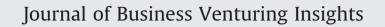
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The "heart" of entrepreneurship: The impact of entrepreneurial action on health and health on entrepreneurial action



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ABSTRACT

Health is one of the most important topics in society. By exploring issues related to health we can gain a deeper understanding of the critical antecedents and consequences of entrepreneurial action. Specifically, we take a psycho-social perspective on health and our knowledge of the entrepreneurship literature to begin a conversation about, and hopefully stimulate research on, how heath (of the entrepreneur and/or others) impacts entrepreneurial action and how entrepreneurial action creates (or diminishes) value (through the health of the entrepreneur and or others). We hope this article stimulates scholars' curiosity on one of society's most critical issues.

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1. Introduction

It is an understatement to say that health is important to people's lives, and not surprisingly, scholars have been interested in exploring the issue. While some entrepreneurship research has touched upon the topic of health (e.g., Boyd and Gumpert, 1983; Kets de Vries, 1980), we believe that there are ample opportunities to substantially expand this stream of research and in doing so make an important contribution to our understanding of entrepreneurial action—the pursuit of new business opportunities under uncertainty (McMullen and Shepherd, 2006). By health we refer to both physical health —"the physiological and physical status of the body"—and mental health—"the state of the mind, including basic intellectual functions" (Ware et al., 1981). While the topic of health in entrepreneurship can (and should) be explored at multiple levels (e.g., economic, inter-personal) to narrow the scope of our task in this paper to one that is more manageable we focus on *personal* health at the individual level because these aspects of health have a natural boundary—they "end at the skin" (Ware et al., 1981).

Health is not simply a topic largely overlooked by entrepreneurship scholars that could expand the boundaries of entrepreneurship at the field's periphery; rather, we believe it represents something more fundamental in the entrepreneurial context. Issues of health potentially underpin the inter-relationships (between individuals, actions, and opportunities) that are central to the field of entrepreneurship. That is, health issues (of entrepreneurs and/or others) can facilitate or obstruct entrepreneurial action from delivering value (to the entrepreneur and/or others). In this paper we make explicit the links between health and entrepreneurial action to offer an agenda for future research to generate new knowledge and shed light

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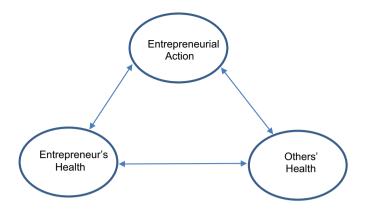


Fig. 1. A triadic framework of entrepreneurial action and health.

on some of the fundamental issues of entrepreneurship. Specifically, drawing on multiple, health-related streams of research from different disciplines, we propose a triadic model of entrepreneurial action and health in terms reciprocal linkages between entrepreneurial action, the health of the entrepreneur, and the health of others (see Fig. 1). From these linkages, we suggest potential points of departure for future research.

2. The impact of entrepreneurial action on the entrepreneur's health

Although the link between stress and health outcomes seems well established in the health literature (Faravelli and Pallanti, 1989; Hammen, 2005), there appear to be many unanswered questions when we consider this relationship in the context of entrepreneurial action. Stress refers to a relationship between the person and the environment (Lazarus and Folkman, 1984) where the requirements of the situation exceed the person's resources and are appraised (by him or her) as involving harm, a threat of harm, or a challenge (Lazarus, 1990). There is some research connecting entrepreneurs to high levels of stress (e.g., Harris et al., 1999; Teoh and Foo, 1997); stress likely generated from the high work-load (Eden, 1975; Harris et al., 1999) and high business risk (Douglas and Shepherd, 2002) faced by entrepreneurs. However, other studies have found no significant difference between entrepreneurs and non-entrepreneurs in the level of strain experienced (Rahim, 1996), life stress (Parasuraman and Simmers, 2001), and some have even found that entrepreneurs experience less stress (Eden, 1975). Therefore, our understanding of the link between entrepreneurial action and the health of the entrepreneur can be enhanced through further investigation of the role of stress.

