a valuable way to assess individuals’ dynamic reactions to obstacles encountered during entrepreneurship. In practical matters, experiencing fear of failure in the face of obstacles can serve as an important warning sign for nascent entrepreneurs. Besides taking into account objective characteristics of the opportunity itself and the business environment, the current research establishes that fear of failure can provide additional informational value indicating whether or not a business opportunity should be carried forward or not. Paying close attention to fear of failure can also benefit advisors and investors working with nascent entrepreneurs, because it may reflect the perceived success probability of the new venture and provide implications on how best to advise nascent entrepreneurs.

1. Introduction

The question of why many initially confident nascent entrepreneurs withdraw from their plans to found a new venture at some point in the process is of great theoretical and practical relevance, but remains largely unaddressed to date (Khan et al., 2014; Hsu et al., 2016; Davidsson and Gordon, 2016). We argue that taking into account nascent entrepreneurs’ fear of failure is a key to explaining such withdrawal from entrepreneurship. The main contribution of the present study is to establish fear of failure as a central psychological mediator in the entrepreneurship literature. Fear of failure is introduced as a responsive avoidance motive, which is activated through obstacles occurring in the process of founding a new venture and has important effects on individuals’ subsequent entrepreneurial activity in the form of opportunity evaluation and exploitation.

Fear of failure has attracted considerable attention in the entrepreneurship literature (e.g., Cacciotti et al., 2016; Morgan and Sisak, 2016) and researchers have presented various insightful conceptualizations of fear of failure (for a comprehensive review see Cacciotti and Hayton, 2015). These existing approaches have advanced understanding of why individuals start entrepreneurial endeavors or why they do not (e.g., Mitchell and Shepherd, 2011; Morgan and Sisak, 2016). However, prior research fails to adequately explain why individuals withdraw from a recently started entrepreneurial activity in the face of obstacles, and which psychological mechanisms underlie these withdrawal decisions in the entrepreneurial process. This gap can be ascribed to the predominant view of fear of failure as being a static and isolated attribute, and one thus unable to explain dynamic individual reactions to threats in the external environment (for a recent review of the extant literature see Cacciotti and Hayton, 2015 and Cacciotti et al., 2016).

In the present study, we argue that a responsive and integrative approach to fear of failure is necessary to fully understand individuals’ withdrawal decisions in the dynamic entrepreneurial process. In doing so, we first refrain from viewing fear of failure as a “fixed trait”, and therefore diverge from prior research which has often conceptualized fear of failure as an unchangeable predictor (e.g., Mitchell and Shepherd, 2011) or moderator (e.g., Wood et al., 2014). Instead, we adopt a social cognitive perspective on achievement motives and position fear of failure as a responsive avoidance motive that is activated through obstacles in the process of founding a new venture. Second, in doing so, our approach avoids the constraints of an isolated view of fear of failure that disregards the entrepreneurial reality of the nascent entrepreneur. Our integrative approach considers instead both business-related characteristics threatening the success of the new venture (i.e., obstacles) and the subsequent psychological reactions of the individual. Following the observation that nascent entrepreneurs are frequently confronted with obstacles that can be critical to the success of their new ventures (Dewald and Bowen, 2010; Cacciotti et al., 2016; Morris et al., 2012), we thus shed a much needed light on the actual effects of these obstacles. We argue that the perception of obstacles results in a devaluation of and withdrawal from the business opportunity and that this negative effect of obstacles is mediated through a fundamentally psychological process, that is, the activation of fear of failure.
The theoretical assumptions are empirically tested in three experimental studies with nascent entrepreneurs (see Fig. 1 for a conceptual framework showing the objectives of those studies). The chosen experimental approach enables causal conclusions to be drawn on the impact of unobservable psychological processes on entrepreneurial activity (Hsu et al., 2015), and thus deepens the understanding of such psychological processes (Grant and Wall, 2008). This article is organized as follows: In the following section, we introduce fear of failure as a responsive avoidance motive activatable by obstacles in the entrepreneurship context. Next, we position fear of failure as the central mechanism that mediates the effects of different business-related obstacles on subsequent entrepreneurial activity. In doing so, we examine fear of failure’s mediating effect from three fundamentally different angles and incorporate three established theories on venture success and competitive advantage, that is, the resource-based perspective, the market-based perspective, and the social capital perspective. In Study 1, we provide empirical evidence for fear of failure being activatable and on its relevance to the entrepreneurship context. Studies 2 and 3 empirically test the central mediation model assuming that fear of failure is the critical mechanism through which the perception of resource-oriented, market-oriented, and social-capital-oriented obstacles influence entrepreneurial activity. This article concludes with a discussion of the results and implications for entrepreneurship theory and practice.

2. Theory and hypotheses

2.1. Introducing fear of failure as a responsive avoidance motive to the field of entrepreneurship

The various insightful conceptualizations of fear of failure presented to date (see Cacciotti and Hayton, 2015) include fear of failure as risk aversion (e.g., Shinnar et al., 2012) and as a negative emotion (e.g., Patzelt and Shepherd, 2011). The majority of approaches, however, present fear of failure as a stable individual trait (Cacciotti et al., 2016). This research has largely conceptualized fear of failure as an independent or moderating variable in the sense that individuals high in fear of failure are less likely to start a new business than individuals low in fear of failure (e.g., Mitchell and Shepherd, 2011; Wood et al., 2013).

Our approach views fear of failure as an achievement motive that is responsive (i.e., activatable) in the sense that it is triggered by failure-relevant obstacles and consequently affects individuals’ cognition and behavior. Given that previous conceptualizations of fear of failure in the entrepreneurship literature have been criticized for being too static and isolated (Cacciotti et al., 2016), our conceptualization of fear of failure allows for the examination of individuals’ dynamic reactions to the environment and thereby carries explanatory power over and above that of the traditional fixed-trait perspective on fear of failure. We suggest that taking a responsive view of fear of failure can better explain how fear of failure is developed, mentally represented, activated, and most importantly, how it affects individuals’ behavior within the entrepreneurial process. We refer to our approach as a social cognitive perspective on achievement motives because we integrate theoretical insights from (1) traditional achievement theory, (2) the social cognitive perspective, and (3) research on individuals’ motives and motive activation.

As a traditional approach, (1) achievement motivation theory (McClelland, 1961; Elliot, 2006) was designed to explain how motives and goals affect individuals’ behavior in achievement situations (e.g., in school settings). As one central concept in this theory, fear of failure has been presented as the motive to avoid failure in achievement situations (Elliot and Thrash, 2004;

![Fig. 1. Conceptual framework showing the main objectives of Studies 1, 2, and 3.](image_url)
In particular, fear of failure is a motive that energizes and directs individuals' behavior away from critical, negative situations in which failure is likely (Elliot, 2006). A rather implicit, little noticed, assumption of achievement motivation theory holds that, as a necessary condition for fear of failure to translate into action, it must be activated by failure-relevant cues (Elliot, 1999; Conroy and Elliot, 2004; Wright et al., 2009). Thus, our view of fear of failure as being responsive to the environment is already inherent in the earliest conceptualizations of fear of failure.

The responsive, situation-dependent view of fear of failure can be further theoretically underpinned by the (2) social cognitive perspective. The essence of the social cognitive perspective is that human behavior is shaped and determined by both person-related characteristics and the environment in which individuals find themselves (Bandura, 2015; Mischel, 2004; Sherman et al., 2015). Accordingly, the social cognitive perspective extends theoretical approaches that try to explain human behavior in terms of "one-sided determinism" (Wood and Bandura, 1989: 361) such as traditional trait theory that sees personal characteristics as unchangeable by the environment (Bandura, 2015). In contrast, as a comprehensive integrated framework, the social cognitive perspective does not view achievement motives as isolated, but as closely interlocking with environmental influences (Dai et al., 1998).

Finally, (3) empirical research on individuals' motives shows that such motives can be activated by relevant environmental cues (Maner and Gerend, 2007; Sacco and Hugenberg, 2012). That is because individuals' motives (including the motive to avoid failure) are represented as part of mental networks (Weary et al., 2001; Chartrand and Bargh, 1996; Mischel and Shoda, 1995), in which motives are directly and automatically linked with cognitive representations of situations with which they typically co-occur (Andersen et al., 2000; Chartrand and Bargh, 1996; Förster et al., 2007). As individuals confront the possibility of, or actually experience, failure in a wide array of situations during their lifetimes (e.g., academic, sports, or job settings), they build mental connections between these failure-relevant situations and the motive to avoid failure (Conroy and Elliot, 2004; Elliot and Church, 1997). Once such mental situation–response links are established, individuals' motives can be activated by environmental cues in comparable situations (Maner and Gerend, 2007; Sacco and Hugenberg, 2012; Shechtman and Horowitz, 2006).

In sum, we propose that when individuals are confronted with the possibility of failure in achievement situations, their motive to avoid failure is activated and their subsequent behavior is driven by that fear of failure (Bélanger et al., 2013). Nascent entrepreneurship can be seen as one such typical critical achievement situation because running a successful business is a highly-valued goal that nascent entrepreneurs wish to achieve; consequently, the possibility of failing in that important life domain is not only associated with potential financial costs (Ucbasaran et al., 2013), but also strongly threatens the individual's self-definition (Ucbasaran et al., 2009). Moreover, during the nascent phase, entrepreneurs are constantly evaluated by external stakeholders and have to deal with the considerable uncertainties that accompany their endeavors (Wood and Pearson, 2009; Cacciotti and Hayton, 2015). Being confronted with the threat of failure in critical achievement situations typically leads individuals to mentally re-experience the aversive thoughts and feelings experienced in prior failure situations and to show an avoidance response. Specifically, when fear of failure is activated, individuals show an increased cognitive focus on the aversive consequences of failing (e.g., disappointing themselves or significant others; Elliot and Thrash, 2002), experience painful feelings of shame and sadness (Turner et al., 2002; Brown and Dutton, 1995; McGregor and Elliot, 2005), and feel the desire to escape the situation physically or mentally (Elliot and Thrash, 2004).

