

REVIEW ARTICLE

Cross-cultural studies on the prevalence of personality disorders

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This article reviews cross-cultural research on personality disorders. The concept of personality disorders is discussed in terms of whether they are universal phenomena or specific to Western society. Then, research on the prevalence of personality disorders in North America, South America, Europe, Asia, Africa, and Australia is reviewed. The overall rates of the prevalence of personality disorders range from 2.40% to 20.00%. The data document that the prevalence of borderline and obsessive-compulsive personality disorders is the highest, especially in high-income countries. The cross-cultural differences in the prevalence

of the specified personality disorders are explained by its influencing factors such as race, ethnicity, social requirements, and the dimension of individualism-collectivism. The occurrence of personality disorders across cultures suggests some degree of psychological unity, and in turn, similarities in the neurobiological mechanisms of personality disorders.

KEY WORDS

personality disorders; prevalence; cross-cultural research; race; world wide

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BACKGROUND

Personality disorders (PDs) are defined as relatively stable dispositions of maladaptive behavior. These patterns of one's inner experiences and behavior deviate from the norms and expectations of the culture the person lives in and impair self and interpersonal functioning (Butcher, Hooley, & Mineka, 2016, p. 366; DSM-IV-TR, 2000, p. 275). PD diagnosis constitutes at least two of the following areas: cognitive, affective, interpersonal and impulse control (Cierpiałkowska & Soroko, 2014). PDs were introduced into the DSM-III in the 1980 as a distinct clinical category. However, they had been present in the former versions of the DSM although not as a distinct notion. They have also been present in many psychological and medical concepts for a long time, such as in personality psychology, individual differences, and clinical psychology. In 2013 in the DSM-5, they were classified under Axis II and grouped into three clusters, A, B, and C. The International Classification of Diseases 10th Edition (ICD-10) also includes PDs. Since the concept of PDs was first introduced in psychology and psychiatry, it has been suggested that PDs are related to dysfunctional emotional processing. People exhibiting PDs experience inadequate emotions, display problems with controlling them and have distorted emotional perception and interpretation. In turn, such impaired emotional processing leads to problems in perception and interpretation of the self and others (Cierpiałkowska & Soroko, 2014; DSM-5, 2013, p. 311). Dysfunctional affective functioning is the main area which characterizes PDs. It manifests differently in different PD types. Researchers argued that dysfunctional affectivity in PDs is not fully characterized and understood (Trzebińska & Gabińska, 2014) and is an important factor in the context of cross-cultural research on PDs. Experiencing emotions, emotional control, and regulation of emotions is dependent on the social and cultural milieu. Social rules of emotional expression determine how people experience and communicate emotions. These rules differ across countries, e.g. Latin Americans and Southern Europeans tend to express emotions more intensely while Asians (China) express themselves in a more reserved manner, with dependence and shyness being common qualities. Behavioral norms vary from one culture to another. This affects the formation and manifestation of personality as well as PD traits. In the literature, the relationship between PDs and culture is shown mainly through the comparison of prevalence rates between different countries, continents, and/or races. Researchers have argued that there are insufficient studies on the role of culture, ethnicity, and race in the diagnosis of PDs and that this aspect is overlooked (McGilloway, Hall, Lee, & Bhui, 2010). In general, there are several focuses in a cross-cultural approach to PD: 1. Scientists (psy-

chologists, neurobiologists, cross-cultural researchers, and evolutionists) aim to understand ethnic determinants of PDs and they compare the prevalence rates between samples of a different ethnicity; 2. Research highlights the differentiation of personality disorders in people from different cultures and nations; 3. The culture-independent approach states that PD is a universal concept of every culture, with gender, social environment, and culture being the main factors important for the diversity of PD traits.

PERSONALITY DISORDER – A UNIVERSAL CONCEPT OR ONLY A WESTERN PHENOMENON?