First, future research can explain heterogeneity in the extent to which entrepreneurs experience stress and/or the impact of stress on their health. The notion of resilience is a great place to start. Resilient individuals are, in the face of adversity, loss, and/or trauma, able to maintain a relatively stable (normal) trajectory of psychological and physical functioning over time (Bonanno, 2004; Sutcliffe and Vogus, 2003). Future research can investigate the extent to which resilient people are more likely to take entrepreneurial action. Alternatively, or in conjunction, it could be that those who engage in entrepreneurial action begin to develop psychological and emotional capabilities that build resilience and this resilience either reduces stress or reduces the negative impact of stress on their health. This line of research can help us understand why some entrepreneurs develop resilience while others do not or are slow in doing so as an explanation for heterogeneity in health outcomes. Indeed, blending the resilience literature with the literature on bricolage (Baker and Nelson, 2005), assumptive worlds (Janoff-Bulman, 2010), and/or positive psychology (Seligman et al., 2005) may provide a theoretical basis for this important stream of research.

Second, future research can explain heterogeneity in the relationship between entrepreneurial action and the entrepreneur's health by exploring the nature of the entrepreneurial tasks and roles and/or the entrepreneur's fit with those tasks or roles. For example, Brigham et al. (2007) found that entrepreneurs had higher levels of satisfaction when their dominant decision making style complemented the formalization and structure of their firms. Therefore, entrepreneurs and ventures differ and it is likely the fit between the two that will help explain an entrepreneur's health issues. Although we are beginning to gain a deeper understanding of the many tasks of the entrepreneurial role (Chen et al., 1998) and how these might change over time as the venture matures (Shepherd et al., 2000) and grows (Wasserman, 2008), and as the entrepreneur prepares for exit (DeTienne, 2010), there is still ample opportunity for more fine grained research linking these micro-activities of entrepreneurial action (Shepherd, 2015) to entrepreneurs' health.

Finally, although the link between stress and health outcomes is well established at high levels of stress, future research can deepen our understanding of this relationship. If lower levels of stress can enhance health (Quick et al., 1987), then future research can make an important contribution by exploring at what level of stress does it become unhealthy for entrepreneurs and by explaining heterogeneity across entrepreneurs in their "optimal" level of stress [in terms of health]. Despite events generating high levels of stress, perhaps some entrepreneurs can rapidly deal with that stress and thereby

reduce, or eliminate, any negative health consequences. For example, extant work suggests that entrepreneurs use different coping strategies (Patzelt and Shepherd, 2011; Uy et al., 2013), but we need research to better understand the extent to which those entrepreneurs with highly developed coping skills have a weaker negative relationship between initial stress and health than those with less developed coping skills. Over and above coping strategies, physical exercise likely has both a direct positive impact on the entrepreneur's health and an indirect positive impact on health through reducing stress. Research can make important contributions to the literature by theorizing and empirically testing mediators and moderators of the stress–health relationship in the entrepreneurial context.

Exploration of the linkage between entrepreneurial action and the entrepreneur's health is also likely informed by an investigation of the various roles of emotion in the entrepreneurial process. Indeed, research has linked entrepreneurial action with positive emotional outcomes (Baum and Locke, 2004; Cardon et al., 2005, 2009). For example, in performing tasks as part of the entrepreneurial process can lead to experiences of passion—"a consciously accessible, intense positive feeling" (Cardon et al., 2009: 7)—excitement, happiness and flow (Rai, 2008; Schindehutte et al., 2006), and job satisfaction (Thompson et al., 1992). Along with being linked to positive emotions, entrepreneurial action has also been linked to negative emotions (Patzelt and Shepherd, 2011), and the co-existence of high positive and high negative emotions (cf. Fong, 2006). Indeed, the risks and uncertainties associated with entrepreneurial action can cause fear and anxiety (Boyd and Gumpert, 1983), loneliness and social isolation (Akande, 1994), frustrations (Du Toit, 1980), and grief (Byrne and Shepherd, 2015). These studies provide a solid foundation for future research to dig deeper and gain new insights into how entrepreneurial action impacts entrepreneurs' health, to which we now turn.

