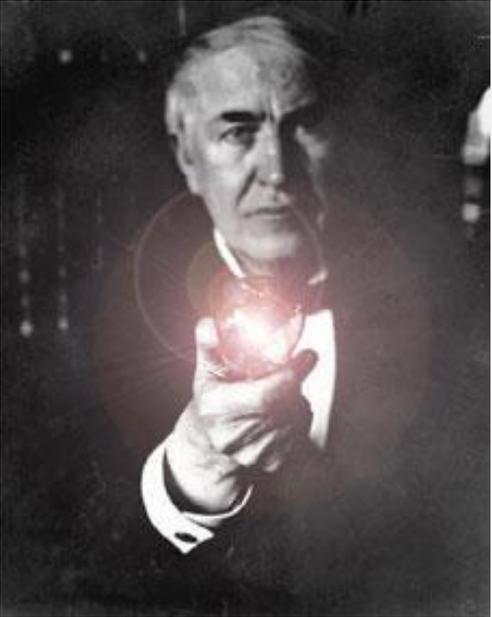


Are Entrepreneurs “Touched with Fire”? [1]

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<p>Contents</p> <p>Acknowledgement</p> <p>Abstract</p> <p>Evolutionary and macroeconomic context</p> <p>Theory development and literature review</p> <p>Methods</p> <p>Results:</p> <ul style="list-style-type: none">• Are entrepreneurs “touched with fire”?• Do asymptomatic entrepreneurs come from asymptomatic families? <p>Discussion</p> <ul style="list-style-type: none">• Limitations• Interpretation• Policy implications <p>References</p>	 <p>Thomas Edison</p>
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	<p><i>I have a lot of illnesses. I don't talk about it much, for a variety of reasons. I feel ashamed to have an illness. (It sounds absurd, but there still is an enormous stigma around being sick.) I don't want to use being ill as an excuse. (Although I sometimes wonder how much more productive I'd be if I wasn't so sick.) And, to a large extent, I just don't find it an interesting subject. (My friends are amazed by this; why is such a curious person so uncurious about the things so directly affecting his life?)</i></p> <p>http://nymag.com/daily/intelligencer/2013/01/aaron-swartz-reader-in-his-own-words.html</p>
<p>⇒.....Ovik Banerjee ☒ Paul Castle ☒ Matt Berman ☒ Steven Good ☒ Steve Jobs ☒ Glen Mueller ☒ Kari Kairamo ☒ Heinz Prechter ☒ Autumn Radtke ☒ Eric Salvatierra ☒ Alan Schram ☒ Carsten Schloter ☒ L'Wren Scott ☒ Jody Sherman ☒ Aaron Swartz ☒ Qinggen Wang ☒ Susie Steiner ☒ Ilya Zhitomirskiy..... ☒ "A diagnosis is not a disease." – Thomas Szasz, M.D.</p>	

We honor the memories of our brilliant, brave and beloved entrepreneurs whose missions will never be accomplished. We seek to understand the causes of their strengths and vulnerabilities, hoping that application of this knowledge will empower future entrepreneurs to prevail.

Abstract

Importance: Entrepreneurs create the vast majority of new jobs, pull economies out of recessions, introduce useful products and services, and create prosperity. Therefore it behooves us to understand the cognitive, affective, and behavioral strengths and vulnerabilities of entrepreneurs. Prior research has identified the personality traits of successful entrepreneurs, but little is known about the nature of their mental health characteristics or those of their families.

Objective: To investigate the prevalence and characteristics of mental health conditions among entrepreneurs and their first-degree family members.

Method: Research procedures were approved by the UC Berkeley institutional review board. In this study, 242 entrepreneurs and 93 demographically matched comparison participants took an anonymous on-line self-report survey to assess their engagement in entrepreneurship, and their individual and family mental health history. Differences between the two groups, and the first-degree relatives of asymptomatic members of both groups, were assessed for statistical significance using chi-square tests and t-tests.