Although PDs are known in all cultures of the world, specified types are considered to be culturally biased (Bhugra & Bhui, 2001). Cultural factors influence the development of PD symptoms and have a direct effect or influence on the diagnostic procedure. The potential impact of culture on PDs is considered further in the cross-cultural research which focuses on whether PDs are a Western or universal phenomenon. Some researchers argue that the diagnosis of PDs is a reflection of North American and Western European concepts of personality (Loranger, Janca, & Sartorius, 1997). There are two opposing approaches to the culture-PD relation: *cultural relativism* and *cultural universalism*. *Cultural relativism* assumes that culture has an important impact on personality development – that mental health and mental illnesses are culturally dependent. Furthermore, psychiatrists and psychotherapists from this school (ethnically matched therapists) evaluate patients with respect to their ethnic and cultural background (Maramba & Hall, 2002). The available scientific data document greater effectiveness with ethnically matched therapy (Zane et al., 2005). *Cultural relativism* emphasizes the development of ethnographic and descriptive analyses (McGilloway et al., 2010). In this approach personality and culture are seen as mutually influencing each other. Personality and behavioral patterns are primarily contextual and historically founded, and universal personality traits are questioned (Church, 2000). Identification of the *socio-centric self-concept* in Hindu Indians and more autonomous, universal *ego-centric self-concept* in Americans are example findings with this approach (Shweder & Bourne, 1984). Comparably, the *independent self-concept* was identified as predominant in Western cultures, while the *dependent self-concept* dominates in Africa, Asia, Latin America, and some Southern European countries, which view a person as more dependent on social relationships (Markus & Kitayama, 1991).

In contrast to the culture-relativistic position of cultural psychiatry, the school of *cultural universalism* assumes that human personality is universal and

independent of cultural influences (Poortinga & Van Hemert, 2001). According to this approach, personality traits and PD traits are relatively stable individual differences in cognitive aspects, emotions, and behavior. Personality disorders may be described and characterized using the universal classifications under the DSM-IV or ICD-10. There are data indicating the culture-independent applicability of the construct of Axis II of the DSM-IV (Yang, McCrea, & Costa, 2000). Studies on the prevalence of PDs report that they are widespread in both clinical and non-clinical world populations. Relatively consistent rates of PD prevalence in different countries are interpreted in line with *cultural universalism* so as to say that they are not specific to Western cultures. Comparably, the differences in prevalence rates in different countries are interpreted as not dependent on the cultural factors but on different sampling instruments and methods used in studies (Tyrrer et al., 2010).

Furthermore, the relatively consistent rates of PDs in community populations suggest that PDs may be analyzed in terms of neurobiological/genetic determinants (Gawda, Bernacka, & Gawda, 2016). The differentiation of PDs is not only due to social factors but also to biological and neuropsychological determinants. It has been pointed out that the PD etiology lies in the interaction between the core inherited biological vulnerability and environmental factors, and that personality traits including pathological personality traits arise from the functioning of the relevant brain systems (De Young, 2010). Personality disorder traits are associated with both structural and functional brain impairments (Gawda et al., 2016). Researchers indicate, for instance, that avoidant PD patterns such as hypersensitivity to negative evaluation, excessive fear of rejection, and avoidance in social relationships are associated with dysfunctional neurobiological mechanisms (Klumpp, Angstadt, & Phan, 2012; Koenigsberg et al., 2014). Similarly, schizotypal PD, defined as a heterogeneous group with interpersonal, perceptual, and disorganized symptoms, is linked to brain structure and functional deficits (Cadenhead, Light, Geyer, McDowell, & Braff, 2002; Hummelen, Pederesen, & Karterud, 2012). Studies suggest that patients with schizotypal PD display dysfunctions in working memory (Rosell, Futterman, McMaster, & Siever, 2014) and prospective memory (Vu et al., 2013; Wang et al., 2014) which are associated with functional and structural brain dysfunctions (Goldstein et al., 2011; Takahashi et al., 2011). Similarly, borderline PD (BPD), with a core pattern of emotional instability, is entrenched in a neural organization. Other features of the BPD – suicidality, outbursts of intense anger, stormy relationships, and identity disturbances – are all also associated with impaired neural mechanisms (Koenigsberg et al., 2009; Ruocco, Amirthavasagam, Choi-Kain, & McMain, 2013). Neurobiological bases

play a fundamental role in heightened attention, sensitivity to social-emotional cues in interpersonal scenarios, tendencies toward self-referential emotional processing, and dysregulated emotional processing in borderline patients (Donegan et al., 2003; Koenigsberg et al., 2009; Mitchell, Dickens, & Picchioni, 2014). Not all PDs are described in terms of neuropsychological mechanisms, but the documented data support their neurobiological roots.

