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Prevalence of Personality Disorders among Males and Females between the Ages of 15 and 65 in Yazd in 2017

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ABSTRACT

Background: Personality disorder is a type of mental disorder in which a rigid and unhealthy pattern of thinking, functioning, and behaving may be seen. A person with a personality disorder has trouble perceiving and relating to situations and people. Limited research has been done on the prevalence of personality disorders in Iran. This study aims at investigating the prevalence of personality disorders among males and females between the ages 15 and 65 in Yazd, Iran.

Methods: The dataset for this cross-sectional study was extracted from a dataset of a national survey conducted on personality disorders of Iranians. The contents relevant to Yazd City were included here with a sample of 1827 people. Among the participants, 852 males and 975 females answered the personality disorders questionnaire (MILON).

Results: Findings indicated that except histrionic and narcissistic patterns, the high rate of the rest of patterns was greater among females, which indicated that in most cases females significantly suffered higher clinical-related personality disorders. Moreover, personality disorders were more prevalent among females (29.8) compared to males (24.3).

Conclusion: This area requires extensive investigation. More evidence is needed regarding the differential impact of personality disorders regarding men and women in other areas of Iran.

Keywords: Prevalence, Personality Disorders, Personality Tests, Iran.

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Introduction

Iran is one of the largest developing countries in the world with a population of over 80. There are great experiences concerning mental health improvement and care programs, such as significant and valuable accomplishments in integration of mental health care with primary mental health care systems. One of the most consequential and important bases in the process of accurate planning is correct estimation of costs and needs and preparation of epidemiological data evaluation systems regarding the prevalence of various disorders (Shirzadi et al., 2019). Personality disorders (PD) are considered as one of the most common psychiatric disorders. Although it often remains unknown in normal situations, studies have shown that the disorder is common and associated with significant complications (Tyrer et al., 2010). PDs constitute an important part of mental health burden of the disease (Van der Boom et al., 2022). PDs are psychological disorders characterized by unhealthy patterns of feelings, thoughts, communication and perceptions (Scheffers et al., 2019). The outcomes are delusions as well as problems with conforming to social norms and values. They are among the most common forms and models of health care. PD is often associated with poor health status, poor quality of life (QoL), and early mortality (Ekselius, 2018).

The Diagnostic and Statistical Manual of Mental Disorders, fifth edition (DSM-5) lists 10 PDs in its new classification. DSM-5 categorizes these 10 types of personality disorders into 3 clusters , cluster A (paranoid, schizoid, schizotypal), cluster B (antisocial personality, borderline personality, histrionic personality, narcissistic personality) and cluster C (Obsessive-compulsive personality, dependent personality, avoidant personality) (Baljé etal., 2023). Based on the current evidence and classification, about 6% of the world populations suffer from PD, and there was no difference among the countries about the incidence of the disease (Volkert, Gablonski & Rabung, 2018). Women tend to have more personality disorders compared with men. For instance, men are more likely to have narcissistic, antisocial, passive-aggressive, obsessive-compulsive, or schizotypal personality disorders. The results of a study in Tehran showed the prevalence of the disorders as the following; dependent personality disorders was 1.1%, dramatic, 35.4%, schizoid , 1.7%, avoidant, 0.4%, depressed, 6.9%, narcissistic, 4.3%, obsessive, 6.15%, and negative, 0/9% (Farnoush, Hosseinaei & Bahrami, 2016). Moreover, the results of the reseach by Fatehizadeh et al. (2007 demonstrated that the prevalence of antisocial PD symptoms was 0.08%, narcissistic, 9.1%, demonstrative, 6.4%, and borderline disorder was 0.08%. On the other hand, borderline, avoidant, depressive, dependent and paranoid disorders were more common in women. In the last 5 decades, PD was recognized as a type of mental disorder. PDs are more common in groups: single people, low socio-economic classes, and city center residents (Torgersen, Kringlen & Cramer, 2001). .There has been no comprehensive and precise study regarding the prevalence of all PDs in such a wide range of age groups as 15-65in Iran; they are either focused on specific PDs such as borderline (Mohammadi, Shamohammadi & Salmanian, 2014), or epidemiology of psychiatric disorders (Mohammadi et al., 2017). Previous population-based surveys in Iran have reported the prevalence of psychiatric disorders as 10.8%–23.8% (Noorbala et al., 2017; Mohammadi et al., 2004). Before 1960s, PDs other than antisocial personality disorder were not considered significant and had no significant diagnostic value. Comorbidity of personality disorder with other psychiatric disorders has been shown to have a significant impact on their outcomes, and may be treated with specific treatment (Tkachenko et al., 2020).