Overall, fear of failure can be seen as activatable in the way that it is directly affected by cues from the external environment signaling that failure is possible or likely (Elliot, 1999). Motives require specific, relevant cues to be activated (Smith and Shoda, 2009). Accordingly, we hypothesize that fear of failure will be activatable through failure-relevant cues, that is, cues that signal potential failure in a particular achievement context such as starting an entrepreneurial endeavor. At the same time, fear of failure is not expected to be activatable through unspecific (i.e., failure-irrelevant) cues that do not indicate that failure in this particular situation is possible or likely. In the present study, we differentiate failure-relevant from anxiety-relevant cues to demonstrate that specificity of fear of failure activation. As anxiety-relevant cues signal unspecific (that is, not failure-related) threats or dangers (Costa et al., 2015; Mathews and MacLeod, 2002), they are not expected to activate fear of failure but to elicit anxiety instead, that is, a vague uncomfortable feeling of unease and apprehension (Lazarus and Folkman, 1984). We therefore hypothesize that:

**H1.** Fear of failure is activatable through failure-relevant cues.

### 2.2. Obstacles encountered during nascent entrepreneurship as elicitors of fear of failure

While engaging in the nascent process, entrepreneurs constantly evaluate the opportunity they are pursuing in the context of the current business environment and pay attention to signals that the planned business could fail (Haynie et al., 2009). Indeed, obstacles threatening the success of new ventures occur frequently in the early phases of entrepreneurship (Cacciotti et al., 2016; Morris et al., 2012). Research examining the outcomes of such occurring obstacles on entrepreneurial activity is scarce and has produced mixed results. As an example, Jackson (2010) found that when nascent entrepreneurs perceive institutional costs to be prohibitive, the number of new firms founded tends to decrease (see also Shepherd et al., 2015). However, Davidsonson and Gordon (2016) adopted a macroeconomic approach and showed that the opportunity exploitation tendency of nascent entrepreneurs was not significantly affected by a sharp macroeconomic downturn (i.e., the Global Financial Crisis). We can conclude that while examining the role of obstacles in the entrepreneurial context is generally very relevant, too little is known about how and why obstacles affect entrepreneurial activity. We argue that shedding light on psychological processes—and particularly on fear of failure—can enhance our understanding of the effects of obstacles on the behavior of nascent entrepreneurs. Most importantly, we
argue that being confronted with obstacles will activate fear of failure and consequently affect entrepreneurial activity during nascent entrepreneurship as a critical achievement situation.

The activation of fear of failure requires what Bélanger et al. (2013) call “failure feedback” (p. 2) as a trigger—failure-relevant feedback signaling a high likelihood of failure in a specific achievement situation. Haynie et al. (2009) argue that in the evaluation process, nascent entrepreneurs scan their business environments for cues indicating whether or not the opportunity has the potential to generate a competitive advantage and benefit the future firm. Consequently, obstacles signaling that the competitive advantage of the planned business is at risk should trigger individuals’ fear of failure as an entrepreneur, or, in other words, the fear of failing in the face of the obstacles encountered.

Obstacles posing a serious threat to the competitive advantage, success, and survival of new ventures can be numerous and diverse (Cardon et al., 2011; MacMillan et al., 1986). To examine those obstacles nascent entrepreneurs perceive to be particularly threatening, we decided to focus on three key categories of exogenous loss-related obstacles from seminal theories on the sources of competitive advantage. Thus, we intended to cover a wide range of highly relevant obstacles that nascent entrepreneurs can face. By referring to exogenous obstacles, we acknowledge that these threats are imposed upon the entrepreneur from outside of the venture, and thus refer to “external problems outside of the entrepreneur’s control” (Cardon et al., 2011, p. 81). The relevance of exogenous obstacles to entrepreneurial activity has been echoed by Krueger et al. (2000) who emphasized the important “impacts of exogenous influences (for example, perceptions of resource availability)” (p. 426). In addition, the idea that exogenous obstacles can cause an initially promising business opportunity to be abandoned is also reflected by Dewald and Bowen’s (2010) concept of situation threats, by which the authors mean environmental threats that reduce the likelihood of opportunity exploitation. Moreover, our focus is loss-related—that is, due to the obstacles, the nascent entrepreneurs experience a significant negative change as compared to their previous situation. Specifically, the obstacles are characterized by a painful loss of valuable resources or capabilities. The strong relevance of loss-related events to individuals’ behavior has been emphasized in seminal psychological studies (Tversky and Kahneman, 1992). In the same manner, entrepreneurship researchers highlight the important role that anticipated or experienced losses play in entrepreneurial decision-making (Forlani and Mullins, 2000; Mullins and Forlani, 2005; Morgan and Sisak, 2016).

The central question of what drives a firm’s competitive advantage and success has been addressed from a variety of theoretical perspectives, each of which has provided an alternative answer to the question (Crook et al., 2008; Kirca et al., 2005). We therefore draw upon three theories widely applied to explain the emergence and success of new ventures: the resource-based, market-based, and social capital perspectives. We accordingly examine the effects of three kinds of exogenous loss-related obstacles in the present study: resource-based, market-based, and social capital-based obstacles.

In this regard, it is important to note that the obstacles examined here are not intended to represent an exhaustive picture of all possible obstacles to entrepreneurship. However, while further obstacles do exist, our exemplary obstacles represent a wide variety of the most important obstacles to entrepreneurship and therefore enable us to address the main goal of our study which is to show that the mediating role of fear of failure in the obstacles—entrepreneurial activity relationship is a robust effect that applies across different types of obstacles that nascent entrepreneurs might encounter.

2.2.1. Resource-based perspective

The resource-based perspective (Barney, 1991) holds that competitive advantage depends on valuable, rare, imperfectly imitable, and non-substitutable resources. Such tangible and intangible resources contribute to a firm’s efficiency and effectiveness (Barney, 1991). Accordingly, suddenly losing one of the venture’s key resources should pose a critical threat during nascent entrepreneurship. While the nature of a firm’s resources can be manifold, we focus on one of the most important tangible resources necessary to the functioning of a firm: its financial assets (Arya and Lin, 2007; Barnett et al., 1994). This is because financial assets are critical to a new venture, and insufficient liquidity and a lack of financial resources are frequently cited as causes of business failure (Coleman, 2000; Gregory et al., 2005). Conversely, the availability of financial assets is significantly associated with the chances of survival of start-up firms (Åstebro and Bernhardt, 2003; Davila et al., 2003). Thus, a critical obstacle for individuals in the nascent phase is a sudden loss of required financial resources.

2.2.2. Market-based perspective

In contrast to the resource-based perspective, which attributes competitive advantage primarily to internal resources, the market-based perspective sees a favorable market position as the central competitive advantage (Makhija, 2003). External market power can be achieved through two central strategies (Narver and Slater, 1990; Zhou et al., 2007): creating customer value to satisfy customer needs (customer orientation), or understanding and outperforming relevant competitors (competitor orientation). As a consequence of both strategies, a company’s successful market position is reflected in high customer demand for its products and services (Makhija, 2003). Conversely, obstacles indicating a loss of customer demand (e.g., declining sales) should be perceived as threatening to a nascent entrepreneur. Therefore, to examine market-based obstacles, our study focuses on one obstacle related to the competitive situation and one obstacle related to the customer situation, both of which indicate a loss of customer demand and which should therefore be perceived as threatening the success of the new venture.

With regard to the competitive situation, the timing of a new venture’s entry into market is critical to its success (Lieberman and Montgomery, 1988). First-mover advantage theory posits that early entry into the market for a particular product or service typically generates long-term competitive advantages (Barney, 1991). The benefits especially include higher market share (Kerin et al., 1992) and more favorable brand perceptions by customers (Kamins et al., 2000, 2007). It follows that being the second firm to enter a specific market should significantly undermine the attractiveness of founding the venture. Indeed, McKelvie et al.
(2011) demonstrate that willingness to engage in entrepreneurial action decreases when individuals are unable to predict the likelihood of achieving a lead-time over market competitors. Therefore, the situation in which a firm unexpectedly finds its competitor offering a comparable product or service in the target market while the own firm is still in its nascent stage constitutes an obstacle and threat to entrepreneurship. With regard to the customer situation, a firm’s success depends on its ability to meet customer needs and create customer value (Anderson et al., 1994; Vogel et al., 2008). Being unable to satisfy customer needs manifests itself in low or declining demand for the firm’s products or services—that is, low or declining sales (Gómez et al., 2004). In summary, a sudden loss of (expected) customer demand signals a serious threat to the success of the firm.

2.2.3. Social capital perspective

Looking beyond the internal resources and the external market position of a firm, entrepreneurs are always embedded in a social environment (Dubini and Aldrich, 1991). Such personal networks encompass all kinds of individuals with whom the entrepreneur has direct contact (Stam et al., 2014), including business contacts (partners, customers, suppliers, co-founders, etc.) and private contacts (friends and family). According to social capital theory (Aldrich and Zimmer, 1986; Lin, 1999), these network relationships constitute a vital source of competitive advantage (Florin et al., 2003). The key benefits of social capital are intangible in nature (Hoang and Antoncic, 2003). Most importantly, personal networks benefit entrepreneurs by providing them with information, ideas, and advice (Davidsson and Honig, 2003); signaling reputation (Hoang and Antoncic, 2003); providing emotional support (Brüderl and Preisendörfer, 1998) and reinforcement (Lin, 1999). Consequently, having a supportive social environment has been linked to a myriad of outcomes (see Stam et al., 2014 and Hoang and Antoncic, 2003 for a meta-analysis and review) including nascent entrepreneurial activity (Davidsson and Honig, 2003); entrepreneurial intent (Liao and Welsch, 2003); firm performance (Stam et al., 2014); and growth (Maurer and Ebers, 2006). Following this reasoning, another critical obstacle for individuals in the nascent entrepreneurship stage should be the sudden loss of important social ties including business partners (e.g., suppliers, key customers, and co-founders) or, in general, the sudden loss of support by the social environment (including friends and family).