As they are characterized by relatively stable neurobiological mechanisms, PDs may also be analyzed in terms of a universal evolutionary perspective (Buss, 2009). In this approach, PDs are conceptualized as stable evolutionary strategies that respond to environmental stimuli (Buss, 2009). Personality traits reflect differences in effectiveness of adjustment to complex social interactions (Figueredo, Hammond, & McKiernan, 2006). Personality disorders and the dysfunctional emotions incorporated in them play adaptive roles; personality disorder traits may be conceptualized as adaptive strategies to deal with painful situations (Molina et al., 2009).

PREVALENCE OF PERSONALITY DISORDERS IN THE WORLD

Studies on the prevalence of PDs are conducted in both clinical populations of the world as well as non-clinical.

Clinical populations. The PD rates in the clinical and psychiatric populations are high: from 30.00% to 70.00%. It has been established that about 30.00% of psychiatric outpatients in the USA are diagnosed with at least one PD. The most frequent PD in psychiatric settings is borderline (Zimmerman, Rothschild, & Chelminski, 2005). It is also highlighted that the high prevalence of PDs is frequently associated with other mental related disorders such as drug and alcohol abuse, and eating disorders (Chiesa, Fonagy, Holmes, Drahorad, & Harrison-Hall, 2002; Pulay et al., 2009; Zimmerman et al., 2005). Afterward, the replication of the National Comorbidity Survey by Lenzenweger and associates (2007) on a representative clinical sample revealed that schizoid, schizotypal, and avoidant are the most prevalent PDs. Furthermore, cluster C PDs were found to commonly co-occur with other mental disorders, such as substance abuse, anxiety, and affective disorders (Hesse & Moran, 2010; Mulder, 2002).

Non-clinical populations. A lower prevalence of PDs (4.00-10.00%) in non-clinical community samples than in clinical samples is reported. Although PDs are widespread and have high and undifferentiated prevalence in the clinical settings, there is some differentiation in prevalence between community samples in different countries and cultures. It should be noted that there are limited data on cross-cultural

differences in PDs. Furthermore, the interpretation of data on the prevalence of PDs in different countries is complicated by different disorder classifications, the variety of tools used in studies, and other methodological aspects (Tyrer et al., 2010). Coid and associates (2006) stated that there are only two studies on the prevalence of PDs that are based on representative populations and adjusted estimates provide reflection on real occurrence of PDs: the first by Torgersen, Kringlen, and Cramer in 2001, and the second by Samuels and associates (2002).

NORTH AMERICA

As for North America, most of the published data on the prevalence of PDs come from the USA. Data on the total rate and specified types of PDs are dependent on the type of the examined sample (clinical vs. non-clinical, student or community), assessment technique, and year of investigation. In 1989, Zimmerman and Coryell examined a sample of clinical patients' relatives and normal controls from Iowa with the DSM-III technique. They established that the overall rate of PDs was 14.30%. Furthermore, the most frequent in this population were passive-aggressive and antisocial PDs (Zimmerman & Coryell, 1989). Four years later, a study on the Iowa sample of relatives of obsessive-compulsive patients and normal controls was published (Black, Noyes, Pfohl, Goldstein, & Blum, 1993). The small sample of 247 participants was tested with the DSM-III technique and a total rate of PD prevalence of 22.30% was found. Passive-aggressive and obsessive-compulsive were the most frequent PDs in this population (Black et al., 1993). In the same year, the results of the National Comorbidity Survey were published, and they showed that the prevalence of antisocial PD in a large randomly selected non-clinical population of the USA was 5.60% (Kessler et al., 1993). Moldin and associates (1994) established the prevalence of PDs at 7.30%. The cited rate means that 7.30% of the population displayed at least one PD. They examined a small sample of normal controls from New York with the DSM-3-R technique, which revealed that the most frequent were antisocial and borderline PDs (Moldin, Rick, Erlenmayer-Kimling, & Squires-Wheeler, 1994). One year later, based on the examination of a sample of normal controls from New York, the overall rate of PDs was established at 14.80%, with avoidant and narcissistic as the most frequent PDs (Klein et al., 1995). Then, a sample of students from New York was examined and the overall rate of PDs was established as 11.00% (Lenzenweger, Loranger, Korfine, & Neff, 1997). In a student population from New York, the most prevalent were histrionic and narcissistic PDs (Lenzenweger et al., 1997). Several years later, Samuels and associates (2002) examined a sample from Bal-

