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Recent advances in understanding physical health problems in personality disorders

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Abstract

Personality disorders are associated with a range of adverse health outcomes, contributing to the high healthcare utilization seen in patients with these disorders. A growing literature supports a robust association of personality disorders and health problems. The primary aim of this article is to summarize the most recent research documenting the associations between personality disorders and health conditions. Extending past reviews, we discuss the association of personality disorders with chronic physical illnesses, sleep disturbances, pain conditions, and obesity. We provide recommendations for future research in this area.

Keywords

personality disorders; medical condition; physical health

Introduction

Personality disorders (PDs) involve longstanding maladaptive patterns of cognition, affect, and behaviors that lead to substantial distress and impairment [1]. According to the fifth revision of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-5), PDs can be classified as 10 distinct conditions, organized within three clusters [1]. Cluster A includes schizoid, paranoid, and schizotypal PDs, characterized by odd or eccentric features. Cluster B includes antisocial, borderline, narcissistic, and histrionic PDs, characterized by dramatic and impulsive patterns of behavior. Finally, Cluster C includes avoidant, dependent, and obsessive-compulsive PDs, characterized by anxious or fearful patterns of behavior. The DSM-5 also includes an alternative model that maps PDs onto existing models of personality, viewing PDs as maladaptive variants of normative personality dimensions.

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Although PDs affect approximately 9% (ranging from 4.4–14.8%) of the population [2], they are associated with a disproportionately high treatment utilization [2], and reduced life expectancies [3]. Given that physical illnesses predict mortality among mental health patients [4], the elevated rates of physical health problems observed in PD samples (see [2,5]) may contribute to these shortened lifespans. Beyond the direct effect of physical illness on mortality, both physical illness and psychiatric disorders predict death by suicide [6]. As such, attention is urgently needed to understand and ameliorate the physical health concerns associated with PDs. The present review extends past reviews on PDs and health concerns (e.g., [5]), focusing on recent advances in this area.

Chronic Physical Illnesses

Recent representative studies document higher rates of numerous physical illnesses among those with PDs. In population-based studies, interviewer-rated PDs were associated with numerous physical health concerns [7]. Likewise, participants who endorsed PD screening items were more likely to report poor health (41.3%) and to report having multiple illness (19.95%) than participants who screened negative for PDs (15% and 9%, respectively) [8]. In particular, those who screened positive for PDs reported higher rates of asthma, rheumatism/arthritis, migraines, and musculoskeletal problems [8].

There is evidence of elevated levels of health concerns among those with Cluster B disorders specifically. In a population-based study, Cluster B PDs were linked with higher odds of syncope, seizures, and arthritis [7]. In addition, results from the National Epidemiologic Survey on Alcohol and Related Conditions (NESARC) found that respondents with versus without antisocial PD reported the most past-year provider-diagnosed medical conditions, as well as the highest prevalence of coronary and “other” cardiovascular, hepatic, gastrointestinal, and arthritic diseases (non-adjusted) [9]. NESARC data also revealed associations between incidence of borderline PD and gastrointestinal, cardiovascular, hepatic, or “any” other disease, hypertension, and arthritis [10]. Other evidence points to specific concerns in relation to Clusters A and C PDs. Namely, Cluster A PDs were linked to gastroesophageal reflux disease, and Cluster C PDs were associated with higher rates of recurrent headaches [7]. Of note, these findings remained when controlling for covariates such as physical activity and medication use.

Emerging evidence from a few population-based longitudinal studies highlights the long-term medical risk of PDs (see [2]). In one such study [11], adolescents with a PD had higher odds of self-reported pain, physical illness, and poor physical health than adolescents without a PD. Of particular concern, participants with PDs showed a 50% faster annual rate of health decline from adolescence through their mid-thirties. In another population-based study of 244 adults, only Cluster B PDs and borderline PD traits were associated with greater risk for cardiovascular disease 23 years later, although there was insufficient prevalence of other PDs to adequately examine other associations [12].