Results: Self-reported mental health concerns were present across 72% of the entrepreneurs in this sample, a proportion that was significantly higher than that of the comparison group.

Entrepreneurs reported significantly more symptoms than the comparison participants, as 49% reported having one or more lifetime mental health conditions, 32% reported having two or more lifetime mental health conditions, 18% reported having three or more lifetime mental health conditions, and 23% reported being asymptomatic members of highly symptomatic families. The entrepreneurs were significantly more likely to report a lifetime history of depression (30%), ADHD (29%), substance use conditions (12%) and bipolar diagnosis (11%) than were comparison participants. Groups did not differ in rates of anxiety, with 27% of entrepreneurs and 26% of non-entrepreneurs reporting anxiety concerns. Asymptomatic entrepreneurs described their first-degree relatives as experiencing significantly more mental health conditions than did the asymptomatic comparison participants, including depression, ADHD, substance use conditions, and anxiety.

Limitations: Limitations of the data include reliance on self-report measures, possible selection bias, vulnerability to shared method variance and comparison group differences, and the reliance on a cross-sectional design.

Conclusions and relevance: The findings of this study are important because they suggest an underlying relationship between entrepreneurship and many of the affective, cognitive, and behavioral differences associated with mental health conditions. Current findings add to a growing body of work suggesting that mental health symptoms, in individuals and their family members, may co-occur with highly advantageous and adaptive outcomes that benefit both the individual and society. Understanding the strengths and vulnerabilities associated with personal and familial mental health histories may contribute to improved entrepreneurial outcomes, and to the development of protective resources for entrepreneurs. These findings have programmatic and policy implications for business education, executive coaching, large employers and human resource managers, health policy, social policy, and macroeconomic policy practitioners, and for mental health advocates. Policies and programs to properly insure and care for people with a wealth of notions (those with mental health conditions) may be synchronized with policies and programs that empower their admirable relatives (the entrepreneurs) to create the wealth of nations.

Methods

Research procedures were approved by the UC Berkeley institutional review board. All participants completed online informed consent and verified that they were at least 18 years of age. Participants were from two primary recruitment groups: 1) a mixture of undergraduate psychology students and MBA graduate students plus business school faculty members recruited through the research participation pools of a large public university, and 2) entrepreneurs recruited through study advertisements posted on entrepreneurship websites, newsletters, at entrepreneurship conferences, meet-up groups and organizations, and viral outreach marketing. Entrepreneurs were defined as business founders or co-founders, with or without employees, including founders and co-founders of not-for-profit organizations (social entrepreneurs). The study was advertised as a study of entrepreneurship and personality. All measures were completed online.