The etiology of PDs is influenced by environmental and genetic factors which is complicated (Mariz, Cruz & Moreira, 2022). Clinical symptoms are different between various types of PDs; the most current element is associated with the inability to create and maintain

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healthy and good interpersonal relationships. This part has negative effects on the interaction between health-care and psychologist professionals and people who suffer from PD (Winsper, 2018). The current concept of PD, as reflected in the newly proposed ICD-11, is a subsequent description based on the severity of functional impairment rather than the type of clinical presentation, or the existence of discrete disease entities classified in previous classification systems (Watts, 2019). What needs to be affirmed is that PDs negatively affect both the clinical manifestations of other medical problems and their outcome, and the combined effects of having PD reduce life expectancy (Dixon-Gordon et al. 2015). According to the national census of 2016, Yazd is a province located in the center of Iran with a total population of 1074428 people: 889583 urban residents and 184829 rural people, and 16 nomadic people (Afzali et al., 2015). So far, no comprehensive study has been conducted at the provincial level to investigate the epidemiology of personality disorders from adolescence to old age. Hence, according to the importance of personality disorders, the prevalence of personality disorders needs to be investigated to a greater extent to plan treatment approaches and preventive measures. Therefore, the present study investigates the prevalence of personality disorders among both genders aged between 15 and 65 in Yazd Province of Iran.

Methods

The dataset for this cross-sectional study was extracted from a dataset regarding a national survey conducted on PDs of Iranians. The contents relevant to Yazd City were included with a sample of 1827 people. This study was funded by the National Institute of Medical Research Development (NIMAD).

1827 people in Yazd were selected using a multi-cluster sampling method. . Among the participants, 852 males and 975 females answered the Personality Disorders Questionnaire (MILON). The inclusion criteria were being Iranian and living in Yazd province for at least one year. The exclusion criteria were having severe physical and mental illnesses.

Trained psychologists were sent to the participants' home, the research project was explained, and the participants' consent was obtained. Then, psychologists received demographic information, and in the end, participants completed the Millon questionnaire.

Milon's Multiaxial Clinical Questionnaire - Third Edition (MCMI-III): Milon's questionnaire is a self-report scale used by mental health professionals for clinical decision making and diagnosis of people with a particular disorder, or the presence of a specific psychological feature in the subject. The MCMI questionnaire has 175 true-false items, and includes 1) clinical personality patterns, 2) variability indices, 3) clinical syndrome, 4) severe clinical syndrome, and 5) severe personality pathology, which is in accordance with Milon's theory. The age range for the test is 18 or older. Sharifi (2006) standardized the third version of Milon's test in Isfahan. The reliability of this questionnaire by test-retest method ranged from 0.82 to 0.90 and its alpha coefficient ranged from 0.66 to 0.90 (Ball et al., 2004; Golomb et al., 1995). In the study by Farnoush et al. (2016), the reliability of the test was calculated through internal consistency, and Cronbach's alpha of the scales was obtained in the range of 0.85 to 0.97. In addition, Chegini, Delavar and Gharai (2012) tested the reliability of this questionnaire by test-retest method in the patient group (0.793-0.795), and in the non-patient group (0.795-0.972), and the reliability by Cronbach's alpha method was also obtained (0.33-0.78.

Participants signed consent forms. All the information in this research was kept confidential. The study's protocols were accepted and approved by NIMAD's ethics committee (ethical code: IR .NIMAD .REC. 1395 .001).

To investigate and analyze data, software packages SPSS Ver. 16 and Crosstabs with descriptive statistics (frequency and percent) were used to determine the prevalence of PD.

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Results

In general, the valid data of 1827 participants were analyzed (852 males and 975 females). The report is provided in terms of the subjects having normal, border, and high rates of disorder. The prevalence of clinical personality patterns is presented separately for males and females in Table 1.