First, although specific tasks or events that occur as part of the entrepreneurial process can generate positive emotions or negative emotions, there is likely heterogeneity across entrepreneurs in the extent to which a specific task or event generates these emotions. That is, future research can help explain why some entrepreneurs experience more positive emotions from a particular task (e.g., inventing) than other entrepreneurs and/or other tasks. Such research could start by investigating the extent to which an entrepreneur's "fit" with his or her venture generates more or less positive emotions from performing venture-related tasks. Given the potential benefits of positive emotions (including health benefits) it is important to gain a deeper understanding of the techniques that entrepreneurs use (if any) to facilitate positive emotions. It could be that those entrepreneurs who reflect on (or engage in) helping others (Seligman et al., 2005), use loving-kindness meditation (Fredrickson et al., 2008), and/or use humor (Folkman and Moskowitz, 2000) are able to generate more positive emotions, which in turn positively impacts their health outcomes. However, there are some questions about whether more (in this case, positive emotions) is always better (i.e., for health related outcomes) (Pierce and Aguinis, 2013). For example, Vallerand et al. (2003) highlight the potential obsessive nature of high levels of passion that can lead to negative health outcomes. Therefore, future research can investigate the extent to which there are diminishing returns from positive emotions, after which further increases diminish health.

Second, negative emotions are also often generated by entrepreneurial actions and likely have consequences for health. For example, the most extreme negative emotional reaction in the entrepreneurial context appears to be associated with business failure. This research investigates how the failure of an entrepreneurial endeavor (project or business) generates a negative emotional reaction-grief-which can interfere with the "learning from failure" process (Shepherd, 2003; Shepherd et al., 2011). Despite a strong link in the psychology literature between grief and depression (Clayton, 1990), anxiety related disorders (Parkes and Weiss, 1983), more visits to the doctor (Mor et al., 1986), poor physical health (Kaprio et al., 1987), and greater risk of mortality (Kraus and Lilienfeld, 1959), the health consequences of entrepreneurial failure have not been explored to date. This is surprising considering the large number of entrepreneurs' businesses that fail each year (uscourts. gov/FederalCourts/Bankruptcy.aspx). Similarly, loneliness can exacerbate health problems (Hawkley and Cacioppo, 2010) with one study finding that lonely individuals have a 45% higher mortality rate than individuals who are not lonely (Holt-Lunstad et al., 2010). Loneliness is an emotional state generated from feelings of being estranged and/or misunderstood by others and thereby feeling a lack of social integration and/or emotional intimacy (Donaldson and Watson, 1996; Rook, 1984), which is different from being alone (which can sometimes be sought out for pleasurable). It is important that future research investigate the extent to which entrepreneurs feel loneliness and how these feelings impact their health. On one hand, entrepreneurs have been called "lone wolfs" and that "being the boss" separates the entrepreneur from his or her employees leading to feelings of loneliness and isolation (Akande, 1994; Gumpert and Boyd, 1984). On the other hand, entrepreneurs have the opportunity to select with whom they wish to work (Forbes et al., 2006) and some ventures are created by a founding team (Ucbasaran et al., 2003) and thereby can develop strong friendships that alleviate feelings of loneliness (Deborah and William, 2000). Future research can make a contribution by investigating why some entrepreneurs are able to avoid loneliness (and the subsequent negative health consequences) and others are not. Perhaps the nature of the entrepreneurial venture (e.g., number of employees, industry, and location), the human resource management approach (e.g., select the "right" people, develop a supportive organizational culture, participative management style, share equity) and/or the building of a network with suppliers, customers, investors and other stakeholders provide some potential avenues for future research.

Finally, although positive and negative emotions can exist simultaneously (Fong, 2006), positive emotions appear to "undo" negative emotions and broaden-and-build enduring personal resources (Fredrickson, 1998, 2001). Therefore, in the presence of positive emotions the negative health consequences of negative emotions might be "short-lived" because if the cause of the health problem is removed then so might its effect—the health problem itself. There is an opportunity for future

research to explore how the entrepreneurial context facilitates (or constrains) the "undoing" effect of positive emotions on negative emotions. Future studies can help explain why the "undoing" effect of positive emotions is stronger for some entrepreneurs than others, in some ventures than in others, and in some environments than in others. For example, perhaps more emotionally intelligent (Salovey and Mayer, 1989) entrepreneurs are better able to use positive emotions to regulate and diminish negative emotions, perhaps entrepreneurs in more emotionally capable organizations (Huy, 1999) or families (Shepherd, 2009) are helped by others to use the positive emotions to undo negative emotions, and/or perhaps entrepreneurs in fast moving environments (e.g., high velocity markets (Eisenhardt and Brown, 1998)) become faster at emotionally dealing with events—use positive emotions to more rapidly undo negative emotions.