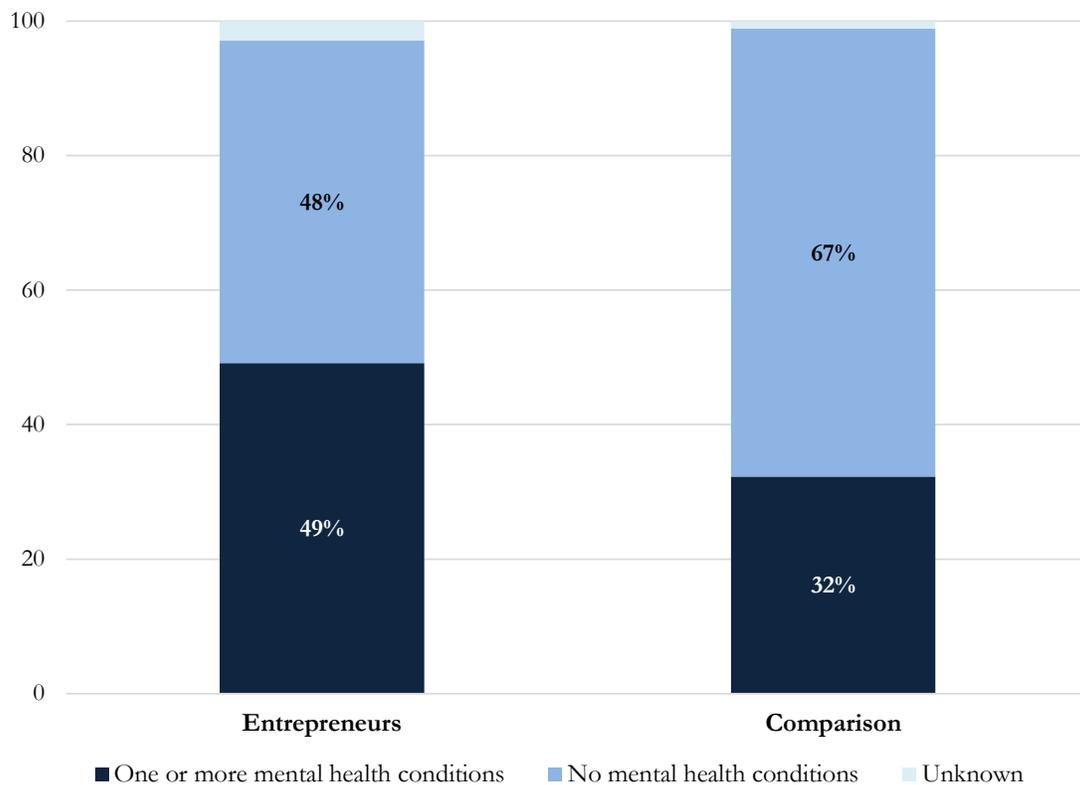
Results

Are Entrepreneurs Touched with Fire?

How many entrepreneurs report having mental health conditions (ADHD, Alcohol/Drugs, Bipolar, Depression, Anxiety)?

Among the entrepreneurs in this study, 119 reported having a mental health condition whereas 116 did not. Among