© *Academy of Management Perspectives*
2020, Vol. 34, No. 2, 291–295.
https://doi.org/10.5465/amp.2019.0085

E X C H A N G E

ENTREPRENEURSHIP, CLINICAL PSYCHOLOGY, AND MENTAL HEALTH: AN EXCITING AND PROMISING NEW FIELD OF RESEARCH

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Original Article: Johan Wiklund, Isabella Hatak, Holger Patzelt, and Dean A. Shepherd, Mental Disorders in the Entrepreneurship Context: When Being Different Can Be an Advantage, https://doi.org/10.5465/amp.2017.0063.

This article presents a response to the commentary "Entrepreneurship and Contextual Definitions of Mental Disorders: Why Psychiatry Abandoned the Latter and Entrepreneurship Scholars May Want to Follow Suit" by Agafonow and Perez (2020), who commented on the *AMP* Entrepreneurship and Mental Health symposium. We discuss and largely challenge the commentary's criticism against the backdrop of the emerging research relating clinical psychology and mental health disorders (especially ADHD) to entrepreneurship. The aim of this response is to help scholars more clearly understand the relevance and challenges of including a (sub)clinical perspective in the study of entrepreneurial decisions, processes, and outcomes.

This article responds to the commentary "Entrepreneurship and Contextual Definitions of Mental Disorders: Why Psychiatry Abandoned the Latter and Entrepreneurship Scholars May Want to Follow Suit" (Agafonow & Perez, 2020; "the Commentary" henceforth), which was written in response to a symposium (special issue) on entrepreneurship and mental health published in *AMP* in 2018 (Volume 32, Issues 2 and 3). We all contributed to that symposium and have also authored other research that the Commentary highlights. We welcome the Commentary and appreciate that more scholars are becoming interested in the connections between entrepreneurship and mental health. We believe this represents a sign of the importance and vitality of this research topic.

We are also happy to engage in dialogue concerning potential weaknesses in our own research, and appreciate suggestions for how our work can be improved. We certainly recognize the limitations of the

We thank editor Phil Phan for making this Exchange possible.

extant literature on this topic. However, while we appreciate these aspects of the Commentary, it is also disheartening to see the Commentary authors' many misunderstandings and/or misinterpretations. Thus, the aim of this response is to reflect on and challenge some of the criticisms against the research relating mental health to entrepreneurship raised by the Commentary. We hope this response leads to continued dialog and inspires others to consider research on this important topic. We conclude our response by providing guidance on how this might be accomplished. Let us start by discussing the Commentary's strongest criticism.

CONTEXTUAL DEFINITION OF MENTAL DISORDERS

The opening sentence of the Commentary reads as follows: "A number of recently published articles have built upon a contextual definition of mental disorders." This is the fundamental premise of the Commentary, and is also echoed in its aforementioned title. Please allow us to clarify our research findings and interpretations.

First, we do not propose contextual definitions of mental disorders. We agree that it is dangerous to medicalize social issues and that the distinction between pathological and normative is often difficult to determine. Nonetheless, attention deficit/hyperactivity disorder (ADHD) is a valid mental disorder. For example, research suggests that ADHD demonstrates both concurrent and predictive validity related to functional impairment, long-term outcomes, and neurobiological risk factors (Faraone, 2005) and diagnostic reliability (Regier et al., 2013). A review of the Robins and Guze (1970) criteria, a theoretical framework that provides phases of research to determine the validity of psychiatric diagnosis, indicates that ADHD meets all necessary criteria to be considered a distinct clinical disorder (Faraone, 2005). Therefore, even though ADHD has many public skeptics, ADHD is a valid diagnosis (Faraone, 2005).

We agree with the Commentary that slaves being diagnosed with drapetomania and including homosexuality in early versions of the DSM is concerning. Neither drapetomania nor homosexuality involves a "failure of biologically designed functioning" (Wakefield, 2007, p. 155), and therefore neither should be considered a disorder. Likewise, unlike ADHD, neither drapetomania nor homosexuality demonstrates both concurrent and predictive validity related to functional impairment, long-term outcomes, and neurobiological risk factors. Thus, while we share the authors' concerns about psychiatry's pseudoscientific missteps of the past, we do not agree that ADHD represents a condition dependent upon "transitory contextual criteria." In fact, while the disorder has not always been called ADHD, the history of the clinical syndrome of inattention and overactivity dates back nearly 250 years (Palmer & Finger, 2001).