2.3. The mediating role of fear of failure

During the nascent entrepreneurial process, individuals scan the environment to build representations of their business opportunity and constantly evaluate future success or failure (Haynie et al., 2009). Intra-psychological phenomena are an important part of such processes (see e.g., Cardon et al., 2012; Welpe et al., 2012 on the role of emotions), with considerable impact on outcome judgments (Maner and Gerend, 2007; Higgins, 2000; Watson et al., 1999). Typically, entrepreneurs are strongly financially involved in (Shepherd et al., 2009) and highly committed to their own ventures (Cardon et al., 2005). Accordingly, obstacles signaling potential failure in the context of starting a business should be particularly relevant to nascent entrepreneurs and thus serve as failure feedback (Bélanger et al., 2013).

As such, resource-oriented, market-oriented, and social-capital-oriented obstacles should activate individuals’ mental networks in which failure situations are closely connected to failure responses. Bélanger et al. (2013) have recently provided first empirical evidence supporting the idea that fear of failure can be “instigated situationally” (p. 9) and consequently, as a mediator, affects individuals’ behavior. Thus, being confronted with threatening obstacles will make nascent entrepreneurs re-experience the aversive consequences associated with prior failure events (Conroy, 2003). On the cognitive side, individuals will direct attention to the immediate negative outcomes of business failure, especially the anticipated risk of losses (including financial costs associated with business failure) and having an uncertain future (Shepherd et al., 2009; Conroy, 2003; Morgan and Sisak, 2016). On the affective side, when fear of failure is activated, individuals will also anticipate the shame, embarrassment, and social stigma associated with the situation of failing as an entrepreneur (Mantere et al., 2013; Smith and McElwee, 2011; Shepherd and Haynie, 2011; Conroy, 2003) as well as the emotional crises that might result (Shepherd, 2003; Shepherd and Cardon, 2009; Jenkins et al., 2014). Overall, fear of failure activation and the associated processes of re-experiencing and imagining the aversive consequences are likely to prompt an avoidance reaction (Wood et al., 2014; Elliot and Thrash, 2004) in the form of individuals’ tendency to escape the situation (Elliot and Church, 1997).

Such an avoidance reaction can manifest itself in cognitive and consequently behavioral reactions (Elliot and Thrash, 2004; Wood et al., 2014). Thus, we suggest that the activation of fear of failure through obstacles has negative effects on entrepreneurial activity that are both evaluative and behavioral in nature. Specifically, while actual withdrawal from a business opportunity (instead of its exploitation) would be the ultimate, but more distant, consequence of fear of failure, our study at first focuses specifically on fear of failure’s negative impact on the more proximal evaluation of the opportunity. The approach aligns with the notion that the favorable evaluation of a business idea is the necessary antecedent step to actual exploitation (Shane and Venkataraman, 2000; Welpe et al., 2012). First, with regard to the evaluative consequences of fear of failure, we hypothesize that it will lead to a devaluation of the business opportunity. We therefore hypothesize that:

H2. Fear of failure mediates the effect of perceived obstacles on opportunity evaluation such that the perceived obstacles relate positively to fear of failure, which subsequently relates negatively to opportunity evaluation. This applies to (a) resource-oriented obstacles (perceived loss of financial resources); (b) market-oriented obstacles (perceived entry of a competitor, perceived loss of customer demand); and (c) social-capital-oriented obstacles (perceived loss of a partner, perceived loss of social support).
Second, we suggest that the behavioral part of the avoidance reaction will become apparent in the entrepreneur’s decision to exploit or to withdraw from the business opportunity. Exploitation decisions can only be understood when considering its necessary antecedent step, that is, whether the objective opportunity is subjectively attractive to the nascent entrepreneur (Shane and Venkataraman, 2000; Welpe et al., 2012). In the special case of nascent entrepreneurs, a positive evaluation of the business idea is particularly important in determining whether or not individuals withdraw from their business ideas or stick with them (Davidsson and Gordon, 2016). Following the reasoning that an unfavorable opportunity evaluation will reduce the likelihood of nascent entrepreneurs ultimately exploiting the business opportunity, we posit a sequential obstacles—fear of failure—opportunity evaluation—opportunity exploitation mediation.

**H3.** Fear of failure and opportunity evaluation sequentially mediate the relationship between perceived obstacles and opportunity exploitation. This applies to (a) resource-oriented obstacles (perceived loss of financial resources); (b) market-oriented obstacles (perceived entry of a competitor, perceived loss of customer demand); and (c) social-capital-oriented obstacles (perceived loss of a partner, perceived loss of social support).

### 3. Study 1

The most important aim of Study 1 was to demonstrate the responsiveness of fear of failure to situational cues in an entrepreneurship setting. Specifically, we aimed to empirically examine the basic assumption of the social cognitive perspective on achievement motives that fear of failure is activatable through failure-relevant cues (H1). A second expectation was that the study might demonstrate the relevance of activated fear of failure to the subsequent judgment of entrepreneurial opportunities. Study 1 is thus intended to provide initial support for the idea that activated fear of failure would be associated with a devaluation of a business idea, as included in H2.

#### 3.1. Method

**3.1.1. Participants**

The participants were 71 students enrolled on an elective entrepreneurship course at a large German university. The aim of the course is to equip students with the theoretical knowledge, expertise, and practical experience to become future entrepreneurs. The most important part of the coursework involved students intensively engaging in an exemplary venture creation process and devising a realistic business model and business plan at the end of the semester. According to Hsu et al. (2015) and Souitaris et al. (2007), such business planning processes can be regarded as nascent entrepreneurial activities; thus, the participating students can be considered to be (early) nascent entrepreneurs. Participants were 24.0 years old on average (SD = 2.4); 46 participants (64.8%) were male.

**3.1.2. Procedure and experimental design**

At the beginning of the semester, participants completed a short survey assessing their fear of failure. Two months later, they completed an online experiment. In order to deter participants from adapting their response behavior to the implicit purpose that they might see in the experiment (i.e., bias through experimental demand characteristics; Orne, 1962), the students were told that the study would include three separate parts addressing unrelated research topics. For the first part of the experiment, participants were randomly assigned to one of two different experimental manipulations. In the first group (failure group), participants were exposed to a failure manipulation, i.e., failure-relevant cues. In the second group (control group/anxiety group), participants were exposed to a failure-irrelevant experimental manipulation. For the failure-irrelevant condition, we chose an experimental manipulation intended to elicit anxiety and thus confronted participants with anxiety-relevant cues. While both anxiety-relevant cues and failure-relevant cues are negative in valence and should elicit negative arousal (Lang et al., 2000), choosing anxiety-relevant cues as failure-irrelevant cues can be seen as a very conservative and rigorous test of the specificity of fear of failure activation. In the second part of the experiment, we examined the activatability of fear of failure by measuring individuals’ reaction times in a lexical decision task, thus applying an objective measure of fear of failure activation. According to this empirical approach, the activation of motives is accompanied by a heightened accessibility of motive-relevant information to the individual (Fazio, 1986, 1990; Higgins, 1996; Shah and Higgins, 1997; Higgins et al., 1997). Such heightened accessibility is observable in faster reaction times to motive-relevant cues (Fazio, 1990). Consequently, when fear of failure is activated, individuals will be quicker to detect and react to failure-relevant words than to failure-irrelevant words (Fazio, 1990). We thus expected that individuals in the failure group would respond quicker to failure-relevant words than to failure-irrelevant words. Moreover, participants in the failure group should react quicker to failure-relevant words than participants in the anxiety/control group. In the final part of the experiment, we assessed the impact of activated fear of failure on the evaluation of a fictitious business idea presented in a case study. After the experiment, the participants were debriefed and thanked for their cooperation.

**3.1.3. Materials and measures**

**3.1.3.1. Assessment of fear of failure.** We assessed participants’ fear of failure (α = 0.83) with the five fear of failure items of the Achievement Motives Scale (Gjesme and Nygaard, 1970; Lang and Fries, 2006; sample item: “I am afraid of failing in somewhat difficult situations, when a lot depends on me”).
3.1.3.2. Manipulation of fear of failure and anxiety. Participants were randomly assigned to one of two experimental groups: a failure group and a control group (anxiety group). For the failure manipulation, we used a writing task. Specifically, we had participants answer questions about their most acute personal weaknesses that would, in the worst case, result in failure in their professional or academic careers. Recalling failure situations has proved successful in provoking individuals’ fear of failure in past studies (see Bélanger et al., 2013 and Selimbegovic et al., 2011 for similar experimental manipulations). Thus, the failure manipulation was used to activate individuals’ fear of failure. For the anxiety manipulation, we also used a writing task in which participants answered questions about their objects of anxiety (see Appendix A.1 for the manipulations). Participants who reported that their object of anxiety was “failing” were excluded from further analyses to prevent confounding effects.

3.1.3.3. Lexical decision task. The lexical decision task was used to determine whether the experimental manipulation actually led to an activation of fear of failure. In the lexical decision task (introduced as a “word recognition test”), participants determined whether strings of letters appearing on the screen represented words in the German language or “non-words.” Participants were informed that performance in the task would depend on both speed and accuracy (Fazio, 1990). After a short five-trial practice session, the major test started. Eight words and eight pronounceable non-words were presented in a randomized order. Of the eight existing words, four were failure-relevant (e.g., fail, lose) and four were failure-irrelevant (e.g., grab, arise).

3.1.3.4. Evaluation of a business opportunity. We used a short case study (see Appendix A.1) to investigate how the participants—whose fear of failure had been activated (in the failure group) or not (in the control/anxiety group)—evaluated a business idea. The main advantage of case studies is that all participants are exposed to an identical set of information (Keh et al., 2002). In the case study, two fictitious fellow students introduce their start-up idea and ask the participant to join them. After reading the case study, participants evaluated the perceived feasibility of the business idea. Feasibility perceptions constitute an established measure of opportunity evaluation and a powerful predictor of opportunity exploitation (Krueger, 1993). The five-item feasibility scale developed by Krueger (1993) and used by Peterman and Kennedy (2003) revealed a satisfactory internal validity (α = 0.76) in this study.