3. The impact of the entrepreneur's health on entrepreneurial action

There is evidence that people with health related restrictions choose to become entrepreneurs. For example, groups who perceive obstacles to advancement in traditional employment roles, such as individuals with disabilities, are likely drawn to become an entrepreneur (Kendall et al., 2006) because it can provide greater accommodations for aspects related to their disabilities (Arnold and Seekins, 2002; Hagner and Davies, 2002). These aspects and findings represent a number of research opportunities.

First, although self-employment typically offer greater flexibility than employment, there is heterogeneity in the amount and type of flexibility offered to entrepreneurs. For example, founders that access external capital to grow their business typically find that they "must give up" more of their discretion in running the business than those that restrict growth to what can be funded by internal sources (Wasserman, 2008). Similarly, different health problems may require different workrelated flexibility. Future research can explore the different flexibility requirements of the major health problems that motivate someone to become an entrepreneur and how these entrepreneurs use flexibility to reduce health problems. That is, by understanding why some entrepreneurs are more effective at using flexibility to reduce health problems than other entrepreneurs we may be able to provide prescriptions that improve the lives of people suffering with poor health. The above discussion focuses on individuals drawn to the flexibility of being self-employed to cope with health problems, but perhaps other entrepreneurs (motivated by other reasons) can also use this flexibility to enhance their health (i.e., greater health benefits rather than reduce health problems). For example, the flexibility from founding and running one's own venture may enable individuals to pursue their sporting or recreational activities.

Second, there is also likely heterogeneity in the autonomy provided across entrepreneurial ventures and the level of autonomy desired by entrepreneurs given the nature of their health problems. For example, Haynie and Shepherd (2011) found that individuals who were injured in the course of following others' directions (i.e., soldiers and marines following orders in battle) were more desirous of autonomy as were individuals whose health-related problems required a long period of hospitalization where they were required to follow orders (of nurses, doctors, therapists). This suggests that the more the health problem is linked to a loss of control (causing the health problem or the health problem causing the lack of control), the greater the desire for autonomy, which likely influences the likelihood of entrepreneurial action and the nature of those actions pursued. It also appears that when poor health prevents one from doing tasks, there is an even greater desire to pursue entrepreneurial actions that enable the individual to build and use his or her competencies (Haynie and Shepherd, 2011). To the extent that entrepreneurial action enables people who have lost confidence in, or the ability to display, their competence to re-build that confidence, then there are likely health benefits (e.g., improved psychological well-being). Future research can make an important contribution to the field of entrepreneurship by investigating how poor health impacts the need for autonomy and/or competence and how these needs impact the nature of entrepreneurial actions.

Third, although self-employment might be more desirable for those with health-related problems, the costs of healthrelated problems may make an entrepreneurial action less feasible. For example, poor health can be financially costly; poor health leads to out of pocket expenses, lost earnings, and a depletion of household assets (Poterba et al., 2010). This can reduce the personal financial resources "available" for starting an entrepreneurial venture. However, consistent with the notion of entrepreneurship as the pursuit of opportunity *beyond* the resources currently controlled (Stevenson, 1983) and work on effectual reasoning emphasizing the entrepreneur's currently available means as a starting point (Sarasvathy, 2001), entrepreneurial action is possible with few resources at hand. Future research can make an important contribution to our knowledge by investigating how the financial cost of poor health impacts the feasibility of entrepreneurial action and the type of opportunity pursued and/or the scale of the venture founded. It could be that despite the health obstacles to pursuing entrepreneurial action, the financial costs of poor health in the employment setting are sufficient to still push the individual towards self-employment. Relatedly, research can investigate how potential investors evaluate entrepreneurs with health-related problems and whether entrepreneurs can use impression management (Zott and Huy, 2007) with regards to health-related problems when engaging with potential stakeholders.

Finally, financial resources are not the only resources drained by health problems; poor health can be costly in terms of lost time (Stewart et al., 2003) and energy from work-related tasks. Future research can explore how entrepreneurs with health-related problems manage time and why some are better at it than others. But given that time management behaviors (such as goal and priority setting) have been found to be associated with higher levels of stress in employees (Macan, 1994), it could be that an entrepreneur's time management to overcome the loss of time associated with poor health creates further health problems. It could be that poor health saps energy away from an entrepreneurial venture or the

entrepreneurial venture generates energy that transforms the health issue. Future research can explore the generation, diminution, and flow of entrepreneur's energy from his or her health status.