timore where they reported the prevalence of PDs at 9.00% with the most frequent antisocial and avoidant PDs. They used the DSM-4 technique (First, Gibbon, Spitzer, Williams, & Benjamin, 1997). Then, in 2004 more than 43 000 individuals were examined with the DSM-IV technique in the National Epidemic Survey on Alcohol and Related Conditions of the USA. It was found that at least 14.80% of Americans had one PD. The findings were based on a random sample. The most prevalent PD in this study was the obsessive-compulsive PD (Grant et al., 2004). Comparably high PD prevalence was recorded in 2005: 15.70%, as indicated in a study by Crawford and associates (2005). Similar data were published a few years later, where it was documented that about 11.39% (Lenzenweger, 2008), and/or 14.79% of American adults had at least one PD (Fowler, O'Donohue, & Lilienfeld, 2007). However, the results of household surveys published by Huang and associates in 2006 revealed a lower prevalence of PDs in the USA, i.e. 7.60%. It is important to note that Huang and associates (2009) used the 33-item screening questionnaire from the International Personality Disorder Examination in their survey, not the DSM-IV technique, which makes the results difficult to compare with previous studies.

In general, recent studies report that the prevalence of PDs in the US population ranges between 9.00% and 15.70% and some specific PDs, such as obsessive-compulsive, are most frequent. The high prevalence of this PD may be due to social requirements and the specifics of modern society. The expectations and requirements from an individual in modern societies have risen and may influence the identity and adjustment of a person (Paris, 2008). This affects mood and behavior, and results in emotional instability and potentially some traits of PDs. Modern societies, such as in North America, put a high demand on perfection and responsibility. People tend to fulfill their roles in social situations of high demands. This, in turn, may elicit inner conflicts, experience of being maladjusted and form a background for PD traits and behavior (Chang, 1965). This cultural pattern of the US society may cause an increase of obsessive-compulsive traits.

Data on the prevalence of PDs in a middle-low income Latin American country such as Mexico indicate lower PD rates. The Mexican National Comorbidity Survey was conducted in a large representative sample ($n = 2362$) of the Mexican urban adult population (Benjet, Borges, & Medina-Mora, 2008). The International Personality Disorder Examination tool was used. The overall rate for any PD in Mexico is 6.10%. The most prevalent are Cluster A disorders (4.60%), then Cluster C (2.40%) and Cluster B (1.60%). The authors of the investigation concluded that almost half of those with a PD are likely to have an Axis I disorder. The rates of Cluster C disorders are much higher in the USA than Mexico, causing the

stark difference between these countries in PD prevalence (Benjet et al., 2008). This result is in line with the idea of the impact that modern society has on PDs that was mentioned in the preceding section. However, the data on antisocial PD (1.80% with predominance in males) show similar rates in the USA and Mexico (Benjet, Borges, Wagner, & Medina-Mora, 2002), which suggests neurobiological etiology of this PD. This supports the reported significant brain dysfunctions in people with antisocial PD (i.e., Harenski, Harenski, Shane, & Kiehl, 2010; Yang & Raine, 2009).