3.1.3.5. Control variables. Participants were asked to rate the innovativeness of the business model, the price model, and the expected demand potential. Moreover, we controlled for participants’ age and for their willingness to found a venture in a student team.

3.2. Analyses and results

Table 1 displays the descriptive statistics and intercorrelations of our study variables. In order to investigate the activation of fear of failure, we observed reaction time latencies for the failure-relevant and the failure-irrelevant words as dependent variables. Responses in which strings of letters were incorrectly identified as words or non-words were eliminated (error rate = 1.9%). In line with previous lexical decision task studies (e.g., Sassenberg and Moskwowitz, 2005), outliers more than two standard deviations above or below the mean response time in the critical trials were also excluded from the analysis. Following the rationale that the activation of a motive is reflected by quicker reaction times for motive-relevant words, we expected participants in the failure condition to respond quicker to failure-relevant than to failure-irrelevant words. In support of H1, these participants did respond quicker to failure-relevant words (M = 349.65 milliseconds [ms]) than to failure-irrelevant words (M = 362.57 ms; t = 1.51, p < 0.10; see Fig. 2). In the control (anxiety) group, there was no significant difference in reaction times to failure-relevant (M = 402.55 ms) versus failure-irrelevant words (M = 390.21 ms), t = 1.21, ns. Moreover, participants presented with anxiety-related cues did not exhibit accelerated response times to failure-relevant words. Instead, participants in the anxiety group responded significantly slower to failure-relevant words (M = 402.55 ms) than did participants in the failure group (M = 349.65 ms, t = −2.49, p < 0.01), lending further support to H1. This supports our assumption that fear of failure is a responsive avoidance motive.

Next, we tested the assumption that activated fear of failure would negatively affect the perceived feasibility of the business idea among those participants who had been confronted with failure feedback. In a regression model, we used feasibility as the dependent variable and the survey measure of fear of failure as a predictor. The results offered initial support for H2, in that fear of failure significantly and negatively predicted perceived feasibility (β = −0.39, p < 0.01), but only among those participants

<table>
<thead>
<tr>
<th>Mean</th>
<th>S.D.</th>
<th>1.</th>
<th>2.</th>
<th>3.</th>
<th>4.</th>
<th>5.</th>
<th>6.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Feasibility</td>
<td>4.08</td>
<td>0.94</td>
<td></td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>2. Fear of failure</td>
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<td>0.58</td>
<td>−0.25</td>
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<td></td>
</tr>
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<td>3. Age</td>
<td>24.03</td>
<td>2.41</td>
<td>0.01</td>
<td>0.14</td>
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<tr>
<td>4. Price model</td>
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<td>1.75</td>
<td>0.13</td>
<td>0.13</td>
<td>0.19</td>
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<td></td>
</tr>
<tr>
<td>5. Innovation level</td>
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<td>1.72</td>
<td>0.33</td>
<td>0.21</td>
<td>0.00</td>
<td>0.18</td>
<td></td>
</tr>
<tr>
<td>6. Demand potential</td>
<td>3.83</td>
<td>1.54</td>
<td>0.43</td>
<td>0.03</td>
<td>−0.01</td>
<td>0.23</td>
<td>0.70</td>
</tr>
<tr>
<td>7. Willingness to found venture in student team</td>
<td>5.24</td>
<td>1.69</td>
<td>0.28</td>
<td>0.06</td>
<td>0.28</td>
<td>−0.03</td>
<td>0.24</td>
</tr>
</tbody>
</table>

Note: N = 71. Correlations of [0.24] and above are significant on a level of 0.05 (two-tailed test). Correlations of [0.31] and above are significant on a level of 0.01 (two-tailed test). Correlations of [0.39] and above are significant on a level of 0.001 (two-tailed test).
who had been subject to failure manipulation, that is, whose fear of failure had been activated through failure-relevant cues. As expected, the fear of failure of participants in the anxiety manipulation (i.e., fear of failure that had not been activated) did not significantly predict feasibility ($\beta = -0.22$, ns).

4. Study 2

Having demonstrated the activatability of fear of failure as well as its potential to affect opportunity evaluation in Study 1, we used Studies 2 and 3 to examine the mediating role of fear of failure in the entrepreneurial context, as predicted in H2 and H3. In doing so, we shine a light on the elicitors of fear of failure during nascent entrepreneurship—that is, exogenous obstacles to venture success—and their effects on entrepreneurial activity (i.e., opportunity evaluation and exploitation).

4.1 Method

4.1.1 Participants

The participants in this study were real nascent entrepreneurs identified via a well-established and representative German online panel. Recruitment e-mails were sent to a total of 36,000 individuals registered with the online panel. Of these invited individuals, 5218 panelists accessed the survey. The response rate of 15% is in line with response rates typically observed in studies using panel data (Pedersen and Nielsen, 2014; Tourangeau et al., 2003). In order to identify nascent entrepreneurs, we used a screening item asking participants for their current occupational status. Following the approaches to identifying nascent entrepreneurs adopted in the Panel Study of Entrepreneurial Dynamics and the Global Entrepreneurship Monitor (Kelley et al., 2016; Reynolds, 2009), only participants were chosen to participate in the study who indicated “I am, alone or with others, currently trying to start a new business, including any form of self-employment or selling any goods or services to others.” Participants not identified as nascent entrepreneurs were screened out. Consequently, the participants in our experiment were 204 real nascent entrepreneurs, corresponding to a 3.9% prevalence rate of nascent entrepreneurs (which aligns with the prevalence rate of active nascent entrepreneurs mentioned in the GEM national report for Germany in 2014; Sternberg et al., 2014). The participants were 118 men (57.8%) and 86 women (42.2%), with an average age of 37.54 (SD = 10.93). Of the entrepreneurial businesses that the participants intended to start, the majority were in the service sector (52.9%), followed by commerce (25.0%), production (13.2%), and other industries (8.8%). Of the participants, 33.3% indicated that their parents were, or had been, self-employed.

4.1.2 Procedure and experimental design

A questionnaire-based pre-test–post-test online experiment with an experimental scenario technique was conducted (cf., Welpe et al., 2012). Following recent calls in the experimental research literature to maximize external validity through realistic scenarios and samples (Aguius and Bradley, 2014), the participants were informed that this study would be about their actual start-up plans. First, they were asked to imagine their own planned start-ups as vividly as possible, and to gather their thoughts and feelings on them as intensively as possible. Second, they were asked to evaluate their business opportunity and the likelihood of actually exploiting this opportunity (t1 measures). Subsequently, the experimental manipulation in the form of presented obstacles was introduced. Each participant was randomly assigned to one of eight situations resulting from a 2 (loss of financial resources or not) × 2 (entry of competitor or not) × 2 (loss of partner or not) design. Participants were asked to memorize the presented obstacles statements and to imagine the consequences of those situations for their start-up plans. The order of
presented statements was randomized. Again, the participants were encouraged to take their time to vividly envision that new, possibly changed situation. In order to assess the perceived obstacles from the nascent entrepreneurs’ point of view, participants then evaluated the (changed) entrepreneurial setting in terms of the financial situation, competitive situation, and partner situation. Afterwards, they were asked to re-evaluate the business opportunity and likelihood of exploitation against the background of the new situation (t2 measures). Following this business opportunity evaluation task, participants’ fear of failure was assessed. Participants were debriefed and thanked.

4.1.3. Materials and measures

4.1.3.1. Opportunity evaluation. Opportunity evaluation was assessed through four items developed by Spörrle et al. (2009), and used by Welpe et al. (2012) (1 = not at all; 7 = totally). Cronbach’s alpha was 0.83 at t1 and 0.89 at t2.

4.1.3.2. Opportunity exploitation. To assess opportunity exploitation, we used the scale developed by Fitzsimmons and Douglas (2011) and adapted by Welpe et al. (2012). Cronbach’s alpha for the scales (1 = very unlikely; 7 = very likely) were 0.76 at t1 and 0.74 at t2.

4.1.3.3. Manipulation of perceived obstacles. Participants were asked to engage in a thought experiment. The obstacles were presented in the form of statements (see Appendix A.2 for all statements), such as, “required financial resources are suddenly no longer available” (a resource-oriented obstacle). In those cases where the participants were not confronted with one or several of the obstacles, they read that the respective situation would remain unchanged.

4.1.3.4. Perceived obstacles. Participants were asked to rate nine item statements on the entrepreneurial situation referring to financial resources, competitors, and partners (see Appendix A.2). Perceived loss of financial resources (α = 0.91), entry of a competitor (α = 0.88), and loss of partner (α = 0.73) were assessed with three items each.

4.1.3.5. Fear of failure. To assess participants’ fear of failure, we again used the Achievement Motives Scale (Gjesme and Nygard, 1970; Lang and Fries, 2006). Cronbach’s alpha was 0.88.

4.1.3.6. Control variables. We used a series of individual characteristics of the nascent entrepreneurs (age, gender, self-employment of their parents, prior entrepreneurship experience) as well as characteristics of the planned business (industry, innovation level) as control variables. Moreover, the dependent variables (t2 opportunity evaluation and opportunity exploitation) were controlled for their baseline values (t1 measures; Little, 2013).

4.2. Analyses and results

4.2.1. Manipulation checks

As a first manipulation check, we tested whether the experimentally and randomly induced obstacles and combinations of obstacles had actually elicited a perception of these threats. To do so, we assessed whether the subjective ratings concerning a particular perceived obstacle were higher for those participants who had encountered that particular obstacle than for those who had not. As expected, the participants in the loss of financial resources group reported significantly higher values regarding perceived loss of financial resources (M = 4.33) than those who were not presented with this cue (M = 3.91), t = 1.90, p < 0.05.