We also seek to clarify our use of the term *context*. We agree with the lexical definition (Oxford Online Dictionary, 2020) of context as "the circumstances that form the setting for an event, statement, or idea." Our fundamental premise is that the extent to which human characteristics represent strengths or weaknesses is context dependent, as suggested by the large person–environment fit literature. The symptoms of ADHD and the extent to which they impair vary as a function of the contextual demands inherent in that setting. For example, a child with ADHD may be more impaired in a reading class than in a physical education class. In this example, the type of class and the varying demands therein represent an important aspect of the child's context.

Our contextual view is also consistent with the diagnostic criteria of the DSM-5 (APA, 2013), which explicitly discusses context (using the term *domain*). For ADHD to be diagnosed validly, clinically significant symptoms must be experienced in two or more different domains (such as work, school, home, or social settings), enduring, and not due to alternative explanations (APA, 2013). For example, deficits in sustained attention might not be indicative of ADHD but rather secondary to contextual factors (e.g., the recent loss of a loved one, substance use, or demands associated with a new job) or other clinical conditions (e.g., depression or anxiety disorders). The DSM-5 approach of considering context is also consistent with the World Health Organization International Classification of Disease, 11th edition (ICD-11), which guides clinicians to consider an individual's functioning separately from his or her symptom status. In previous versions of the DSM, Axis IV[1] covered psychosocial and environmental contextual factors that affect diagnosis, treatment, and prognosis of mental disorders. Thus, when viewed from the framework of the lexical definition of context, we disagree with the Commentary that "psychiatry as a medical science has debunked contextual definitions of disorders for a good reason" (p. 285).

[1] In versions of the DSM between 1980 and 2012, clinicians considered their clients on several axes. Each axis refers to a specific domain of information that is of importance to the clinician. The fourth axis asked clinicians to note "psychosocial and environmental problems" that may impact the client's diagnosis, treatment, and prognosis.

THE NEGATIVE IMPLICATIONS OF MENTAL DISORDERS

Another important point made in the Commentary relates to not underestimating the negative implications of various disorders: "[I]t is desirable to be cautious about underestimating the negative consequences for disordered individuals. ... [A]ny research that postulates a link between entrepreneurship and disorders must avoid playing down the harmful effects of a dysfunction" (pp. 288, 286, respectively).

We completely agree with these statements and believe that the research literature is too nascent to form meaningful conclusions capable of driving public policy and treatment decisions. The Commentary interprets our statements of how ADHD relates to engaging in entrepreneurship as if we are suggesting that ADHD is associated with positive entrepreneurship outcomes (e.g., business performance). That is not what we claim. In fact, the cited work of Lerner, Verheul, and Thurik (2019, p. 389) explicitly cautioned against making assumptions of how ADHD may relate to performance:

> It is important to underscore that entrepreneurial action and performance are not synonymous. The linkage found between ADHD and venturing/entrepreneurial action should not be conflated, nor interpreted as a positive link with venture performance. The present study cannot speak to the effect of ADHD on venture performance or other entrepreneurial outcomes. ... Suffice to say, the connection between ADHD and later stages of organizing, profitability, and growth are yet unknown—and it is unlikely to be entirely rosy or dark.

Similarly, the cited paper of Lerner, Hunt, and Verheul (2018) elaborated at length on the potential of ADHD to undermine key venturing activities and explicitly noted the need for scientific skepticism in the face of the rosy popular media and celebrity-entrepreneur accounts—conclusions that related works have also noted (Lerner 2016; Lerner, Hunt, & Dimov 2018; Wiklund, Yu, Tucker, & Marino, 2017). Thus, we agree with the Commentary authors that it is premature to form conclusions, especially about whether ADHD is advantageous for entrepreneurial outcomes. However, we disagree that the extant scientific literature underestimates the negative consequences associated with ADHD. In fact, the significant negative consequences associated with ADHD are, in large part, responsible for our interest in identifying contexts that may be less negatively affected by inattention and hyperactivity-impulsivity.

Further, we believe it is somewhat ironic that the few empirical articles that have been published suggesting that traits associated with ADHD may not be exclusively negative are being construed as unbalanced. The overwhelmingly more common empirical paper focuses solely on the negative implications associated with ADHD. Thus, the argument could instead be made that it is the extant literature that appears to focus exclusively on negative implications that is unbalanced (as it does not contemplate any potential upside, drawing on a strength-based approach).

