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Just a Chemical Imbalance: Exploring the Absence of the Social Etiology of Depression in Common Medical Websites

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Introduction

Substantial public and academic data has indicated a notable rise in the instance of clinical depression worldwide since the advent of modernity, but especially among western nations such as the United States (Hidaka, 2012); depression now comprises the largest cause of direct and indirect disability costs in the world (Friedrich, 2017). Increasingly many organizations have formed with the express intention of decreasing stigma and thereby increasing treatment rates for those with mental illnesses in the US; the National Alliance on Mental Illness (2019) currently estimates that only 43.3% of American adults with mental illnesses received treatment for them in 2018. With such concerns intensifying in media, and especially those targeted at younger generations, the United States has asserted mental illness as a pressing issue among its civilians. Resources abound to point individuals toward treatment and away from stigma. These same resources likewise generally explain their understanding of the causes of depression.

When ascertaining the underlying mechanisms which bring about a disease or disorder, experts speak of the etiology, or the study of causation; depressive disorders, like any other, are prescribed an etiological explanation. With the advent of a biological theory of depression, and subsequent pressure for its mass acceptance, mass-media resources explaining the illness most commonly espouse a biological etiology of depressive disorders. Essentially, depression is explained as originating in biochemical processes, rather than in social or lifestyle circumstances. This falls in line with a rising public perception of mental illness as biologically based (Blumner & Marcus, 2009). Researchers have hoped that a broader acceptance of the biological model of mental illness would decrease public stigma, but found no such relationship (Schomerus, Matschinger, & Angermeyer, 2014; Botha & Dazois, 2015), as rates of negative perceptions of those suffering from mental illness have remained fairly stable throughout the past few decades.

This information, paired with mounting scientific evidence for a more social etiology of depression (Cruwys et al., 2014), implies a potential danger in the lack of public media attention given to the possibility of a causal relationship between an individual's social circumstance and likelihood of contracting clinical depression.

Potential consequences of a misrepresentation of data concerning what causes depression may likewise prove disadvantageous for individuals with a personal or family history of depression. Rüsçh et al. (2010) found a significant relationship between adherence to a biological/genetic model of causal attribution of depression and increased social distance from the general public. The researchers also found a connection between the biological model and self-guilt among individuals experiencing depression. Other recent research has begun to investigate the relationship between mental illness identity and ultimate well-being outcomes (Thoits, 2016), and has found that internalization of depression as an unchanging facet of identity predicts worsened well-being even when adjusting for factors such as illness severity and treatment experience. With preliminary evidence suggesting an overtly biological model of depression as damaging for both public stigma and self-stigma for those with a mental illness identity, a more nuanced public image of the illness and its causes seems particularly prescient.

This paper seeks to highlight the aforementioned risk posed by an over-preponderance of biologically-based explanations for depression in mass media. By first exploring the evidence for a social understanding of the onset of depression, and then investigating the disconnections between such evidence and widely-available medical advice online, a clear distinction can be observed between the scientific literature exploring depression and how it is portrayed. Consequentially, potentially disruptive implications for both the treatment of depressed individuals and the illness identity of those with a history of depression might arise from this

disconnect. Connections between available data and such social psychological concepts as heuristics and causal attributions are investigated, highlighting the cognitive processes reinforcing a skewed perception of the etiology of depression. The paper concludes with implied consequences and suggestions for future research in the efforts of creating a more accurate and holistic public perception of depression.

Literature Review

The Social Etiology of Depression

Contemporary understandings of the onset of depression among academic researchers tend to use the bio-psycho-social model as a guideline, as no explicit triggers for depression have yet been found. All three routes of the current model have merit, although biological understandings have historically taken place in a backward fashion of theorizing brain defects after finding medicine that seems to achieve desired effects (Phillips, 2018). Although medical research understandably tends toward biological definitions of mental illness, recent compelling research has further illuminated the link between social factors and the etiology of depression.