the non-entrepreneurs, 30 reported having a mental health condition whereas 63 did not.

Figure 1
Respondents that report having any lifetime mental health condition
percent of total respondents



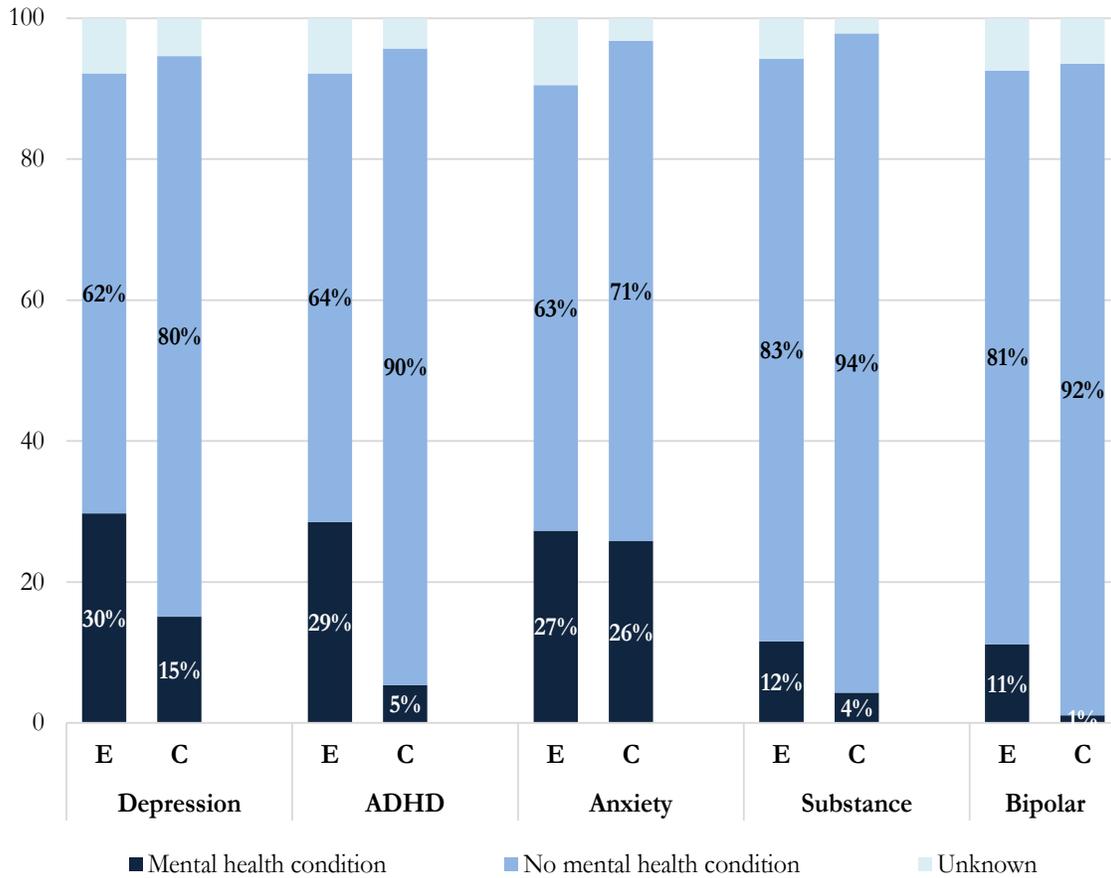
Notes: Entrepreneur sample size: 242; comparison sample size: 93.