Table 1. Prevalence of clinical personality patterns among male and female

		Clinical personality pattern (female)		Clinical personality pattern (male)	
		Frequency	Percent	Frequency	Percent
Schizoid	Normal	956	98.1	845	99.2
	Border	16	1.5	7	0.8
	High	3	0.3	-	-
Avoidant	Normal	963	98.8	839	98.5
	Border	9	0.9	13	1.5
	High	3	0.3	-	-
Depressive	Normal	840	86.2	801	94
	Border	68	7	29	3.4
	High	67	6.9	22	2.6
Dependent	Normal	933	95.7	845	99.2
	Border	27	2.8	4	0.5
	High	15	1.5	3	0.4
Histrionic	Normal	788	80.8	519	60.9
	Border.	104	10.7	225	26.4
	High	83	8.5	108	12.7
Narcissistic	Normal	925	94.9	821	96.4
	Border	48	4.9	27	3.2
	High	2	0.2	4	0.5
Antisocial	Normal	975	100	849	99.6
	Border	-	-	2	0.2
	High	-	-	1	0.1
Aggressive	Normal	962	98.7	832	97.7
	Border	12	1.2	20	2.3
	High	1	0.1	-	-
Compulsive	Normal	755	77.4	553	64.9
	Border	60	6.2	213	25
	High	160	16.4	86	10.1
Negativistic	Normal	909	93.2	829	97.3
	Border	61	6.3	22	2.6
	High	5	0.5	1	0.1
Self-defeating	Normal	949	97.3	835	98
	Border	22	2.3	17	2
	High	4	0.4	-	-
Clinical personality pattern	Normal	508	52.1	360	42.3
	Border	179	18.4	296	34.7
	High	288	29.5	196	23

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as can be seen from Table 1, except the histrionic and narcissistic patterns, the high rate of the rest of patterns was greater among females, indicating that in most cases, females suffered higher clinical-related personality disorders. Interestingly, antisocial PD is the only variable which is neither border nor high among females. The most prevalent disorder among females is compulsive one.

The prevalence of severe personality pathology including schizotypal, borderline, and paranoid separately for females and males is presented in Table 2.

Table 2. Prevalence of Severe personality pathology among male and female

		Severe personality pathology (female)		Severe personality pathology (male)	
		Frequency	Percent	Frequency	Percent
Schizotypal	Normal	969	99.4	840	98.6
	Border	5	0.5	12	1.4
	High	1	0.1	-	-
Borderline	Normal	958	98.3	835	98
	Border	12	1.2	14	1.6
	High	5	0.5	3	0.4
Paranoid	Normal	969	99.4	848	99.5
	Border	5	0.5	4	0.5
	High	1	0.1	-	-
Severe personality pathology	Normal	952	97.6	828	97.2
	Border	17	1.7	21	2.5
	High	6	0.6	3	0.4

As can be seen from Table 2, similar to clinical personality patterns, females have significantly higher severe personality disorders. Moreover, the borderline is the most prevalent disorder among females.

Table 3 demonstrates the prevalence of personality disorders-relevant clinical disorders among males and females.

Table 3. Prevalence of clinical syndromes among males and females

		Clinical syndromes (female)		Clinical syndromes (male)	
Anxiety	Normal	946	97	830	97.4
	Border	20	2.1	11	1.3
	High	9	0.9	11	1.3
Somatoform	Normal	952	97.6	836	98.1
	Border	19	1.9	14	1.6
	High	4	0.4	2	0.2
Bipolar, manic disorder	Normal	974	99.9	839	98.5
	Border	1	0.1	8	0.9
	High	-	-	5	0.6
Dysthymia	Normal	929	95.3	828	97.2
	Border	22	2.3	14	1.6
	High	24	2.5	10	1.2
Alcohol dependence	Normal	974	99.9	849	99.6
	Border	1	0.1	3	0.4
	High	-	-	-	-
Drug dependence	Normal	974	99.9	842	98.8
	Border	1	0.1	7	0.8
	High	-	-	3	0.4

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Table 3. Prevalence of clinical syndromes among males and females