4. The impact of entrepreneurial action on others' health

People vary to the extent that they have knowledge of health problems; people in the medical profession have developed knowledge of health problems across many people (Simmons, 2002) and this knowledge could facilitate the identification of opportunities for someone (McMullen and Shepherd, 2006). For example, based on patent data from the American Medical Association, Chatterji et al. (2008: 1532) found that physicians were responsible for approximately "20% of the medical device patents filed in the United States during 1990–1996." However, for a host of reasons associated with assessments of reduced desirability and/or a lack of perceived feasibility, medical professionals may not exploit identified opportunities. For example, the doctor has a high opportunity cost if he or she decided to exploit the opportunity (entrepreneurial action is less desirable) and they may perceive a lack of personal knowledge to exploit the opportunity (entrepreneurial action is perceived as not feasible). This leads to a number of avenues for future research.

Because the identification of an opportunity to improve health that is not exploited represents a potentially wasted resource, it is important to question (and empirically investigate) our initial premise: do medical professionals identify health opportunities (3rd person opportunity) that they do not personally exploit and if yes, why not? What happens to these potentially valuable identified but not exploited opportunities? But some do go on to exploit their identified opportunities to improve health; future research can help explain why some and not others exploit identified opportunities. Perhaps entrepreneurship programs would be a useful addition to the education and/or training of medical professionals; future research can explore the nature and benefits (if any) of such entrepreneurship educational programs.

Although we typically think of the entrepreneurial process as occurring through one actor (individual, team and/or venture) perhaps this represents an artificial constraint on how we think about the entrepreneurial activities particularly when it comes to others' health as an outcome of those activities. Future research can determine the extent to which opportunities identified by medical professionals but assessed as not personally desirable or feasible are "passed on to" someone who has the knowledge and motivation to exploit the identified opportunity to enhance health. By gaining an understanding of the mechanisms underlying a successful exchange, then this could have important practical implications for how organizations manage and reward medical professionals. Furthermore, new doctors educated in health problems but lacking the experience with current solutions might be a source of new innovations. Indeed, new entrants into an industry are often the source of radical innovations (Christensen, 1997) because they are more likely to question the status quo. Is this the case for new medical professionals? Again, while this might lead to the identification of opportunities to enhance others' health, the obstacles to exploitation might be even greater (albeit different) for this group. For example, their time and energies are focused on learning and adapting their expectations to fit the roles of their new profession (Pratt et al., 2006) and therefore may not have sufficient "slack" to identify opportunities to enhance others' health.

5. The impact of others' health on entrepreneurial action

One does not need to directly experience health problems to be motivated to identify and exploit opportunities for enhancing others' health. Some people are prosocially motivated—"the desire to expend effort based on a concern for helping or contributing to other people" (Grant and Berry, 2011: 77)—and these motivations can shape cognitive processing (Kunda, 1990). Indeed, Grant and Berry (2011) found that pro-social motivation led to perspective taking that enabled individuals to be more creative in generalizing useful ideas. Perspective taking is "a cognitive process in which individuals adopt others' viewpoints in an attempt to understand their preferences, values, and needs" (Grant and Berry, 2011: 79). This perspective taking provides insights into the nature of health problems necessary for identifying solutions to these problems. Therefore, it appears that not only does prosocial motivation shape cognitions to provide insight into potentially useful health solutions but it also provides the motivation to act on these identified opportunities and in a way that maximizes its diffusion.

There is likely to be considerable heterogeneity amongst entrepreneurs in their prosocial motivation (although this remains an empirical question) and future research can investigate the impact of heterogeneity in prosocial motivation on entrepreneurial action to alleviate others' health problems. Perhaps only highly prosocially motivated individuals identify and exploit opportunities to enhance others' health. However, given the high potential for profit in this sector it is more likely that "all sorts" of entrepreneurs enter this sector. A more productive line of research may be to understand differences in the opportunities exploited based on the entrepreneur's pro-social motivation. That is, perhaps entrepreneurs who are more prosocially motivated exploit more radical health opportunities than those who are less prosocially motivated. If this is the case, is it because they engage in more perspective thinking to identify opportunities more useful in overcoming health problems (consistent with Grant and Berry, 2011) and/or does prosocial motivation increase the entrepreneurs' willingness to bear uncertainty to exploit the more "radical" identified opportunities? Perhaps more prosocially motivated individuals are more inclined to exploit opportunities that are likely to have the greatest impact in relieving suffering. Moreover, future research can explore why some prosocially motivated entrepreneurs are drawn to alleviate others' health problems while

other prosocially motivated entrepreneurs are drawn to help others' in non-health related ways.