Entrepreneurs in the study were significantly more likely to report having a lifetime history of any mental health condition than participants in the comparison group ($X^2=8.67$, $n=327$, $p<0.01$). As Figure 1 illustrates, almost half of the entrepreneurs reported having a lifetime mental health condition, as compared with 32% of the non-entrepreneurs.

Which mental health conditions do entrepreneurs report having?

Figure 2 displays the prevalence of five common mental health conditions among the entrepreneurs and comparison group participants in this sample.

Figure 2
Lifetime prevalence of mental health conditions among entrepreneurs
percent of total respondents



E = Entrepreneurs C = Comparison Participants

Notes: Entrepreneur sample size: 242; comparison sample size: 93.

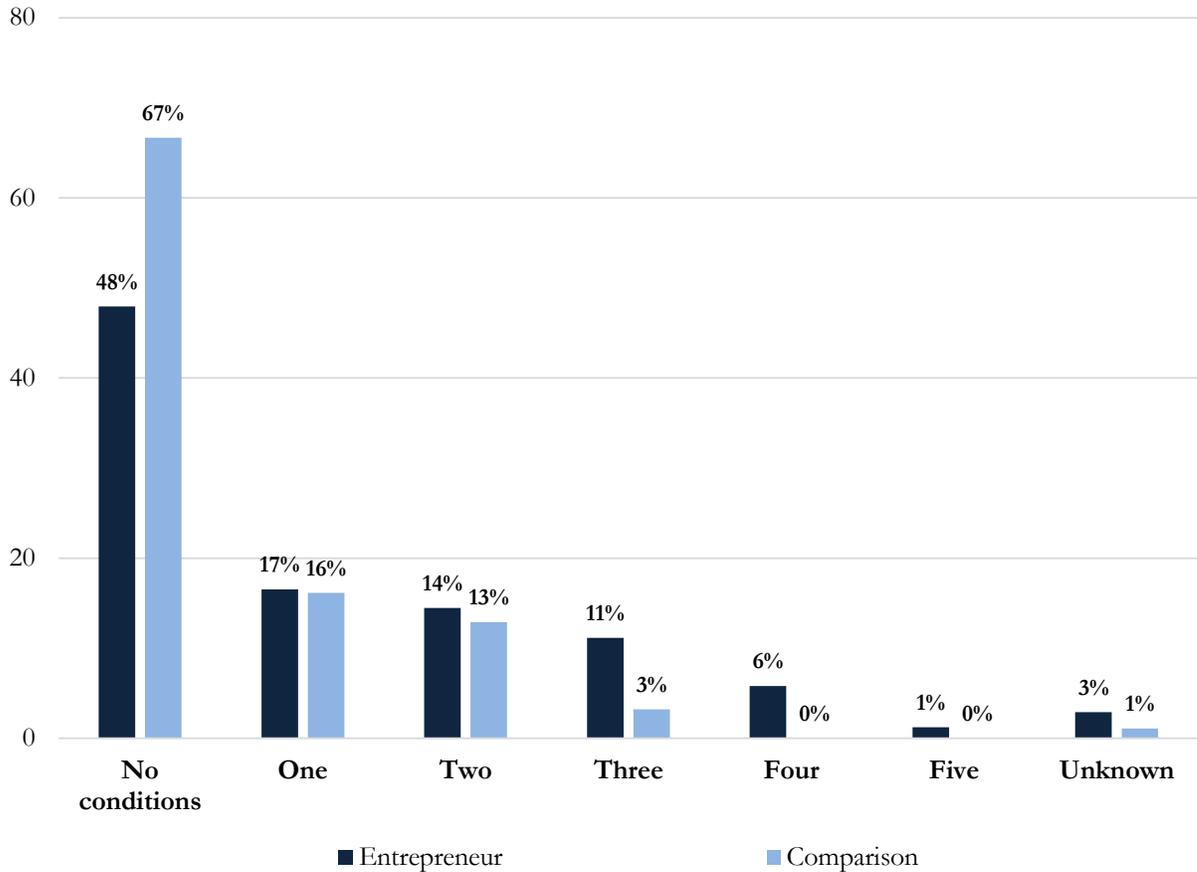
Entrepreneurs in the study reported significantly higher rates of ADHD ($X^2=21.71$, $n=310$, $p<0.01$), substance abuse ($X^2=4.48$, $n=319$, $p=0.03$), depression ($X^2=8.46$, $n=311$, $p<0.01$), and bipolar disorder ($X^2=9.09$, $N=311$, $p<0.01$) than comparison participants. As illustrated in Figure 2, entrepreneurs did not report significantly higher rates of anxiety than did participants in the comparison sample ($X^2=0.62$, $n=305$, $p=0.43$).

How many co-occurring mental health conditions do entrepreneurs report having?

In light of the greater prevalence and diversity of mental health conditions experienced by the entrepreneurs in this sample, the authors sought to determine the extent to which entrepreneurs were likely to have *several* mental health differences.

Figure 3
Lifetime prevalence of co-occurring mental health conditions among entrepreneurs

percent of total respondents



Notes: Entrepreneur sample size: 242; comparison sample size: 93.