This was also true for the perceived entry of competitor scale (Mentry of competitor group = 4.50; Mno entry of competitor group = 4.09; t = 1.99, p < 0.01) and the perceived loss of partner scale (Mloss of partner group = 3.74; Mno loss of partner group = 3.13; t = 3.29, p < 0.01). The results suggest that the participants perceived the assigned obstacles as intended. Moreover, we found that the different obstacles were specific in their effects; that is, they increased the perception of the respective obstacle without affecting the perception of the other two “irrelevant” obstacles.1

A second manipulation test was conducted to ascertain if fear of failure was actually activated in those experimental conditions in which obstacles were presented. Indeed, those participants who had encountered any (combination) of the obstacles reported a significantly higher fear of failure (M = 3.47) than their counterparts who had not (M = 2.83), t = 2.04, p < 0.05. Finally, we tested whether the opportunity evaluation and exploitation measures of those participants who had been exposed to obstacles declined after presentation of the cues. The analysis showed that their post-test opportunity evaluation (M12 = 4.86) was significantly smaller than the pre-manipulation measure (M11 = 5.11), t = 3.10, p < 0.01. Similarly, the exploitation t2 score (M12 = 5.08) was significantly lower than the t1 score (M11 = 5.48), t = 4.17, p < 0.001.

1 As an exception, participants in the “loss of partner” condition reported a significantly higher perceived loss of financial resources (M = 4.36) than their counterparts who had not been confronted with a loss of partner (M = 3.84), t = 2.38, p < 0.05. This relationship is reasonable given the fact that a venture’s partners—especially co-founders—are often financially involved in the venture. Thus, losing a partner can often be accompanied by a loss of financial resources as well.
Table 2
Descriptive statistics and correlations among study variables (Study 2).

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>S.D.</th>
<th>1.</th>
<th>2.</th>
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<th>10.</th>
<th>11.</th>
<th>12.</th>
<th>13.</th>
<th>14.</th>
<th>15.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceived loss of financial resources</td>
<td>4.11</td>
<td>1.58</td>
<td></td>
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<tr>
<td>Perceived loss of partner</td>
<td>3.45</td>
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<td>Perceived entry of competitor</td>
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<td>Fear of failure</td>
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<tr>
<td>Opportunity evaluation (t1)</td>
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<td>1.10</td>
<td>−0.13</td>
<td>−0.09</td>
<td>−0.15</td>
<td>−0.17</td>
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<tr>
<td>Opportunity evaluation (t2)</td>
<td>4.89</td>
<td>1.26</td>
<td>−0.16</td>
<td>−0.27</td>
<td>−0.10</td>
<td>−0.33</td>
<td>0.60</td>
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<tr>
<td>Opportunity exploitation (t1)</td>
<td>7.19</td>
<td>1.29</td>
<td>−0.06</td>
<td>−0.19</td>
<td>0.00</td>
<td>−0.17</td>
<td>0.44</td>
<td>0.38</td>
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<tr>
<td>Opportunity exploitation (t2)</td>
<td>5.11</td>
<td>1.35</td>
<td>−0.11</td>
<td>−0.29</td>
<td>−0.06</td>
<td>−0.18</td>
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<td>0.65</td>
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<tr>
<td>Age</td>
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<td>−0.10</td>
<td>−0.20</td>
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<td>0.12</td>
<td>0.11</td>
<td>0.17</td>
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<tr>
<td>Gender (male)</td>
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<td>0.50</td>
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<td>−0.13</td>
<td>−0.15</td>
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<tr>
<td>Industry (production)</td>
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<td>0.34</td>
<td>0.06</td>
<td>0.12</td>
<td>−0.11</td>
<td>0.13</td>
<td>−0.08</td>
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<td>Industry (commerce)</td>
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<td>0.04</td>
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<td>Industry (other)</td>
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<td>−0.09</td>
<td>−0.08</td>
<td>0.01</td>
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<td>0.08</td>
<td>0.01</td>
<td>0.09</td>
<td>0.17</td>
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<td>−0.18</td>
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<tr>
<td>Level of innovation</td>
<td>2.88</td>
<td>1.55</td>
<td>−0.02</td>
<td>0.02</td>
<td>−0.12</td>
<td>−0.04</td>
<td>0.07</td>
<td>0.06</td>
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<tr>
<td>Self-employed parents</td>
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<td>0.47</td>
<td>0.01</td>
<td>0.09</td>
<td>−0.07</td>
<td>−0.01</td>
<td>0.11</td>
<td>0.02</td>
<td>0.03</td>
<td>−0.03</td>
<td>−0.16</td>
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<td>0.09</td>
<td>0.04</td>
<td>0.02</td>
<td></td>
</tr>
<tr>
<td>Entrepreneurship experience</td>
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<td>0.32</td>
<td>−0.06</td>
<td>−0.05</td>
<td>−0.02</td>
<td>0.08</td>
<td>0.07</td>
<td>0.00</td>
<td>0.06</td>
<td>0.03</td>
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<td>−0.07</td>
<td>0.05</td>
<td>0.03</td>
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</tbody>
</table>

Note: N = 204. Correlations of |0.14| and above are significant on a level of 0.05 (two-tailed test). Correlations of |0.18| and above are significant on a level of 0.01 (two-tailed test). Correlations of |0.23| and above are significant on a level of 0.001 (two-tailed test).

a For gender, 0 = “male”, 1 = “female”.

b For industry, dummies were coded (four categories), baseline category = “service”.

c For self-employed parents, 0 = “no”, 1 = “yes”.

d For entrepreneurship experience, 0 = “no”, 1 = “yes”.
4.2.2. Model comparisons and hypothesis testing

Using Amos 22, we first conducted a confirmatory factor analysis to test the measurement model. The resulting model indicated a good fit to the data (CFI = 0.971, RMSEA = 0.030, SRMR = 0.043). We then tested our Hypothesized Model, including the full mediation effects of fear of failure and opportunity evaluation, against a series of alternative models in order to rule out divergent theoretical explanations. The Hypothesized Model outperformed (1) a model including all direct and indirect paths (Alternative Model 1); (2) a model in which fear of failure constituted a stand-alone fourth predictor independently affecting opportunity evaluation and exploitation (Alternative Model 2); (3) a model in which fear of failure was completely omitted and the perceived obstacles directly related to opportunity evaluation (Alternative Model 3); and (4) a model in which the opportunity evaluation variable was omitted and in which fear of failure was directly related to opportunity exploitation (Alternative Model 4). An overview including the fit indices of all tested models is presented in Table 3. Fig. 3 shows the Hypothesized Model.

To test the suggested mediation hypotheses, bootstrapping procedures were performed. H2a, suggesting that fear of failure mediates the relationship between the resource-oriented obstacle (perceived loss of financial resources) and opportunity evaluation, received support from the data ($\beta = -0.072; p < 0.01$). Moreover, fear of failure mediated the relationship between the social-capital-oriented obstacle (perceived loss of partner) and opportunity evaluation ($\beta = -0.047; p < 0.05$), supporting H2b. However, in contrast to H2c, the relationship between the market-oriented obstacle (perceived entry of a competitor) and opportunity evaluation was not significantly mediated by fear of failure ($\beta = -0.014; ns$). H3a to H3c proposed three path mediations in which the obstacles–exploitation relationships would be mediated sequentially by both fear of failure and opportunity evaluation. The results supported H3a and H3b, as both loss of financial resources ($\beta = -0.041; p < 0.01$) and loss of partner ($\beta = -0.027; p < 0.05$) elicited indirect effects on opportunity exploitation via fear of failure and opportunity evaluation. However, there was no significant sequential effect emanating from the entry of a competitor ($H3c$) ($\beta = -0.008; ns$). Overall, in Study 2, we found support for the mediating role of fear of failure for the relationships between two of the three central obstacles (i.e., the resource-oriented obstacle and the social-capital-oriented obstacle) and entrepreneurial activity.

5. Study 3

5.1. Method

We conducted an additional study in order to address two main goals: The first goal, addressed in Study 3a, was to replicate the mediating effect of fear of failure for the relationships between obstacles and opportunity evaluation found in Study 2 while varying certain features of the experimental design. As a first variation, in order to rule out potential sequence effects, we measured fear of failure directly after the experimental manipulation instead of measuring it at the end of the experiment. Second, we confronted each participant with only one obstacle (instead of combinations of obstacles). This approach provided a more conservative test of the effects of the obstacles on fear of failure, as multiple obstacles co-occurring at the same time (as in Study 2) might mutually reinforce one another in provoking fear of failure. On the antecedent side moreover, we modified the content of two of the obstacles. First, to incorporate the customer aspect within the market-oriented obstacles (in addition to the competitor aspect tested in Study 2), we presented a loss of customer demand obstacle. Declining customer demand or declining sales constitute the ultimate consequences of poor market performance in the sense of the market-based view (Makhija, 2003; Gómez et al., 2004). As such, the loss of customer demand is a more general obstacle that is associated with a firm’s inability

### Table 3

<table>
<thead>
<tr>
<th>Study</th>
<th>Model</th>
<th>$\chi^2$</th>
<th>df</th>
<th>$\Delta \chi^2$</th>
<th>$\Delta df$</th>
<th>PGFI</th>
<th>PCFI</th>
<th>CFI</th>
<th>RMSEA</th>
<th>SRMR</th>
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<td>2</td>
<td>Hypothesized Model</td>
<td>697.17</td>
<td>553</td>
<td></td>
<td></td>
<td>0.702</td>
<td>0.837</td>
<td>0.953</td>
<td>0.036</td>
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<td></td>
<td>Alternative Model 1</td>
<td>685.50</td>
<td>546</td>
<td>11.67</td>
<td>7</td>
<td>0.694</td>
<td>0.828</td>
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<td>0.035</td>
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<td>Alternative Model 2</td>
<td>714.21</td>
<td>549</td>
<td>28.71***</td>
<td>3</td>
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<td>38.41***</td>
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<td>Alternative Model 3</td>
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<td>127.46***</td>
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<td>0.950</td>
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<td>3b</td>
<td>Hypothesized Model</td>
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<td>0.056</td>
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<td>491</td>
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<td>496</td>
<td>151.15***</td>
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<td>0.783</td>
<td>0.886</td>
<td>0.062</td>
<td>0.153</td>
</tr>
</tbody>
</table>

**Note:** N (Study 2) = 204; N (Study 3) = 355. Hypothesized Model = Only indirect effects; Alternative Model 1 = All direct and indirect effects; Alternative Model 2 = Fear of failure as stand-alone predictor; Alternative Model 3 = No fear of failure; Alternative Model 4 = No opportunity evaluation.