6. Others' health impacts the entrepreneur's health through entrepreneurial action

Entrepreneurial actions that enhance the health of others can have a dark side—or at least research can explore this potential dark side: (1) the pursuit of opportunities to enhance others' health can itself have negative health implications for the entrepreneur. Although there are likely some advancements in psychological well-being from helping others, such endeavors may also come at a health cost for the entrepreneur (as discussed above). (2) Like all potential opportunities, potential health opportunities are surrounded by uncertainty. Pursuit of what are believed to be opportunities may result in failure. It could be that these failures adversely impact the health of those who they were trying to help (e.g., through false hope, early commitments, and so on) and/or the entrepreneur him or herself. Indeed, entrepreneurial grief may be greater when the business failure means that others' suffering that was going to be alleviated is now going to persist. To the extent that entrepreneurs are an important source of health benefits to others, then the implications to their own health from entrepreneurial actions takes on added importance.

7. The entrepreneur's health impacts others' health through entrepreneurial action

Entrepreneurs can impact the health of others through the opportunities they identify and exploit. Although the process of opportunity identification and exploitation to enhance health can be similar to the processes for all other opportunities that provide economic gain for the entrepreneur (see McMullen and Shepherd, 2006), we focus on aspects of the process specific to health.

Prior knowledge of health problems in the community is likely to play an important role in understanding who identifies opportunities to enhance others' health. Although some people are lucky to be healthy and are not exposed to health related issues, others are not so lucky. That is, some people personally suffer from health problems or become actively aware of health problems through the suffering of loved ones. Experiencing (directly or vicariously) health problems, the individual not only gains a deep understanding of the nuances of the problem but also knowledge of current solutions and how these solutions fall short. This can lead to an understanding of a latent demand. Future research can explore how personally experiencing a health problem impacts the opportunity identification process—deeper knowledge of the cause of the problem, the inter-related parts of the problem, and/or the inadequacy of current solutions. It could be that experiencing health problems motivate the sort of cognitive processes (e.g., analogical thinking (Grégoire et al., 2010; Gregoire and Shepherd, 2012)) and/or perseverance in identifying an opportunity. In contrast, it could be that the consequences of experiencing health problems may act in a way similar to negative emotion (Fredrickson, 1998) or an appraised threat (Staw et al., 1981) and constrict thinking in a way that reduces creativity and encourages reliance on tried-and-tested current approaches. That is, some health problems may obstruct the knowledge from experiencing health problems from leading to opportunity identification.

Although an individual experiencing (directly or indirectly) health problems is likely both knowledgeable and motivated to *identify* an opportunity for someone they may not be sufficiently knowledgeable and motivated to personally *exploit* the opportunity. For example, the exploitation of an opportunity to introduce a product to overcome people's health problems will likely require knowledge of production, marketing, and management in that sector, and it will require the resources to do so. Acting on opportunity to solve health problems might be a particularly important context where individuals who develop solutions to their own problems and use these innovations trigger a process (perhaps unintended) that leads to the adoption, technological improvement, and full scale exploitation of the health opportunity. Indeed, such research could complement a stream of research that builds on the notions of user innovation (von Hippel, 1988) to explore health entrepreneurship. Recognizing that user innovation is likely to be an important source of entrepreneurial actions that enhance health, we believe that future research that explores this process amongst users of health-related technologies, products and services will likely make an important contribution to an emerging (hopefully) "health entrepreneurship" literature.

In conclusion we note that health is an important topic. Health problems cause suffering. In this article we provide a first step and a roadmap on how entrepreneurship scholars can extend our research efforts to building a better understanding of the triadic relationship between entrepreneurial action, the entrepreneur's health, and others' health. We hope that other scholars pursue the above research agenda or a slightly different research agenda based on a different set of assumptions (e.g., take a more social perspective of entrepreneurial action and health than the largely psychological perspective taken here). Entrepreneurship scholars have the chance to better understand and perhaps, therefore, improve the health of entrepreneurs and/or the entrepreneurial actions that enhance others' health.

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