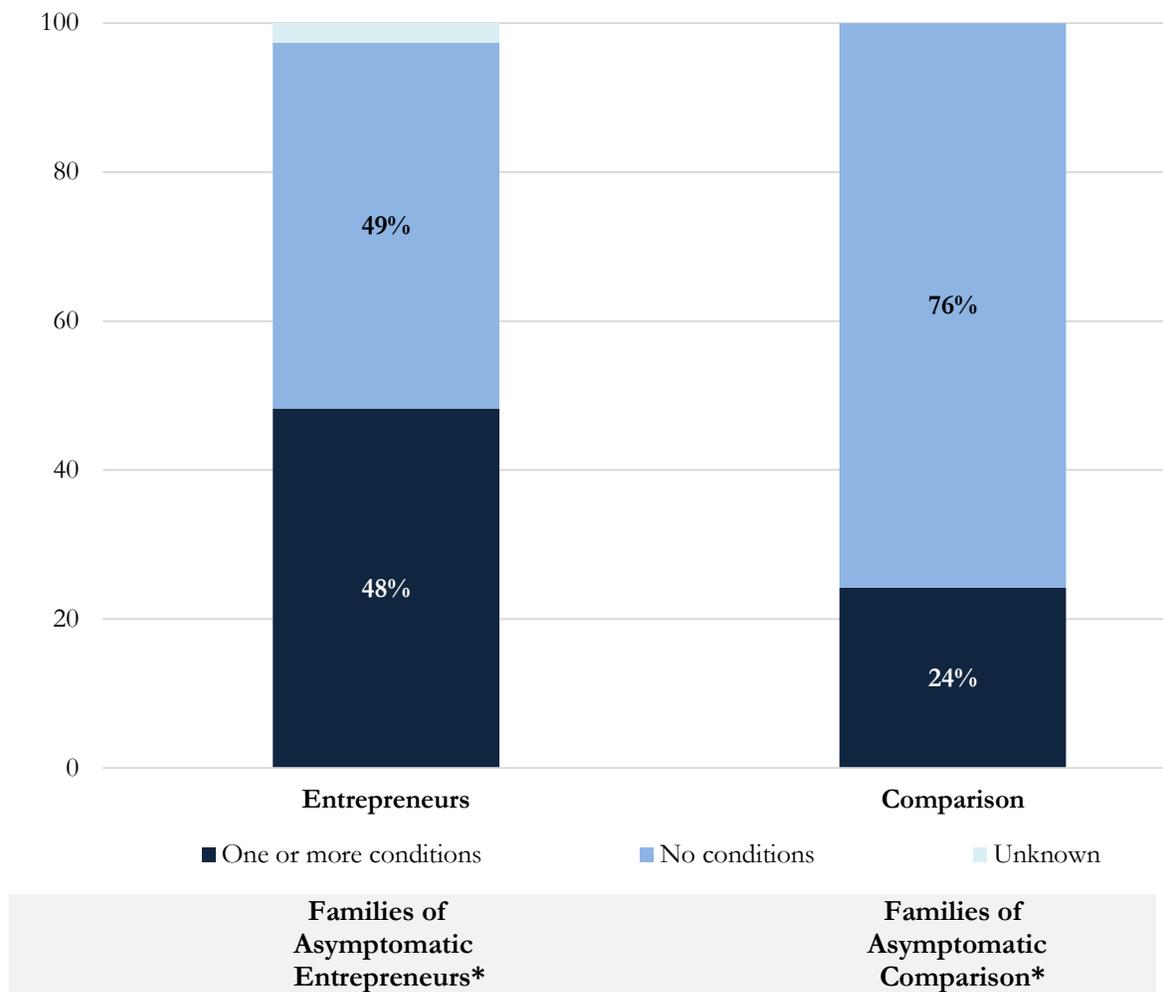
Figure 3 illustrates that the entrepreneurs in this sample reported significantly more co-occurring mental health conditions than were the comparison participants. ($t(175)=4.01$, $N=328$, $p<0.01$). In this sample 32% of entrepreneurs reported two or more co-occurring mental health conditions, and 18% reported three or more co-occurring conditions.

Do Asymptomatic Entrepreneurs come from Asymptomatic Families?

The authors sought to determine the presence of mental health conditions among the first-degree relatives of the asymptomatic entrepreneurs in this study.

How many asymptomatic entrepreneurs report mental health conditions among their first-degree relatives?

Figure 5
Prevalence of mental health conditions among first-degree relatives of asymptomatic entrepreneurs
percent of asymptomatic respondents



*Prevalence as reported by study participants.

Notes: Asymptomatic entrepreneur sample size: 116; asymptomatic comparison sample size: 62.

Figure 5 illustrates that the asymptomatic entrepreneurs in this sample were twice as likely to report one or more mental health conditions among their first-degree relatives than were the asymptomatic comparison participants, a difference that was statistically significant ($X^2=10.68$, $n=175$, $p<0.01$).