Social scientists have long known of the impact of social and environmental factors on mental disease, suggested by such data as variable prevalence of illnesses such as schizophrenia and depression among twins (Schmidt, 2007). More recent analyses have explored such connections even further, focusing especially on social aspects such as connectedness, group identification, and social capital. One structural path analysis in a survey of 272 college students found that general social well-being, as defined by social competency and social connectedness,

mediated depression and self-esteem (Williams & Galliher, 2006). Cruwys, Haslam, Dingle, Haslam, and Jetten (2014) conducted a meta-analysis of studies investigating depression as related to a social identity perspective and found significant evidence supporting a hypothesis stating that “social identification with meaningful groups will predict lower levels of depression” (p. 219) across 16 studies with 2,700 total participants. However, research conducted by Postmes et al. (2018) found that certain qualifying factors influence the effect of social identification on depression, nuancing the aforementioned relationship. Structure and social identity of groups seems to play a role, as the study found that effects maintain potency most in interactive groups comprised of non-stigmatized members.

Another meta-analysis, focused on the relationships between social capital and common mental disorders, found a significant decrease in illness rates for those with high individual cognitive social capital, defined by measuring the number and quality of the social ties an individual has. This trend held true over both cross-sectional studies and longitudinal cohort studies, suggesting an element of causation between meaningful and plentiful social ties and decreased risk of depressive disorders (Ehsan & De Silva, 2015).

More so than simply predicting depression, researchers have found that measures of social group identification may prove curative (Cruwys et al., 2013). Through a longitudinal study of thousands of participants (n=4087), researchers observed a 63% decrease in risk of relapse for those that joined three or more groups. Data suggests that the relationship between social health and mental illness is not only correlative but causal, strongly implying that social well-being proves a definite factor in one’s risk of contracting a depressive disorder. While an integrated biopsychosocial model for understanding depression abounds in the literature, notable recent research has illuminated the particular importance of the social element of this theoretical

framework. Using measures such as social connectedness, group identity, and social capital, researchers have found significant correlations between an individual's social well-being and mental health. Despite this evidence, there exists a dearth of public policy programs aimed at mitigating the effects of social risk factors (Candy et al., 2007). In addition, mass report on the causational factors related to mental illnesses such as depression tend to ignore or depreciate social considerations. This potentially concerning trend is investigated below.

Explanations of Depression in Medical Mass Media

As of 2013, 59% of Americans had used the internet to research a medical condition within the past year (Fox, 2013). As such, the information provided on such websites as WebMD might make a recognizable difference in the way that users conceptualize and understand the illnesses they research. Additionally, primacy and recency effects have been found to influence online behavior, with users clicking links that come first or last in a list more often (Murphy, Hofacker, & Mezerski, 2006). Therefore, the presence and order of causes for depression given in reputable public medical information websites arguably change the way citizens understand the disorder. In keeping with the trend toward a biological etiology of depression as most salient (Blumner & Marcus, 2009), an analysis of five reputable web pages aimed to educate on the causes and treatments of depression found that biological factors were always mentioned first, and commonly mentioned last also, and received more attention. Psychosocial factors most commonly had mention in the form of "stressful life events," in which life milestones such as divorce or unemployment highlighted (rather than overarching social circumstances). In order to assess readily available information from reputable sources regarding depression, articles were gathered

from the websites of Harvard Health (2019), WebMD (n.d.), Healthline (2019), Mayo Clinic (2018), and the National Institute of Mental Health (2015).

The articles vary in the strictness of their adherence to a biological framework of understanding depression. The Harvard Health article, for example, devotes its text almost exclusively to investigate genetic, hormonal, and neurological factors that interplay with depression, ending with a discussion of medications used to treat depressive conditions. Its introduction claims that “there are many possible causes of depression, including faulty mood regulation by the brain, genetic vulnerability, stressful life events, medications, and medical problems” (2019). Both the first and last causes mentioned derive from biological explanations, promoting a primacy/recency effect of prioritizing such a causal context. While the article mentions stressful life events, this factor falls to the wayside, nearly forgotten between much more prominent and extensive sections discussing genetic and physical stressors. Though impossible to know why the creators of the website chose to present their information as such, their perspective seems inarguably skewed toward biological explanations.