- $\chi^2$ = Chi-square-difference statistic; significance compared to Alternative Model 1 including all direct and indirect effects.
- $\Delta \chi^2$ = Chi-square difference statistic; significance compared to Alternative Model 1 including all direct and indirect effects.
- PGFI = Parsimony Goodness-Of-Fit Index; the highest PGFI value indicates the best fitting model.
- PCFI = Parsimonious Comparative Fit Index; the highest PCFI value indicates the best fitting model.
- CFI = Comparative Fit Index; cut-off value < 0.90 (Hu & Bentler, 1999).
- RMSEA = Root Mean Square Error of Approximation; cut-off value < 0.08 (MacCallum et al., 1996).
- SRMR = Standardized Root Mean Square Residual; cut-off value < 0.08 (Hu & Bentler, 1999).
to satisfy customer needs and/or a competitor’s superior ability to satisfy customer needs. Second, we defined the social-capital-oriented obstacle more broadly as loss of social support.

The second goal, addressed in Study 3b, was to extend Study 2 by examining the evaluative consequences of fear of failure in a differentiated manner. We accordingly chose to provide a more nuanced view of the opportunity evaluation component by splitting it into the two aspects, perceived feasibility and perceived desirability. While feasibility refers to the extent to which a person feels personally capable of starting a venture, desirability includes the degree to which a person perceives starting a new business to be attractive (Krueger et al., 2000; Shapero, 1982).

5.1.1. Participants
Again, we recruited participants from a representative German online panel using the same screening item as in Study 2. Of 54,300 invitations sent, 10,758 panelists accessed the survey (response rate = 20%). The final sample consisted of 355 real nascent entrepreneurs (prevalence rate = 3.3%). 45.4% of the respondents were male. The average age was 38.0 years (SD = 11.1). Most nascent entrepreneurs intended to found their ventures in the service sector (62.3%), followed by commerce (15.5%), other industries (12.1%), and production (10.1%). About half of the respondents planned to establish their venture with at least one co-founder (49.6%), while the other half (50.4%) were solo entrepreneurs.

5.1.2. Procedure and experimental design
As in Study 2, we used a questionnaire-based pre-test–post-test online experiment with an experimental scenario technique. Except for the two variations mentioned before, the experimental procedure was identical to that used in Study 2.

5.1.3. Materials and measures
5.1.3.1. Opportunity evaluation (Study 3a). Opportunity evaluation was assessed with the same scale as in Study 2. Cronbach’s α was 0.81 at t1 and 0.88 at t2.

5.1.3.2. Perceived feasibility and desirability (Study 3b). We relied on the scale developed by Krueger (1993) and used by Peterman and Kennedy (2003) to capture perceived desirability and feasibility. As feasibility and desirability have been assessed with differing, sometimes overlapping, sets of items in the past (cf., Krueger, 1993; Krueger et al., 2000), we considered it important to ensure the discriminant validity of these two constructs. In an independent sample of 292 undergraduate students, we found that when assessing feasibility and desirability simultaneously, two feasibility items did not sufficiently meet the requirements in terms of discriminant validity and reliability. We therefore captured both feasibility and desirability using three items each.2 The reliability of the final feasibility scale (0.60 for t1 and 0.61 for t2) was acceptable and within the ranges observed in past studies (Krueger, 1993; Peterman and Kennedy, 2003). The Cronbach’s α values for perceived desirability (0.86 for t1; 0.90 for t2) were satisfactory.

2 All items used in the studies are available upon request from the authors.
5.1.3.3. Manipulation of perceived obstacles. Participants were randomly assigned to one of four different experimental groups (three obstacles groups plus one control group). The wording of the obstacle statements can be found in Appendix A.3.

5.1.3.4. Perceived obstacles. Again, participants rated their perceptions of the three obstacles (see Appendix A.3). Cronbach’s α values were 0.91 for perceived loss of financial resources, 0.90 for perceived loss of social support, and 0.89 for perceived loss of customer demand.

5.1.3.5. Fear of failure. Participants again indicated fear of failure using the 5-item Achievement Motives Scale. Cronbach’s α was satisfactory (0.91).

5.1.3.6. Control variables. Once more, we controlled for participants’ age, gender, prior entrepreneurship experience, targeted industry, innovation level, and t1 values of the dependent variables. Additionally, we assessed whether the nascent entrepreneurs intended to build the new venture in a team or alone.

5.2. Analyses and results

Descriptive statistics and intercorrelations of the variables used in Study 3 are shown in Table 4.

5.2.1. Manipulation checks

We used the same manipulation checks as employed in Study 2. First, in examining whether the presented obstacles had evoked the respective perception of that threat, we found that participants in the loss of financial resources group had significantly higher scores on the perceived loss of financial resources scale (M = 4.72) than those who were not presented with that cue (M = 3.65), t = 4.89, p < 0.001. The same was also true for the perceived loss of social support items (Mloss of social support group = 3.93; Mno loss of social support group = 2.67; t = 5.54, p < 0.001) and the perceived loss of customer demand scale (Mloss of customer demand group = 3.86; Mno loss of customer demand group = 2.91; t = 4.71, p < 0.001). The different obstacles were moreover specific in their effects; in that they increased the perception of the relevant obstacle without affecting the perception of the other two “irrelevant” obstacles. Second, we again showed that fear of failure was higher in these experimental groups confronted with obstacles (M = 3.67, SD = 1.56) compared to the control (no obstacles) group (M = 3.35, SD = 1.43), t = 1.56, p = 0.06. Finally, the analyses showed that in the experimental groups, the post-test scores were significantly lower than the pre-test scores for all dependent variables examined, namely opportunity evaluation (M1t = 5.24; M1c = 4.53; t = 8.23; p < 0.001); opportunity exploitation (M2t = 5.56; M2c = 4.95; t = 7.30; p < 0.001); desirability (M1t = 5.65; M1c = 4.98; t = 7.63; p < 0.001); and feasibility (M1t = 4.78; M1c = 4.65), t = 2.32, p < 0.01.

5.2.2. Study 3a: replication of the mediating effect of fear of failure on opportunity evaluation

The measurement model (CFI = 0.966, RMSEA = 0.040, SRMR = 0.035) fit the data well. As in Study 2a, the hypothesized full mediation model was successfully tested against competing models (see Table 3). Again, we applied bootstrapping analyses to test the mediation hypotheses. Fear of failure significantly mediated the relationships between all three obstacles and the opportunity evaluation measure used in Study 2. Hence, H2a (resource-oriented obstacle/loss of financial resources; β = −0.048; p < 0.001), H2b (market-oriented obstacle/loss of customer demand; β = −0.064; p < 0.001), and H2c (social-capital-oriented obstacle/loss of social support; β = −0.063; p < 0.001) received further support.3

5.2.3. Study 3b: the mediating effect of fear of failure on perceived feasibility and desirability

The measurement model showed an adequate fit (CFI = 0.944, RMSEA = 0.048, SRMR = 0.047). The Hypothesized Model (see Fig. 4), indicating that fear of failure fully mediates the relationships between the three obstacles and the two outcomes (feasibility and desirability), also showed a satisfactory structural model fit. Moreover, it was not outperformed by any of the competing models (see Table 3).4

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3 We further used Study 3a to rule out alternative explanations by comparing the effect of fear of failure with potential alternative psychological mediators. In order to test whether these psychological mechanisms served as meaningful mediators alongside fear of failure, we modeled each of these as parallel and covarying mediators for the obstacles—opportunity evaluation relationships. First, we examined the alternative explanation that the perception of obstacles might be associated with an approach (instead of an avoidance) reaction. Therefore, we additionally assessed hope of success—the “positive” or “approach counterpart” of fear of failure (Pang, 2010). Hope of success did not significantly mediate the obstacles—opportunity evaluation relationships. At the same time, fear of failure remained a significant mediator in the model. Second, we addressed the alternative explanation that the obstacles might be perceived as challenges (instead of threats), thereby triggering individuals’ resilience (i.e., individuals’ “ability to bounce back”; Smith et al., 2008, p. 192; in the face of stressful circumstances). We found that resilience did not significantly mediate the obstacles—opportunity evaluation relationships while fear of failure was still a significant mediator. Third, we used negative affect (i.e., “undifferentiated subjective distress”; Cohen et al., 1995, p. 139) as an alternative mediating mechanism. Again, negative affect did not significantly mediate the relationships, whereas fear of failure did. Detailed analyses are available upon request from the authors.