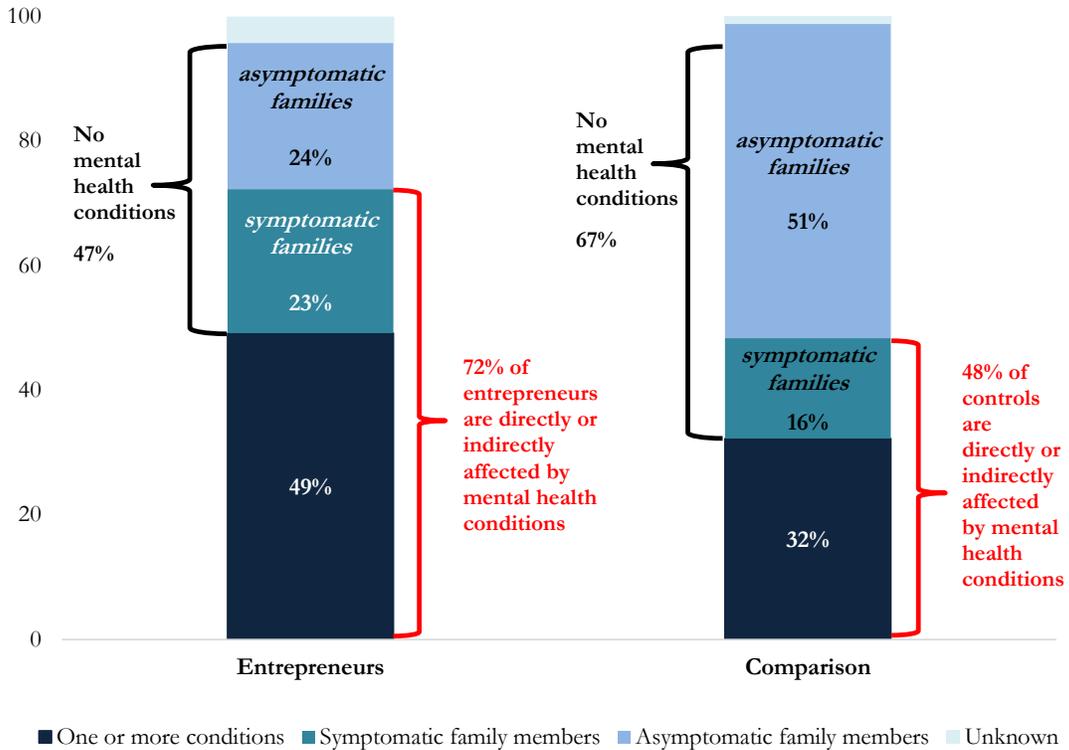
Figure 6

Figure 6 illustrates the prevalence of mental health conditions among entrepreneurs and their immediate families.

Figure 6

Prevalence of mental health conditions among entrepreneurs and their first-degree relatives

percent of total respondents



Notes: Entrepreneur sample size: 242; comparison sample size: 93.

Asymptomatic entrepreneurs with symptomatic families constitute 23% of the entire sample of 242 entrepreneurs. Asymptomatic entrepreneurs with asymptomatic families constitute only 24% of the entire study sample of 242 entrepreneurs.

Reviewed in conjunction with the results displayed Figure 1, 72% of the entrepreneurs in this sample either reported a personal mental health history (49%) or were asymptomatic yet reported a family mental health history (23%). By contrast, 48% of the comparison participants in this sample reported a personal mental health history (32%) or were asymptomatic yet reported a family mental health history (16%).

Discussion

Limitations of the Data

The results reported herein are limited by reliance on self-report measures, vulnerability to shared method variance, possible selection bias, comparison group characteristics, and study design considerations. In light of these limitations, the current findings must be considered highly preliminary.

Interpretation

Reconceptualizing mental health differences: A surprising 72% of the entrepreneurs in this sample reported a personal (49%) or family (23%) mental health history. This suggests an opportunity to reconceptualize mental health differences in a way that is not confined by the limits of a disease model. Mental health conditions are referred to as “disorders” and co-occurrence is referred to as “comorbidity” in the illness-oriented psychiatric literature. However the focus on a disease model does not address the adaptive benefits and positive outcomes that may be related to mental health conditions. A broad and complex array of interacting cognitive, affective, and behavioral differences associated with individual and co-occurring mental health conditions may also be associated with entrepreneurship. Some of the positive outcomes produced by symptomatic entrepreneurs in this sample, and asymptomatic entrepreneurs from symptomatic families, include invention, innovation, company formation, and job creation. Given that the vast majority of the job-creating, value-creating entrepreneurs in this study sample are affected by individual and/or family mental health issues, the strict focus on a disease model seems reductionistic and misleading.