Sleep Disturbances

Past work has documented an association of PDs and sleep disturbance (see [5]). For instance, patients with sleep disturbance screened positive for Cluster C PDs at high rates (50%) [13]. In addition, forensic patients with (versus without) antisocial PD reported higher sleep dissatisfaction [14]. An epidemiological study focused on borderline PD found that PD symptoms were associated with poorer subjective sleep quality [15], comparable to that of individuals with other mental health problems. Likewise, patients with borderline PD reported worse sleep quality than healthy controls [16].

In contrast, several studies have not demonstrated unique associations between PDs and sleep disturbances. For instance, participants who endorsed having trouble sleeping (versus those without sleep difficulties) reported more anxiety and depression, but not significantly more antisocial or borderline PD symptoms [17]. In addition, those with borderline PD exhibited better sleep quality on objective measures (latency, efficiency) than patients with depression [18] and comparable sleep quality to those with insomnia [19]. Thus, although people with PDs (especially Clusters B or C) often report sleep-related difficulties, they do not exhibit greater sleep problems than individuals with mood or anxiety disorders.

Pain-related Conditions

A broad foundation of research points to higher rates of pain disorders among patients with PDs, although most of this work has focused on Cluster B disorders. For instance, epidemiological research shows that individuals with chronic pain generally were more likely to screen positive for antisocial and borderline PD traits [20]. Similarly, disproportionately high rates of borderline PD (19%) have been found in chronic pain patients [21]; see [22]. In particular, patients who screened positive for borderline PD report more chronic back/neck problems, headache, fibromyalgia, visceral pain, and pain severity and interference [21].

Obesity

Research has documented a robust relationship between PDs and obesity (see [5]). Not only have PDs consistently shown positive associations with concurrent body mass index (BMI) [9,23], but also high rates of interviewer-rated PDs (26%) were seen among obese patients referred for bariatric surgery [24]. Although people with psychiatric disorders generally had greater odds of being overweight, those with PDs were more likely to be obese [25].

Evidence is mixed, however, on whether specific types of PDs are linked to obesity. Whereas several studies identified Cluster C as the most common PDs in obese bariatric surgery patients [24], other studies found that Cluster A disorders were the most prevalent [26]. Results revealed that both Cluster A and B disorders were linked with greater odds of obesity [23]. Furthermore, antisocial, avoidant, obsessive compulsive, paranoid, and schizoid (but not depressive or histrionic) PDs were associated with obesity [27]. Although borderline PD was not assessed in this sample [27], interviewer-rated borderline PD severity was associated with high BMI in a community sample [28].

Longitudinal studies reveal that PDs also predict later obesity. In the McLean Study of Adult Development, of the 264 patients with borderline PD, 17% were obese at baseline, and 28% were obese at the 6-year follow-up assessment [29], although it is unclear how these compare to rates seen in the general population. Among a subset of these patients, BMI was associated with poorer psychosocial outcomes at a 10-year follow-up [30]. In a community sample, adolescents with any diagnosed PD were 1.84 times more likely to be obese 17 years later, even after adjusting for demographic characteristics [31].

Dimensional Measures of Personality

The emergence of the alternative models of PDs raises the question of how personality traits, such as negative affectivity, may relate to disease [1]. Although there is scant evidence on the relation of physical health with pathological PD traits of *negative affectivity, disinhibition, antagonism, detachment,* and *psychoticism,* there is some research on their normative counterparts (i.e., *neuroticism, conscientiousness, agreeableness, extraversion,* and *openness*).

Broadly, conscientiousness, agreeableness, extraversion, openness, and low neuroticism are linked with better health outcomes. The shared variance among agreeableness, conscientiousness, and the inverse of neuroticism were associated with decreased risk for cardiometabolic disease [32]. Likewise, extraversion, openness, and low neuroticism were associated with better physical health among cardiovascular disease patients [33]. In addition, conscientiousness is generally associated with positive health outcomes and longevity [34]. Conscientiousness may spark more healthy behaviors, stabilize relationships, and boost socioeconomic status (see [35]). Some traits, such as neuroticism, may not be linearly related to health [35]. While there is some association of neuroticism and health problems [32], in other work, neuroticism attenuates mortality risk [36]. Still other work shows no differences in neuroticism among participants with and without chronic pain [37]. Low levels of neuroticism, such as realistic worry, are theorized to motivate health-protective behaviors [35].