There is a lack of data on PDs in Canada. The rate for antisocial PD is reported as 1.80% (Offord et al., 1996), which is similar to the USA and Mexico, and also suggests the neurobiological determinants of this disorder. In Canada, the prevalence of other PDs ranges from one to ten percent. It was also noted that PDs are more likely to contribute to the length of hospitalization (Stewart, Lips, Lakaski, & Upshall, 2002).

SOUTH AMERICA

The data on PDs in South America are scarce. The overall rate in Colombia is 7.90%, which is similar to the rate in Mexico (Huang et al., 2006). A study conducted in Brazil with the use of the Personality Disorders Dimensional Inventory showed that homeless people display antisocial, schizoid, and dependent PDs more often than others. However, in a non-clinical student group, borderline and obsessive-compulsive personality patterns of disorders were found to be frequent (Bartholomeu et al., 2015). The sample in this study was not, however, large and not randomized, which makes it difficult to compare these results with other studies. It has been indicated that people from Southern American countries may be misdiagnosed with two PDs: narcissistic and histrionic (Castaneda & Franco, 1985). The typical patterns of histrionic PD are hyper-emotionality, seductiveness, somatization, and tendency to dramatize, which all reflect typical emotional expression and social norms in Latin American and Mediterranean countries. These patterns may be perceived as some symptoms of PDs (Calliess, Sieberer, Machleidt, & Ziegenbein, 2008). Comparably, it has been thought that narcissistic PD, which is related to the aforementioned patterns, may be misdiagnosed in individuals from Southern Europe and/or Latin America (Loranger et al., 1994).

EUROPE

Data on PD prevalence in Europe are more similar to those of the USA than to South American countries. The rates reported in the literature are on occasion as low as the overall rate of 2.40% for Western Europe (Huang et al., 2006) but in general are rela-

tively high. The prevalence of PDs in England, Wales and Scotland was examined using the SCID-II (Coid, Yang, Tyrer, Roberts, & Ulrich, 2006). The researchers established that the overall unweighted rate was 10.70% and weighted 4.40%. PDs from Cluster C are the most frequent, with obsessive-compulsive PD being the most prevalent (Coid et al., 2006; Moran, Rendu, Jenkins, Tylee, & Mann, 2001). Several years later, a sample from England was examined and it was found that 13.70% of adults were screened positively for a PD (Moran, Rooney, Tyrer, & Coid, 2016). General PD prevalence among men and women was similar. The rate for antisocial PD was higher in men (4.90%) than in women (1.80%). Positive screening for antisocial personality was also associated with age; in men aged 18-24, the rate was 6.40%, 6.60% in men aged 25-34, and 4.10% in older men. Then, 2.40% of a population of adults were screened positively for borderline PD; this disorder was present in both groups of men and women. In general, age was found to be also related to the PD rate: the older a person is, the lower the PD rate it has. Younger people are more likely to screen positively for borderline PD (Moran et al., 2016).

Data from another European country, Norway, were established in 2001 (Torgersen, Kringlen, & Cramer, 2001). The researchers examined a community in Oslo and found that the PD rate was 13.40%. The most prevalent was avoidant PD. In another Scandinavian country, Sweden, the most prevalent were narcissistic and obsessive-compulsive PDs (Bodlund, Ekselius, & Lindstrom, 1993). A prevalence rate of 11.00% was established in a randomly selected Swedish community sample (Ekselius, Tillfors, Furmark, & Fredrikson, 2001). Research confirmed that the most frequent PDs in the Swedish community were obsessive-compulsive (7.70%), avoidant (6.60%), and borderline (5.40%) (Ekselius et al., 2001). A decade earlier, obsessive-compulsive PD was found as the most prevalent also in Germany (Maier, Lichtermann, Klingler, Heun, & Hallmayer, 1992). This is consistent with the data on community samples in Scandinavian countries and the USA.

In regards to individuals from Mediterranean countries some findings documented that typical patterns of emotional expression such as hyper-emotionality, charm, and the tendency to dramatize may be misinterpreted as patterns of PDs. Spaniards, for example, tend to be unwilling to adjust to social standards and may be perceived as displaying histrionic or borderline PDs (Calliess et al., 2008). On the other hand, people from Eastern Europe might appear as more secretive or distrustful to an outsider, which can be wrongly attributed to PDs in Cluster C (Calliess et al., 2008).