Even in instances where sites acknowledge some level of social interaction with the onset of depression, it is often strictly categorized, such as in the case of WebMD. WebMD mentions the following in explaining depression: “Some people experience depression during a serious medical illness. Others may have depression with life changes such as a move or the death of a loved one. Still others have a family history of depression” (n.d.). The term “life changes” is not explored in great depth. Intersection of other medical conditions and family genetic history, both biological explanations, still comprise the first and last explanations. Psychosocial factors, once again, whittle down to concrete life events, rather than overarching trends. Similarly, Healthline (2019) mentions causes as “Family History...Early Childhood Trauma...Brain

Structure...Medical Conditions... [And] Drug Use”, once again displaying a heavy bias toward biological explanations, and no mention of adult psychosocial environment.

The Mayo Clinic’s article and the pamphlet on depression from the National Institute of Mental Health (NIMH) display similar informational biases toward the biological model of depression. Mayo Clinic cites causes of depression as “Biological Differences...Brain Chemistry...Hormones... [And] Inherited Traits” (2018). The article goes on to mention psychosocial “risk factors,” but discusses these in the context of events and circumstances that may trigger latent genetic predispositions. The NIMH report has this to say about what causes depression: “Many factors may play a role in depression, including genetics, brain biology and chemistry, and life events such as trauma, loss of a loved one, a difficult relationship, an early childhood experience, or any stressful situation... Depression can [also] co-occur with other serious medical illnesses such as diabetes, cancer, heart disease, and Parkinson’s disease” (2015). Once again, these explanations heavily skew toward biology and biological models of the possible causes and onset of depressive disorders.

Through comparing the narratives presented on five different highly trafficked online medical resources, a clear picture of the intended public understanding of depression emerged. These findings keep with the fundamental attribution error of attributing causes to individual or dispositional factors, rather than social or group dynamics, but the distinct lack of acknowledgment of generalized social well-being as a predictor of depression stands out as a significant omission. Using both primacy and recency effects, and by creating an availability heuristic based on the ratio of biological discussion versus social, public information might arguably sway mass perceptions regarding the nature of depression, with some implied detriment to decreasing public and internalized stigma, discussed below.

Consequences of a Biological Etiology of Depression

Some might argue that understandings of mental illnesses such as depression have always been grounded to some extent in a psychosocial model, and that this natural tendency implies a lesser need for explication in mass media. However, with such a strong tendency toward explaining depression with biology over past decades, mass opinion seems to have followed: Schomerus et al. (2012) found a trend toward a broader understanding of mental illnesses as biological disease through a meta-regression of six studies. This tendency correlated with greater mental health literacy and acceptance of treatment such as psychiatric medication, but attitudes toward the mentally ill stayed the same or even worsened throughout time.

This relationship between espousing the biological model of mental illnesses such as depression and decreased acceptance, support, and positive self-regard for those suffering from the illnesses has been documented in other studies, as well. Schomerus, Matschinger, & Angermeyer (2014) found that increased use of the biological explanation led to decreased social acceptance of individuals with schizophrenia or depression in a study of 3642 Germans. Importantly, research conducted on the influence of public attitudes toward mental illness in 14 European countries revealed that treatment seeking significantly increased among individuals living in societies with less public stigma and negative attitudes toward the mentally ill (Evans-Lacko et al., 2012).

In addition to important information regarding public attitudes of mental illness, researchers have investigated the individual consequences of causal attributions on those who suffer from mental illnesses. Cruwys & Gunaseelan (2016) found that individuals who had

experienced public stigma were more likely to internalize said stigma, and that individuals with increased personal identity as “depressed” had higher internalized stigma and lower well-being. Recent research has also begun to examine the consequences of causal attributions of mental illness on current sufferers. Stolzenburg et al. (2018) examined the relationships between different causal attributions and stigma attitudes among individuals with untreated mental illnesses, and found that both biomedical causal attributions and attributions of childhood trauma significantly predicted more social distance, and therefore less willingness for treatment, among individuals with depression. Rüsç et al. (2010) likewise found a relationship between the biogenetic model of psychopathology and increased social distance and decreased social acceptance among the general population.