Instead of viewing a diagnosis as a disease [103-105] it can be viewed as a description of a set of empowering traits and personal endowments that are coupled with vulnerabilities and risk factors. If properly managed, these endowments can result in significant social and personal benefits. If the vulnerabilities prevail, adverse individual and social consequences may ensue.

The first-degree family members of asymptomatic entrepreneurs were reported to be significantly more likely to manifest one or more mental health conditions, and to be affected by depression, ADHD, substance use conditions, and anxiety than were the first-degree relatives of asymptomatic comparison participants; 30% of non-affected entrepreneurs report two or more mental health conditions among their first-degree relatives and 16% report three or more mental health conditions among their first-degree relatives.

Mental health differences directly or indirectly affect 72% of the entrepreneurs in this sample, including those with a personal mental health history (49%) and family mental health history among the asymptomatic entrepreneurs (23%). Asymptomatic entrepreneurs with asymptomatic families constituted only 24% of the entrepreneur participants. (Data on this issue was missing for 4% of the entrepreneurs surveyed.)

Policy Implications

The findings presented above suggest that some implications for entrepreneurs, business education, executive coaching, corporate human resource management, macroeconomic policy,

health policy, and mental health advocacy deserve consideration.

Business education and executive coaching: This study suggests the possibility of developing more effective business education and executive coaching programs and resources for entrepreneurs by taking mental health risk and success factors into consideration. Understanding mental health risk factors and advantage factors may be particularly relevant for business school programs, incubators, and accelerators that are tasked with the education and training of entrepreneurs at an early stage of their careers. Business schools and incubators are uniquely positioned to offer self-awareness and vulnerability resistance resources to emerging entrepreneurs. Such resources could include confidential screening for treatable mental health symptoms and conditions. Current curricula devoted to human factors, organizational behavior and entrepreneurship may be augmented in ways that help MBA students and nascent entrepreneurs understand and build upon their personality and mental health propensities by developing risk management and strength building strategies. Executive coaching and self-management resources could also identify, and help to strengthen, mental health-related entrepreneurial success factors.

Large employers and human resource managers: Innovation and “intrapreneurship” are essential to sustained corporate success [30, 107-110], and innovative, entrepreneurial employees with mental health differences may have a critical role in achieving these business results. However, large corporations have focused on the disability costs of employees with mental health differences with less regard for the benefits that may accrue when these employees are retained and managed properly [41, 111-113]. Psychiatrically “disabled” employees may be the very same and critically important people who contribute disproportionately to the paradigm-shifting innovation and breakthrough value creation that is necessary for the sustained success of large enterprises [114-117]. Alternate human resource strategies may empower creative, risk-tolerant, entrepreneurial employees with mental health differences to add both incremental and game-changing value that offsets or overshadows costs related to disability and management issues [116, 118-121].

Policy and advocacy: From the perspective of macroeconomic, social and health policy, the findings in this study suggest that the people whom we admire and depend upon for creating jobs and prosperity, and the people whom we marginalize for being different (mentally ill) may spring from the same gene pool. Empowering some people with mental health issues, the entrepreneurs, while stigmatizing and marginalizing others, including their first-degree relatives, may thus constrain our talent pool and have limited net social utility.

Destigmatizing people with mental health differences, and understanding the strengths and vulnerabilities associated with the mental health differences of entrepreneurs, may inform more evolved healthcare, social, and macroeconomic policies that add value to the lives of the people who add value to our lives. Policies and programs to properly insure and care for marginalized people with a wealth of notions (those with mental health conditions) may be synchronized with policies and programs that empower their admirable relatives (the entrepreneurs) to create the wealth of nations.