Data on the prevalence of PDs in Poland are based on two publications. The first is a study conducted through the Internet on a nonclinical sample

by Trzebińska and Gabińska (2014) that focused on the emotional characteristics of individuals with PDs and revealed data on their prevalence. They measured PDs using the Lifestyle 05/FS Questionnaire, a shortened, electronic version of the Lifestyle 05/F Questionnaire. The most frequent PDs were schizotypal (8.60%), paranoid (6.10%) and histrionic (6.10%) (Trzebińska & Gabińska, 2014). Then, a study on the prevalence of PD traits using the DSM-IV technique (the Structured Clinical Interview for the DSM-IV Axis I Disorders – SCID-I by First et al., 2010) was conducted by Gawda and Czubak (2017). A large community sample between 18 and 65 years old was randomly selected and interviewed. The results showed that the overall rate of PD traits was 8.90% and rates on sex differences were similar to other Western countries. The most prevalent in Poland are obsessive-compulsive (9.60%), narcissistic (7.00%), and borderline (7.00%) PDs traits. These data are consistent with those in Sweden and the USA, with the exception of the narcissistic PD. This disorder was reported to be less frequent in other populations; however, the level of subclinical narcissism is reported as high in modern societies (Mac Donald, 2014; Twenge & Campbell, 2009). Possibly, this is a PD which reflects some cultural aspect of the Polish community. This is in line with another study which showed that the average score for covert narcissism was higher in the Polish sample in comparison to the Dutch sample (Zondag, Van Halen, & Wojtkowiak, 2009). Furthermore, these results showed greater comorbidity of PD traits than that which has been reported in the literature (Gawda & Czubak, 2017).

Data on PDs in the Turkish population are sparse. There was a study conducted in Turkey with a community sample using the DSM-4 and ICD-10 Personality Questionnaire (DIP-Q) (Dereboy, Güzel, Dereboy, Okyay, & Eskin, 2013). The results showed that 20.00% of the participants received a diagnosis of at least one PD. Among specified PDs, schizotypal and obsessive-compulsive were the most prevalent. The high prevalence of obsessive-compulsive PD is typical to all modern societies. However, a high rate for schizotypal personality is unique to the Turkish community population and probably reflects the specificity of the culture. The authors of this study stated that risk factors and personality dimensions were most strongly associated with the cluster B disorders (Dereboy et al., 2013).

ASIA

A lower prevalence of PDs is reported in community samples in Asian countries in comparison to the West; in the Republic of China, at least 4.10% of the population has one personality disorder, while in Lebanon it is 6.20% (Huang et al., 2006). Not only

is the PD prevalence in China lower than in Western countries but also some PDs, such as avoidant, dependent, and borderline, are not specified in the Chinese Classification of Mental Disorders (Tang & Huang, 1995). Interestingly, although the worldwide prevalence of borderline PD is the highest, it is not specified in the Chinese Classification. Borderline PD is more prevalent in the American than Spanish or Asian populations (Grant et al., 2008). Comparably, avoidant PD has not been reported in India (Loranger et al., 1997). Another difference is that antisocial PD is identified in all cultures at a similar rate while in Taiwan its prevalence is exceptionally low, at 0.20%, while in the USA and other countries it is about 3.00% (Calliess et al., 2008). The findings in Taiwan were interpreted as reflecting cultural aspects associated with a common tendency to negate antisocial behavior and social rules of expression towards antisocial behavior. Asians and Filipinos express shame more frequently than Europeans and North Americans and have a different manner of expressing fear and passiveness. This might be attributed to some PD traits (Calliess et al., 2008). Some social attitudes may be related to philosophical aspects; Chinese interpersonal relationships are influenced by Confucian principles such as forgiveness, righteousness, and propriety (Kline, Horton, & Zhang, 2008). On the other hand, modern societies, such as Japan, demand a high measure of responsibility and perfectionism from an individual, which may contribute to creating a background for PD behavior. Cultural components of Japanese society are perfectionism, carefulness, and orderliness (Chang, 1965). This, in turn, may be related to the high prevalence of obsessive-compulsive PD reported in Japan, the USA, and Europe (Calliess et al., 2008).