4 Following a valuable reviewer comment, we re-ran the analyses including two additional variables pointing toward the appropriateness of our experimental manipulation. Participants were asked whether the presented scenario was realistic to them and their nascent business and whether they had been able to put themselves into that fictitious situation. Controlling for these two variables did not impair model fit nor did it change the significance of the hypothesized results (results available upon request).
<table>
<thead>
<tr>
<th>Table 4</th>
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<td>Descriptive statistics and correlations among study variables (Study 3).</td>
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</table>

| Mean | S.D. | 1. | 2. | 3. | 4. | 5. | 6. | 7. | 8. | 9. | 10. | 11. | 12. | 13. | 14. | 15. | 16. | 17. |
| 1. Perceived loss of financial resources | 3.86 | 1.71 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2. Perceived loss of social support | 2.96 | 1.66 | 0.30 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 3. Perceived loss of customer demand | 3.10 | 1.56 | 0.41 | 0.33 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 4. Fear of failure | 3.56 | 1.52 | 0.37 | 0.43 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 5. Feasibility (t1) | 4.56 | 0.90 | −0.27 | −0.30 | −0.26 | −0.50 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 6. Feasibility (t2) | 4.54 | 0.99 | −0.39 | −0.37 | −0.35 | −0.56 | 0.63 |  |  |  |  |  |  |  |  |  |  |  |  |
| 7. Desirability (t1) | 5.11 | 0.93 | −0.13 | −0.22 | −0.27 | −0.29 | 0.43 | 0.30 |  |  |  |  |  |  |  |  |  |  |  |
| 8. Desirability (t2) | 4.74 | 1.19 | −0.31 | −0.28 | −0.37 | −0.38 | 0.35 | 0.56 | 0.43 |  |  |  |  |  |  |  |  |  |  |
| 9. Opportunity evaluation (t1) | 5.26 | 1.06 | −0.05 | 0.01 | 0.02 | −0.13 | 0.28 | 0.21 | 0.03 | 0.03 | 0.09 | 0.08 |  |  |  |  |  |  |  |
| 10. Opportunity evaluation (t2) | 4.67 | 1.19 | −0.30 | −0.13 | −0.35 | −0.27 | 0.27 | 0.44 | 0.28 | 0.67 | 0.38 |  |  |  |  |  |  |  |  |
| 11. Age | 37.99 | 11.08 | −0.05 | 0.01 | 0.02 | −0.13 | 0.28 | 0.21 | 0.03 | 0.03 | 0.09 | 0.08 |  |  |  |  |  |  |  |
| 12. Gendera | 0.55 | 0.50 | 0.00 | 0.04 | 0.09 | 0.23 | −0.07 | −0.12 | 0.04 | 0.01 | 0.06 | 0.03 | −0.01 |  |  |  |  |  |  |
| 13. Industryb (production) | 0.10 | 0.30 | −0.01 | −0.06 | 0.04 | 0.00 | −0.03 | 0.03 | −0.01 | 0.00 | −0.01 | −0.06 | −0.01 |  |  |  |  |  |  |
| 14. Industry (commerce) | 0.15 | 0.36 | 0.00 | −0.04 | 0.01 | −0.04 | 0.02 | −0.05 | 0.01 | −0.04 | 0.03 | −0.12 | −0.02 | 0.02 | −0.14 |  |  |  |
| 15. Industry (other) | 0.12 | 0.33 | 0.09 | −0.01 | 0.04 | 0.07 | −0.06 | −0.08 | −0.10 | 0.01 | −0.06 | 0.03 | −0.01 | 0.01 | −0.13 | −0.16 |  |  |
| 16. Level of innovation | 2.77 | 1.54 | 0.05 | −0.03 | −0.05 | −0.12 | 0.02 | 0.06 | 0.03 | 0.06 | 0.11 | −0.01 | −0.03 | −0.10 | 0.06 | −0.06 | 0.09 |  |
| 17. Team founderc | 0.50 | 0.50 | 0.03 | −0.03 | −0.01 | −0.06 | 0.07 | 0.10 | 0.08 | 0.06 | 0.13 | 0.04 | −0.18 | −0.07 | 0.06 | −0.02 | −0.06 | 0.20 |
| 18. Entrepreneurship experience ∗d | 0.31 | 0.46 | 0.00 | −0.07 | 0.05 | 0.10 | −0.13 | −0.09 | 0.03 | −0.07 | −0.02 | −0.03 | −0.18 | 0.22 | 0.03 | −0.03 | −0.07 | 0.01 | 0.03 |

Note: N = 355. Correlations of |0.11| and above are significant on a level of 0.05 (two-tailed test). Correlations of |0.14| and above are significant on a level of 0.01 (two-tailed test). Correlations of |0.18| and above are significant on a level of 0.001 (two-tailed test).

a For gender, 0 = “male”, 1 = “female”.
b For industry, dummies were coded (four categories), baseline category = “service”.
c For team founder, 0 = “solo founder”, 1 = “team founder”.
d For entrepreneurship experience, 0 = “no”, 1 = “yes”.
The mediation analyses show that fear of failure mediates the relationships between the resource-oriented obstacle (perceived loss of financial resources) and feasibility ($\beta = -0.108; p < 0.01$) as well as desirability ($\beta = 0.070; p < 0.01$), lending further support to H2a. In support of H2b, fear of failure also significantly mediates the relationships between the market-oriented obstacle (perceived loss of customer demand) and feasibility ($\beta = -0.159; p < 0.001$) as well as desirability ($\beta = -0.104; p < 0.001$). Finally, fear of failure served as a mediator for the impact of the social-capital-oriented obstacle (perceived loss of social support) on feasibility ($\beta = -0.158; p < 0.001$) and desirability ($\beta = -0.103; p < 0.001$), supporting H2c. Overall, Studies 3a and 3b show that the mediating role of fear of failure found in Study 2 can be successfully generalized to a wider variety of consequences (feasibility and desirability), obstacles, and variations in experimental design.

6. Overall discussion

Entrepreneurship is an adventurous emotional journey (Baron, 2008) and all too often, nascent entrepreneurs end their journey before they have even hit the road (Khan et al., 2014; Davidsson and Gordon, 2016). Despite the aversive consequences of abandoned business opportunities, these individual withdrawal decisions have not been sufficiently explained by prior literature. The present study closes that gap by showing that the activation of fear of failure through obstacles is a central psychological mechanism that can explain nascent entrepreneurs’ subsequent entrepreneurial activity. Overall, the mediating effect of fear of failure was robust and pervasive across different studies, different evaluation aspects, and different obstacles. As an exception, one of the market-based obstacles—the perceived entry of a competitor—did not produce the hypothesized effect of triggering fear of failure. Potential second mover advantages, which oppose the expected second mover disadvantages, might explain the insignificant link. Later-entry companies can, for example, create advantages for themselves by learning from existing competitors (Lévesque et al., 2009). In addition, a competitor’s entry might serve as an external validation of the firm’s business opportunity, in the sense that the business idea must be a good one if another competitor is also pursuing it. This might actually increase the perceived attractiveness of entering that market. Either way, additional future research is needed in order to fully understand the impact of existing and changing market structures on the opportunity evaluation of nascent entrepreneurs.

On the theoretical side, our mediation model builds upon different theories from the fields of entrepreneurship, general management, and psychology. While these existing theoretical approaches all play important parts in explaining nascent entrepreneurial behavior, taken alone however, they cannot fully answer the question of why nascent entrepreneurs withdraw from entrepreneurial opportunities when confronted with obstacles. In building upon and combining insights from these approaches, our study provides a novel answer to the withdrawal question and thereby also extends and contributes back to the existing theories.

6.1. Theoretical implications

First, our study has theoretical implications for scholars approaching the withdrawal question from an opportunity characteristics perspective. This study highlights the relevance—and destructive power—of obstacles arising during nascent
entrepreneurship. Many studies have dealt with the positive, promising characteristics of entrepreneurial opportunities (e.g., Shepherd and DeTienne, 2005; Mitchell and Shepherd, 2010), and that is an important perspective on opportunities when predicting individuals’ approach tendencies with regard to entrepreneurship (e.g., the entry into entrepreneurship). However, the present study suggests that the additional consideration of negative business-related influencing factors (in this case, obstacles) is also important in explaining entrepreneurship, as it sheds light on avoidance tendencies with regard to entrepreneurship (e.g., withdrawal from entrepreneurship).

Our findings reveal that obstacles play an important role in the nascent entrepreneurial process, as their occurrence initiates a destructive chain of effects. Most importantly, our study identifies that at the heart of this process, perceiving critical obstacles triggers a basic psychological process. The model comparisons indicating full mediation effects support that the activation of fear of failure is a central mechanism through which the negative effects of obstacles on entrepreneurial activity are conveyed. As a consequence, perceiving exogenous obstacles triggers the activation of fear of failure, which, in turn, not only results in an immediate devaluation of the business opportunity but ultimately determines whether or not exploitation will occur.

Our findings accordingly also inform research using traditional management theories such as the resource-based (Barney, 1991), market-based (Makhija, 2003), or social capital perspectives (Lin, 1999) according to which the potential of new ventures to create competitive advantage is of utmost importance. First, our findings are consistent with these theories in confirming that new ventures failing to generate competitive advantage will be perceived as less favorable (Haynie et al., 2009), leading to withdrawal. At the same time, our study complements those theories by highlighting the particular role of the individual in these processes. By raising awareness of a previously unconsidered intra-psychological mechanism—the activation of fear of failure—the current research thus enhances the understanding of the impact of resource-based, market-based, or social-capital-based obstacles in the nascent process. Our findings suggest that withdrawal tendencies can only be fully explained by additionally accounting for how environmental characteristics trigger individuals’ fear of failure. In other words, regardless of whether individuals are confronted with resource-oriented, market-oriented, or social-capital-oriented obstacles, it is the avoidance motive triggered that decisively drives their judgment and behavior.

As a final theoretical implication, our study offers a new perspective on fear of failure that enhances previous conceptualizations and thereby provides a more refined research approach for entrepreneurship researchers in particular, and achievement theorists in general. Specifically, although fear of failure is a popular construct in discussions of entrepreneurship (Cacciotti and Hayton, 2015), its predominant static and isolated conceptualization (Cacciotti et al., 2016) did not enable researchers to examine individuals’ dynamic reactions to the environment. Adopting a social cognitive perspective on achievement motives to understand fear of failure as a responsive avoidance motive provides a meaningful way to examine the complex judgmental and behavioral consequences of fear of failure when individuals are confronted with failure-relevant environmental cues. That dynamic and situation-dependent view of fear of failure thereby supplements the existing conceptualizations of fear of failure in entrepreneurship, especially the fixed-trait perspective (e.g., Mitchell and Shepherd, 2011; Arenius and Minniti, 2005). Furthermore, for general achievement motivation theorists, our findings present a novel application of their theories. In addition to academic, work, or sports settings (e.g., Caraway et al., 2003; Conroy and Elliot, 2004), entrepreneurship can be treated as an achievement context in which fear of failure is activated by situational obstacles that signal a potential failure. We hope that the social cognitive perspective on achievement motives and the mediating role of fear of failure introduced here will also encourage future research in that general research domain.