Overall, the biomedical model seems to tend toward an understanding of genetic determinism that might make individuals feel stuck in their diagnoses, thus negatively impacting identity and wellbeing. Researchers concerned with the Social Identity Perspective found that individuals with depression who socially identified with depressed people experienced increased self-stigma (Klik, Williams, & Reynolds, 2019), while those investigating the matter using the theory of mental illness identity likewise proposed that increased illness identity (when that identity involves perceptions of inadequacy and incompetence) would also predict increased self-stigma (Yanos, Roe, & Lysaker, 2010).

Structurally, some research has found that a strictly biological model of mental illness has led to a stagnation of treatment innovation as well as increased division among scientists and practitioners (Deacon, 2013), raising alarm with the dangers of such a skewed framework. This concern, paired with both risks of negative public attitudes and increased internalized stigma, suggests a more holistic approach should be taken moving forward. With the wealth of evidence

supporting the social aspects of the etiology of depression, it seems almost negligent to omit such information from public data, when the converse explanation has been proven to cause visible damage to those who suffer from mental illness.

Suggestions for Future Research

Despite substantial evidence supporting a social etiology of depression, the lack of discussion of social predictors in mass media regarding depression, and the potential psychological consequences of the biomedical model of depression, no research has yet investigated the intersection of these variables. Potential areas of inquiry include a more in-depth understanding of the effects of a more explicitly psychosocial context for explaining depression on stigma from the perspectives of both depressed persons and the general public. Additionally, the literature could serve to gain from investigating the effects of psychosocial etiology on both mental illness identity and perceptions of treatment among those currently suffering from depression. Furthermore, as the specific connections mentioned in the literature review have not been closely examined before in the literature, many potential areas of inquest may arise.

Some manner of urgency regarding this area of study seems necessary, as the potential consequences broaden with the increasing number of individuals diagnosed with depression in the developed world. With evidence suggesting that a strictly biomedical model may do more harm than good for its patients, and an alternative explanation (more in line with the biopsychosocial theory) readily available, a reconsideration of the public narrative regarding depression, and perhaps even other common mental disorders, might prove necessary.

Conclusion

This paper aims to connect the deficits in public awareness of general social well-being as a potential aggressor of depressive conditions with concerns about consequences of the currently heralded biomedical model of depression. Through analyzing mass-media sources, a heavy skew toward a biological etiology of depression (with a lesser acknowledgment of psychosocial causes) emerged. Research regarding the potential consequences of a strictly biomedical model of depression showed that biomedical frameworks have been linked to decreased social acceptance in the public eye, and increased self-stigma for individuals with depression.

Given the rising diagnoses of common mental illnesses such as depression around the world, and the social and economic burdens societies face when a significant proportion of the population suffers from mental illness, a change in conceptualizing depression in the public eye seems necessary. By utilizing a biopsychosocial model with a heavier emphasis on factors such as social connectedness, belonging, and social capital, more effective and efficient treatments for sufferers may become available. Pilot programs such as an online social therapy group for young adults have already proven potentially useful in decreasing relapse rates among those with depression (Rice et al., 2016), and undoubtedly further research exploring social cures will follow. In the midst of a potentially more efficient fix, the almost complete lack of social etiology on common medical websites proves even more concerning. Perhaps, with the inclusion of such social therapies and a more social understanding of what causes depression in addition to current understandings of biological triggers, we might decrease stigma while simultaneously increasing the efficacy of treatment. It seems high time that public narratives of mental illness reflect the

broader biopsychosocial theory of depression, rather than focusing almost exclusively on a biomedical model that cannot paint the full picture of depression.

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