AFRICA

Prevalence of PDs in Africa is largely unknown. There are some findings such as the report on the overall PD rate in South Africa, which is 6.50%, and the general prevalence of 2.70% in Nigeria (Huang et al., 2009). However, the tool used for the assessment was not the DSM-4 interview; it was the 33-item screening questionnaire from the International Personality Disorder Examination (IPDE). Thus, it is difficult to compare these results to the norms of the USA or Europe. Another study estimates the prevalence in South Africa as 6.80% (Suliman, Stein, Williams, & Seedat, 2008). It is worth noting that no borderline PD was reported in Kenya, whereas, in general, the prevalence of borderline disorder increased in the last 30 years (Loranger et al., 1994). These findings are potentially related to some cultural aspects or they are incomplete.

AUSTRALIA

Data showed that approximately 6.50% of the adult population of Australia has one or more PDs (Jackson & Burgess, 2000). It was found that borderline personality is significantly associated with greater Axis I psychopathology among specific PDs (Jackson & Burgess, 2004). A recent study using the Structured Clinical Interview for DSM-IV Axis II Personality Disorders showed that PDs are relatively common and occur at higher rates than previously estimated in the Australian population (Quirk et al., 2017). In women, the overall prevalence was established at 21.80%. Cluster C is the most prevalent (17.50%); obsessive-compulsive (10.30%) and avoidant (9.30%) were among the most prevalent PDs (Quirk et al., 2017).

RACE AND ETHNICITY

The aspect of a relationship between PDs, race, and ethnicity has been overlooked in the opinion of some researchers (McGilloway et al., 2010). They stress that there is still little known about the impact of culture, race, and ethnicity on the etiology and treatment of PDs (McGilloway et al., 2010). The degree to which the cultural context influences PDs is not fully described and only limited data are available from transcultural comparisons (Calliess et al., 2008). Earlier, Alarcon (1996) criticized the DSM-IV for considering only a small part of experts' suggestions on transcultural aspects of PDs. Aspects such as self-image and adjustment associated with culture were not sufficiently touched upon in the DSM-IV. However, there are some data on relations between race, ethnicity, and prevalence of PDs. In regard to race and PDs, no differences between black and white populations were found in the UK (Coid et al., 2006). Recent studies revealed that there was no significant association between PDs and ethnic groups (Moran et al., 2016). Furthermore, a meta-analysis showed a slightly but significantly lower prevalence of PDs amongst black as compared to white populations (McGilloway et al., 2010). Prevalence of PDs in Asian cultures is usually reported as lower than in white populations. Some disorders are not identified in Asian countries, e.g. avoidant personality in India or avoidant, dependent, and borderline PDs in China (Loranger et al., 1997). This is interpreted as being associated with social rules of emotional expression; e.g. Filipino more frequently and differently express shyness, anxiousness, and passiveness (Calliess et al., 2008). In regards to ethnicity, Latin Americans, Spaniards, and Southern European populations are thought to be more frequently misdiagnosed with histrionic or narcissistic PD traits, however, it does not mean that these disorders are highly prevalent in these populations (Loranger et al., 1994).

INDIVIDUALISTIC VS. COLLECTIVIST CULTURES

The dimensions mainly considered in cross-cultural studies on personality and PDs are individualism versus collectivism, dependence versus independence, and idiocentrism vs. allocentrism (Calliess et al., 2008). Individualist societies promote personal development and independence while collectivist cultures are more favorable to close relationships and intimacy (Dion & Dion, 1993). Western societies and high income countries are typical individualist cultures. Thus, the high prevalence of obsessive-compulsive PD in modern societies may be related to individualism. On the other hand, a low prevalence of antisocial PD is observed in collectivistic cultures such as Taiwan. The occurrence of antisocial personality is principally independent of the socio-economic status; however, in collectivistic cultures, crime rates and this disorder rate are lower than in individualistic cultures (Cooke & Michie, 1999; Harenski et al., 2010). It may reflect some general attitude toward antisocial behavior. Furthermore, dependence is not perceived as a symptom of a disorder in collectivistic cultures. Social distance respected by members of a society is typical for dependent/traditional cultures, and that is why this is not specified there as a psychopathological symptom (Loranger et al., 1997). Hence, dependent and avoidant PDs are not specified in the Chinese classification.