6.2. Practical implications

In practical terms, the current research goes some way toward answering the question of why some individuals stop pursuing their business ideas and quit the entrepreneurship process. Therefore, its insights might be relevant not only for individuals who are planning to start a new business in the future and nascent entrepreneurs already engaged in the process, but also for advisors and investors dealing with nascent entrepreneurs. Traditionally, advisors and investors directed considerable attention to the objective characteristics of the business opportunities that nascent entrepreneurs are pursuing (Mason and Stark, 2004; Kuratko, 2005). However, our findings suggest that in addition to those objective characteristics, the psychological reaction to the characteristics—that is, activated fear of failure—decisively shapes nascent entrepreneurs’ judgment and behavior. Accordingly, decision processes (including e.g., investment processes) should not only illuminate the objective entrepreneurial situation, but also closely examine individuals’ fear of failure activated in response to these objective characteristics. In this regard, it is important to note that we would recommend nascent entrepreneurs not to downplay, mitigate, or even ignore their activated fear of failure. Instead, observing fear of failure provides important informational value over and above assessing objective opportunity characteristics alone (Schwarz and Clore, 1983; Clore et al., 2001). In cases when individuals are confronted with obstacles, the activated fear of failure in response to such threats can be interpreted as an important warning sign that objective threats in the nascent process should be taken seriously. Likewise, fear of failure can be highly informative for predicting individuals’ continuance in or withdrawal from the nascent process. Therefore, closely examining individuals’ fear of failure can be an important point of reference from which to scrutinize and balance the pros and cons of carrying the business idea forward. An overly negative perception of the entrepreneurial situation will increase the likelihood of withdrawal from entrepreneurial endeavors; moreover, individuals who are not fully convinced of their own success in the entrepreneurial process are unlikely to survive and persist, given their inability to deal with risks and dangers (Cardon and Kirk, 2015). Likewise, an inappropriately positive image of the entrepreneurial opportunity will reduce the likelihood that individuals will successfully continue along the path of
entrepreneurship (DeTienne et al., 2008). Thus, advisors and investors should aim to help nascent entrepreneurs to develop a subjective portrayal of the entrepreneurial situation, including exogenous obstacles, as realistically and objectively as possible.

6.3. Limitations of the study and directions for future research

Despite these contributions, our study has limitations that offer opportunities for future research. First, while this study’s experimental approach with real nascent entrepreneurs offers the preferred solution to draw causal inferences about the impact of psychological variables on entrepreneurial activity (Hsu et al., 2015), future research might replicate our findings using other survey methods and field studies (including qualitative approaches to capture the full realities that nascent entrepreneurs face) to examine the effects of obstacles on nascent entrepreneurs’ evaluations and behavior.

Second, while our research has focused on exogenous loss-related obstacles, future research should examine alternative relevant constructs that might trigger fear of failure. These might include factors internal to the entrepreneur—as an example, individuals might realize that they lack important entrepreneurial competencies such as self-management (Baum et al., 2001). Following the failure attribution classification by Cardon et al. (2011), in addition to examining obstacles beyond the direct control of entrepreneurs, future research could also focus on obstacles arising as a result of mistakes made by entrepreneurs, such as planning errors. Moreover, an alternative approach could include obstacles operationalized in terms of “non-gain” in addition to loss (cf., Higgins et al., 1997; Idson et al., 2000)—that is, fear of failure might well include fear of not achieving gains. The situation in which desired gains are not achieved could also be perceived as a threat to the success of the venture and to the expectations of the nascent entrepreneur (Shaver et al., 2001). Moreover, future research could take a more fine-grained look at the obstacles used in this study. For instance, within the realm of social capital theory, the differentiation between a firm’s external social ties (“bridging social capital”) and intra-firm social ties (“bonding social capital”) merits further attention (Adler and Kwon, 2002).

Third, while the nascent entrepreneurs participating in our empirical studies operate in a variety of different industry contexts, the samples are limited to one cultural context, namely Germany. Although our hypotheses are theoretically based and thus should generally hold up in a wide range of situations, the strength of the relationships in our model may vary in different cultural contexts. In particular, a certain obstacle might be a stronger or weaker trigger of fear of failure in one culture than in another (cf., Hong et al., 2000). Therefore, an interesting avenue for future research could include the investigation of fear of failure’s mediating effect in cross-cultural contexts (De Castella et al., 2013; Vaillant and Lafuente, 2007).

Fourth, our research reveals that obstacles translate into fear of failure, which, in turn, affects opportunity evaluation and ultimately opportunity exploitation. While not a focus of our study, having revealed this complex sequence of effects offers research opportunities to examine the roles of moderating characteristics that might buffer the effects of obstacles on individuals’ fear of failure and the subsequent decision process. Among others, such protective mechanisms might include individuals’ “human capital” (Shepherd et al., 2015) which encompasses skills, education, training, and employment experience or entrepreneurial self-efficacy (Chen et al., 1998). Moreover, in addition to the effect of triggering fear of failure, being confronted with obstacles during the nascent process might be accompanied by further emotional experiences such as grief or sadness (Ucbasaran et al., 2013; Shepherd et al., 2009) or might lead to the activation of other individual motives. Likewise, nascent entrepreneurs’ decisions to continue with, or to withdraw from, their business ideas might have alternative triggers in addition to obstacles which might deserve further attention in future research. While our study focuses on the importance of fear of failure as a mediator in the obstacles—entrepreneurial activity relationship, examining such further situations and emotional experiences and their interplay can present interesting lines of enquiry for future research.

Appendix A

A.1. Appendix A.1

Fear of failure manipulation:
In this part of the study, we want to learn more about the personal weaknesses that individuals are confronted with in their university or work life. Please write down three personal weaknesses in the context of your university or work life. In order to answer the following questions, please choose the most burdensome weakness which would, in the worst case, result in failure in your professional or academic career.

1. What negative implications did this weakness already have on your university or work life?
2. How does this weakness impede you from achieving your goals?
3. What negative outcomes would occur if this weakness were to worsen suddenly?

Anxiety manipulation:
In this part of the study, we want to learn more about anxieties that individuals are confronted with in their daily life. Please write down three things (situations, objects, animals, etc.) that you are afraid of. Please choose the object of fear that you are most anxious of in order to answer the following questions:
(1) What exactly makes you afraid of this?
(2) Please describe a situation in which your anxiety was particularly strong
(3) Which thoughts and feelings run through your head when you think about the object of anxiety?

Case study:
"myyogi" is a pocket-sized yoga coach. It is a mobile application that enables health-conscious users to integrate yoga exercises easily into their daily lives. Although exercising is a part of most people's New Year's resolutions, many individuals do not manage to realize their sporting plans. Especially people with a tight daily schedule find it difficult to make space for physical activity. Yoga is the perfect type of sport especially for busy people. Yoga has been shown to help individuals in dealing with stress and exhaustion. It effectively alleviates various physical complaints including back pain. Moreover, many yoga exercises are quick and easy to learn. The mobile application "myyogi" offers users an individualized yoga workout plan. Starting off with some very easy yoga exercises, yoga will—little by little—become an integral part of the users' daily routine. One key advantage of "myyogi" is that the yoga exercises can be done during a lunch break or between meetings. "myyogi" can be synchronized with a fitness bracelet or a calendar. It then suggests a fitness unit whenever it fits into the schedule or whenever the user needs to take some time out. The fitness and wellness industry is booming—"myyogi" comes along just at the right time. Germans spend more money on their health than ever before. At the same time, the use of mobile devices expands apace. A free trial version of "myyogi" can be downloaded for 30 days. Afterwards, the company is planning a monthly subscription model for €5.99 and can be terminated on demand.

A.2. Appendix A.2

Experimental manipulation/obstacles statements (Study 2):

Resource-oriented obstacle:
Required financial resources are suddenly no longer available.
Required financial resources are still available as planned.

Market-oriented obstacle:
A strong competitor suddenly markets an offering that closely resembles your planned offering.
The competitive situation remains unchanged.

Social-capital-oriented obstacle:
An important partner (e.g., an external business partner, key member of the entrepreneurial team, important supplier, or a key customer) suddenly withdraws from your planned start-up.
Important partners are still available as planned.

Items capturing the perception of the obstacles (Study 2):

Perceived loss of financial resources:
1. My situation is problematic with regard to the financial resources of my business.
2. My financial situation is difficult.
3. My financial situation is poor.

Perceived entry of competitor:
1. In my target market, there is strong competition.
2. In my target market, the competitive situation is difficult.
3. In my target market, competition is tight.

Perceived loss of partner:
1. My situation is problematic with regard to business partners.
2. My situation is adverse with regard to business partners.
3. An important business partner is missing.

A.3. Appendix A.3

Experimental manipulation/obstacles statements (Study 3):

Resource-oriented obstacle:
Required financial resources are suddenly no longer available.
Required financial resources are still available as planned.

Market-oriented obstacle:
The demand for your products and services suddenly drops sharply.
The demand situation remains unchanged.

Social-capital-oriented obstacle:
You suddenly lose the support of your social environment regarding your entrepreneurial activities.
Support from your social environment is still available.
Note: For each experimental group presented with one obstacle, the relevant present obstacle was highlighted in color. At the same time, participants were informed in the scenario that the other areas of their business would remain unchanged.

Items capturing the perception of the obstacles (Study 3):

Perceived loss of financial resources:
1. My situation is problematic with regard to the financial resources of my business.
2. My financial situation is difficult.
3. My financial situation is poor.

Perceived loss of customer demand:
1. My situation is problematic with regard to the customer demand for my products/services.
2. Customer demand for my products/services is poor.
3. The customer demand situation for my products/services is difficult.

Perceived loss of social support:
1. The support by my social environment is lacking.
2. My problem is that the support by my social environment is missing.
3. My situation is problematic with regard to the support by my social environment.

References