RESEARCH DESIGN

The last point raised in the Commentary concerns research design. For example, it states (Commentary, p. 289): "The Hawthorne effect brings to the fore serious flaws in recent works claiming to show an association between ADHD and entrepreneurship, seeking to pass self-administered online questionnaires as diagnostic evidence (e.g., Lerner, Verheul, & Thurik, 2018; Verheul et al., 2015, 2016)." Similar to previous misunderstandings, we believe that the Commentary authors fail to comprehend our research data and conclusions. Several of the studies we conducted rely on the extent to which respondents self-report ADHD symptoms rather than whether they have a formal ADHD diagnosis. For example, in Verheul, Block, et al. (2015), Verheul, Rietdijk, et al. (2016), and Wiklund et al. (2017), the self-administered ADHD Self-Report Scale (ASRS) was not used for diagnostic purposes but rather to determine the extent to which individuals report inattentive and/or hyperactive-impulsive symptoms.

As we have noted in our prior writings (e.g., Wiklund et al., 2017), the distinction between reporting ADHD symptoms and having an ADHD diagnosis is important for a number of reasons. First, those who receive an ADHD diagnosis during childhood might be in remission as adults. In fact, until relatively recently, it was a common belief that ADHD symptoms were confined to childhood (Hill & Schoener, 1996). Thus, those who have a diagnosis from childhood might not continue to display a clinical level of symptoms/impairment and would no longer meet criteria for an ADHD diagnosis (yet may report having such a diagnosis). Second, there are also regional and national differences in access to health care, suggesting that under/over-reporting of diagnoses relative to symptoms may vary substantially. Third, many individuals diagnosed with ADHD receive prescription medication to reduce ADHD symptom expression (Halmøy,

Fasmer, Gillberg, & Haavik, 2009). Thus, receiving an ADHD diagnosis may lead to reduction of the symptoms and impairments through medication, and the individual might no longer meet diagnostic criteria. Fourth, and quite germane to our hypothesis, if an individual with ADHD is not impaired occupationally, that lack of impairment is likely to mean that that individual no longer meets DSM-5 criteria for the disorder.

Although some studies have assessed ADHD symptoms, others, such as the cited Lerner et al. (2019) paper, indeed focus on whether individuals with an ADHD diagnosis are more or less likely to venture. In that specific study, rather than being asked about symptoms, respondents reported on whether or not they had been diagnosed with ADHD. In the absence of extensive medical records linked with business venturing activity, it appears reasonable and appropriate to ask respondents if they have been diagnosed with a particular condition (e.g., cancer, a broken bone, borderline personality disorder, or attention deficit/hyperactivity disorder). We propose that one independent variable is not necessarily superior to the other (symptoms vs. disorder). Rather, variable choice depends on the specific research hypothesis being investigated. We therefore believe that it can be appropriate (and sometimes advantageous) to study ADHD symptoms rather than the clinical ADHD diagnosis. Of course, it is important to clearly report whether a study uses self-reported symptoms or formal diagnosis and to provide appropriate justification for the choice.

We agree with the Commentary authors that research designs for studying mental disorders and entrepreneurship can be improved methodologically; several possible avenues are proposed by Wiklund, Hatak, Patzelt, and Shepherd (2018). Case studies and self-report surveys are appropriate for the early stages of any research field, but with time, more methodologically and technologically sophisticated studies (e.g., using DNA-based measures such as polygenic risk scores in longitudinal epidemiological samples) will greatly inform our understanding of these associations.

CONCLUSIONS

We are pleased to see that more scholars are becoming interested in the connections between business venturing and clinical psychology and mental health. We are also happy to engage in dialogue concerning potential weaknesses in our own research, and appreciate suggestions for how our work can be improved. We certainly recognize the limitations of the extant literature on this topic. However, while we appreciate these aspects of the Commentary, it is also disheartening to see the Commentary authors' many misunderstandings and/or misinterpretations. Hopefully, this response has clarified that (1) we do not believe that ADHD represents a medicalization of social issues, (2) we are not playing down the harmful effects of ADHD and encourage further research to focus on entrepreneurial outcomes, and (3) we agree that existing research designs limit our abilities to make firm conclusions. However, we disagree that studying only ADHD diagnoses (a categorical variable) is superior to studying both ADHD diagnoses and ADHD symptoms (a dimensional variable).

We thank the authors of the Commentary for allowing us to sharpen our points and further raise awareness of the relevance and complexities associated with studying the relationship between business venturing and clinical conditions, subclinical or aberrant tendencies, and mental health.

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