CO-OCCURRENCE OF PERSONALITY DISORDERS

In almost all studies presented here, the authors highlighted the co-occurrence of PDs, which has an impact on the presented results. The existing classification (with reference to the DSM-IV) generates comorbidity of several PDs across different clusters (Tyner et al., 2010). In fact, the assessment of PDs using the DSM-IV (or previous techniques) indicates that a person displays different PD traits and different types of PDs including 'personality disorder not otherwise specified' (Bernstein, Iscan, & Maser, 2007). It means that PD patterns overlap. This causes problems in the differentiation of specific PDs and consequently in treatment (Chiesa et al., 2002; Mulder, 2002). Potentially, this also causes overestimation/or incorrect estimation of rates of PDs worldwide, making it difficult to compare results across different countries and continents (Paris, 2010). Another problem linked to the difficulty in comparison of the data presented here is due to the fact that they are based on different techniques as well as different sample sizes and types. This makes these comparisons not only difficult but also inadequate. In order

to solve the problem of categorical PD diagnosis and comorbidity of several specified PDs, researchers suggested a dimensional approach to PDs (Moran et al., 2016). Therefore, future research that recognizes this approach will be comparable. The categorical diagnoses of PDs have been abandoned (Tyrer, Reed, & Crawford, 2015). There has been proposed dimensional classification which extends from no personality dysfunction to severe PD, including intermediate levels as personality difficulty, mild and moderate PDs. There are empirical bases for this new severity-based classification (Moran et al., 2016). There are five trait domains which qualify the severity level: dissocial, anancastic, detached, negative affective, and disinhibited, which refers to normal personality variation. People diagnosed with PD have a disturbance in more than one domain (Mulder, Horwood, Tyrer, Carter, & Joyce, 2016). The DSM-5 (2013) and the ICD-11 revision also take into consideration the evidence that PD is not stable over time (Newton-Howes, Clark, & Chanen, 2015), which in turn results in two types of diagnoses: late-onset PD and PD in development (Tyrer et al., 2015).

CONCLUSIONS

PDs are widespread in all cultures of the world. The concept of PD is not specific to Western society. Prevalence rates in clinical populations are higher than in community samples; they range between 30.00% and 70.00%, and are significantly comorbid with Axis I disorders. Prevalence rates in community populations are lower; they range from 4.50% to 21.50% and co-occur with disorders such as substance abuse, suicidal behavior, eating disorders, anxiety, and affective disorders. There is one PD that is highly prevalent world-wide whose world-wide rate has increased in the last 30 years; it is borderline PD. Importantly, research also indicates a high prevalence of obsessive-compulsive PD, especially in high-income modern societies. There are some differences between overall rates and rates of specified PDs associated with cultural aspects. For instance, in individualistic cultures, antisocial PD is identified more frequently than in collectivistic cultures. The avoidant and dependent PDs are not found in collectivist cultures. In some countries, such as Kenya and China, borderline PD is not identified. However, the degree to which race, ethnicity, and culture affect etiology, diagnosis, and treatment of PDs is not fully understood and covered in the literature. Future research is required to describe the relationship between culture, ethnicity, and personality pathology. The transcultural studies on PDs document its worldwide global occurrence and suggest a degree of psychological unity of PDs. This can be interpreted in terms of the evolutionary perspective and/or

in terms of similarity between the neurobiological/neurogenetic mechanisms of PDs among different nations (Figueredo et al., 2006; Gawda et al., 2016; Molina et al., 2009).

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