Underlying Mechanisms

While it is clear that PDs are associated with co-occurring health problems, we know very little about the factors underlying these associations. Several biological, environmental, and psychological/behavioral factors may contribute to these health problems among people with PDs.

Biological vulnerabilities may increase the propensity for medical problems in PD samples. One such vulnerability is metabolic syndrome, characterized by obesity, high blood pressure, and elevated blood glucose. Psychiatric inpatients with borderline PD had twice the rate of metabolic syndrome compared to adult primary care participants [38]. Whether due to preexisting metabolic conditions or other behavioral variables, BMI may account for other health problems in PD samples. For instance, among individuals with borderline PD, BMI was associated with a greater odds of multiple medical conditions [30], and accounted for elevated rates of arthritis [39].

Behavioral or psychological factors associated with PDs may also directly or indirectly influence health problems. Although PDs may show a biological vulnerability to metabolic syndrome, it is also possible that behavioral correlates of PDs (e.g., impulsive eating, difficulty sustaining an exercise regimen, substance use) elevate the risk of this syndrome. Emotion dysregulation is one psychological factor that may confer risk for physical problems [40]. Consistent with this view, the association between borderline PD features and pain outcomes was accounted for by indirect pathways from emotional dysfunction through maladaptive cognitive-affective responses to pain in nonclinical [41] and chronic pain patient [42] samples. Likewise, another study of nonclinical participants showed that the link between borderline PD features and pain interference was highest among those with high distress and emotional avoidance [43]. Similarly, both emotional instability and impulsivity were hypothesized to underlie the link between insomnia and suicidality seen in borderline PD (see [44]). Of note, one model found that only impulsivity, and not emotional lability, accounted for the association between borderline PD features and BMI [28]. Disentangling these associations over time, a longitudinal study of young women found that baseline borderline PD traits predicted physical health problems eight months later [45]. Moreover, emotion dysregulation at four months partially accounted for this association.

Environmental factors may also play a role in relation of PDs with health problems. For instance, interpersonal processes such as loneliness [46], lack of social supports, or poor occupational functioning [47] may contribute to the observed associations of PDs and physical health concerns. Furthermore, inadequate health care access is another potential environmental risk factor. Relative to other psychiatric patients, those with PDs were less likely to have their physical health monitored by their providers, in part due to missing appointments [48].

These risk factors likely transact across biological, environment, and behavioral domains. For instance, use of psychotropic medication in patients with PDs has been linked to metabolic syndrome in borderline PD patients [38]. More generally, chronic stress can lead to persistent physiological activation (e.g., sympathetic nervous system activation, inflammation, hypothalamaic pituitary axis dysfunction), or elevated *allostatic load* [49]. This increased allostatic load, influenced by psychological/behavioral factors, such as emotion dysregulation, may exacerbate chronic illness in this population (see [50]).

Conclusions

This existing research base documents a robust relation of health problems and PDs. Recent advances in longitudinal studies have shown that PDs also predict later health problems. With the advent of dimensional models of PDs, it is important for future studies to examine continuous measures of PD traits and physical health, particularly given that nonlinear associations might be expected [35]. Future work is needed that not only pinpoints the specificity of PDs to certain health outcomes, but also translates this research to clinical contexts. In particular, future studies may benefit from examining how treatment may influence rates and severity of physical problems. Given the already high burden of PDs on the individual and health care systems [2], these co-occurring chronic health conditions

further tax the individual and lead to increased utilization of health care systems. Additional research in this area is of great public health importance.

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Highlights

- Personality disorders are associated with a range of physical health concerns.
- Advances in population-based research link personality disorders with health problems.
- Longitudinal studies suggest that personality disorders predict later health problems.
- Research on health problems and dimensional personality disorders is needed.
- Mechanisms underlying the relation of personality disorders to physical illnesses remain under-examined.