		Clinical syndromes (female)		Clinical syndromes (male)	
Post-traumatic stress disorder	Normal	965	99	842	98.8
	Border	7	0.7	9	1.1
	High	3	0.3	1	0.1
Clinical syndromes	Normal	908	93.1	794	93.2
	Border	39	4	32	3.8
	High	28	2.9	26	3.1

As can be seen from Table 3, other than bipolar, manic disorder, and drug dependence, the rest of PDs related to clinical syndromes were more prevalent among females. It is noteworthy to mention that dysthymia was the most prevalent disorder among others. Table 4 provides the prevalence of personality disorders in clinical syndromes among males and females

Table 4. Prevalence of severe clinical syndromes among males and females

		Severe clinical syndromes (females)		Severe clinical syndromes (males)	
Thought disorder	Normal	962	98.7	836	98.1
	Border	11	1.1	16	1.9
	High	2	0.2	-	-
Major depression	Normal	970	99.5	851	99.9
	Border	5	0.5	1	0.1
	High	-	-	-	-
Delusional disorder	Normal	972	99.7	850	99.8
	Border	2	0.2	1	0.1
	High	1	0.1	1	0.1
Severe clinical syndromes	Normal	957	98.2	835	98
	Border	15	1.5	16	1.9
	High	3	0.3	1	0.1

As can be seen from Table 4, both females and males have shown no high rates of major depression, and they have been equal in delusional disorder. However, females showed higher rates of thought disorder and severe clinical syndrome in general. Figures 1 and 2 depict the prevalence of PDs among females and males, respectively.

Discussion

The present study investigated PDs in Yazd Province of Iran. Using MCMI-III which was distributed among a sample composed of 1827 participants (852 males and 975 females); it was found that the prevalence of personality disorders was much higher among females compared to that of males. This finding was consistent with Sepehri et al.'s research conducted in Tabriz city (Sepehri et al., 2017). Nevertheless, histrionic and narcissistic patterns were higher among males. The results of this research were in line with the research by Fatehizadeh et al. (2016) in Isfahan metropolis, and also the research by Farnoosh et al. (2007) in Tehran. Narcissistic personality disorder (NPD) is usually characterized by an absence of empathy for others, and also fickle and brittle self-esteem, which makes peoples with NPD seek attention and approval (Esmaeilian et al., 2022; Nenadic et al., 2015). The prevalence of NPD in the population ranged from 0% to 6.2%, and 50% to 75% of the affected individuals were males (Schulze et al., 2013). Several factors such as childhood trauma, heredity, age, and culture have been shown to influence the development of NPD (Andrews-Hanna et al., 2010). Recent studies

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revealed that with the quick development of China's social economy, the surface of narcissism in the younger group of people is increasing too fast (Svob et al. 2016). Another study predicted that if a society becomes more narcissistic and has less empathy, this will lead into a higher amount of anxiety, crime, and depression (Rubinov & Sporns, 2010).

Generally, epidemiological perusals have shown different rates of PDs; some reports suggested similar total rates between both genders (Bangash, 2020; Volkert, Gablonski & Rabung, 2018). On the other hand, other studies pointed to higher rates of PDs in men. Regarding the prevalence of PDs such as borderline, the result of previous research has shown that a higher ratio of women suffered from a borderline personality disorder compared to men; however, recent research has not found any differences in prevalence by gender (Golomb et al., 1995). Moreover, gender differences in borderline personality disorder (BPD) may not exist regarding certain types of self-destructive behaviors, such as levels of psychological distress at clinical presentation or self-cutting. Nonetheless, current evidence suggested that there were considerable gender differences in (BPD) regarding personality traits, treatment utilization, and Axis I and II comorbidity. According to personality characteristics, men with BPD are less likely to show explosive temperament and lower levels of novelty seeking than women with BPD (Yang et al., 2021). Some studies reported that women diagnosed with BPD usually faced childhood trauma or adversity, sexual abuse, environmental risk factors, childhood illnesses, parental loss, child abuse, and neglect (McKay et al., 2022; Yen et al., 2021).

In contrast with findings of this study, Golomb et al., (1995) reported that based on Hamilton's 17-item depression questionnaire, the scores were obtained for 108 men with an average age of 39.28 and 208 women with an average age of 39.11 = respectively (standard deviation = 3.8) and (Standard deviation = 6.9). It was more likely for men to meet the criteria of antisocial, obsessive-compulsive, and narcissistic PDs in comparison to women according to the modified personality diagnosis questionnaire, and for obsessive-compulsive personality disorders and narcissistic according to the interview named Structured Clinical Interview for DSM-III-R Personality Disorders (SCID-II). Accordingly, Paris (2004) discovered that antisocial disorder mostly happened with men, and BPD was more prevalent with women. He found that these differences were not fictitious, but reflected gender differences in personality which underlined Axis II diagnoses. Engemann et al. (2021) observed a relationship between cardiac parasympathetic activity and antisocial behavior in men.

In a big sample of 1460 people from Poland who were 18 to 65, noticeable differences were found in the prevalence of PDs between women and men. Depressive, obsessive-compulsive, dependent, borderline, and avoidant PDs were more likely to happen among women, while schizoid, antisocial, and schizotypal PDs were more likely to happen among men (Gawda & Czubak, 2017). In a study investigating samples of BPD patients, Vatheuer et al. (2021) found no increased aggression among male patients, indicating that BPD decreases gender differences typically found in the general population. However, neurobiological studies comparing BPD patients with healthy sex-matched individuals revealed several interesting gender differences. On the one hand, there were well-replicated results regarding the reduction of hippocampal and amygdala gray matter volumes in female patients with BPD, whereas these results were not similar in male BPD patients. On the other hand, only male patients with BPD had reduced striatal activity during the time of an aggression task; this showed a more severe deficit in central serotonergic response, reduced anterior cingulate cortex gray matter volume, and increased putamen gray matter volume. These neurobiological results concentrated on the real importance of impulsivity for aggression in male patients with BPD (Mancke, Bertsch & Herpertz,

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2015; Vatheuer et al., 2021).

Similarly, Sansone and Sansone (2011), Mattingley et al. (2022) argued that male patients with BPD might have substance use disorders, while female patients with BPD might have mood, anxiety, eating, and PTSD or post-traumatic stress disorders (Amad et al., 2019). Concerning the coexistence of second axis, there were more male patients with BPD \ than females regarding antisocial personality disorder (Moreira et al., 2022). Finally, regarding treatment, men with BPD might have treatment histories associated with substance abuse, while women might have treatment histories characterized by more psychotherapy and pharmacotherapy.

This was the first study on epidemiological survey regarding PDs among males and females in Yazd province; however, its generalization to the whole country of Iran should be done with caution.

Conclusion

There are gender differences regarding PDs in Yazd Province of Iran. Gender differences in all types of PDs mirror gender differences regarding normal personality characteristics. Men have a tendency to score higher on narcissistic and histrionic traits, while women scored higher on characteristics such as being schizoid, avoidant, depressive, dependent, aggressive, compulsive, negativistic and self-defeating; this was while females were reported to be less antisocial in this study. The results of psychometric studies have shown a systematic gender bias in DSM-IV-TR diagnostic criteria for PDs. This field needs more expansive investigation. More evidence is needed regarding the differential effect of personality disorders of male and female patients in other areas of Iran. This research showed a good perspective on the prevalence of PDs in Yazd province, which had not been conducted with such comprehensiveness. The results of this research can be helpful in mental health education programs for prevention and treatment. It is also proposed to undertake studies on the causes of women's more PDs in communities and cultures such as Iran.

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Conflict of Interest

The authors declare that the text is completely original and that there are no conflicts of interest in it.

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Ethical Considerations

I testify on behalf of all co-authors that our article:

This material has not been published in whole or in part elsewhere. The manuscript is not currently being considered for publication in another journal, and all authors have been personally and actively involved in substantive work leading to the manuscript and will hold themselves jointly and individually responsible for its content.

Code of Ethics

IR.NIMAD.REC.1395.001

Authors' contributions

N. A, P. R, was involved with methodology; A, did data collection; M. R. M, J; Adid the writing; H. A, M. M, were involved with original draft; A. M, F. M, did data analysis; M. F, did the supervision; N. A, M. R. M, Formal Analysis, Writing – Review and Editing, Supervision. All the authors read and

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approved the final manuscript and were responsible for any question related to the article.

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