

Anxiety, Depression, Somatization and Psychological Resilience in Patients with Antisocial Personality Disorder

Antisozyal Kişilik Bozukluğu Tanılı Hastalarda Anksiyete, Depresyon, Somatizasyon ve Psikolojik Dayanıklılık

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ABSTRACT

The present study aimed to explore the link between anxiety, depression, psychological resilience, and somatization in individuals diagnosed with Antisocial Personality Disorder (ASPD), a significant psychiatric condition of both individual and societal importance, whose origins remain unknown. Forty male patients with ASPD and 40 healthy controls participated in this research. Various assessments including Sociodemographic forms, Resilience Scale for Adults (RSA), Beck Depression Inventory (BDI), Beck Anxiety Inventory (BAI), and Somatization Scale were administered to all participants. The findings revealed that individuals diagnosed with ASPD exhibited notably lower scores in RSA-structural style, future perception, family cohesion, self-perception, social inadequacy, social resources subscales, and overall RSA-total score compared to the control group. Moreover, the patient group demonstrated significantly higher scores in the Somatization scale, BDI, and BAI compared to the control group. The study also identified significant negative correlations between RSA-total and Somatization scale ($r=-0.450$, $p=0.004$), as well as significant positive correlations between Somatization scale and BDI ($r=0.644$, $p<0.05$) and BAI ($r=0.609$, $p<0.05$). Furthermore, a substantial positive correlation was established between BAI and BDI ($r=0.878$, $p<0.05$). In conclusion, individuals with ASPD displayed lower psychological resilience and higher levels of somatization, depression, and anxiety symptoms. Considering these outcomes, the assessment of psychotherapeutic and medical interventions for individuals with ASPD could prove beneficial.

Keywords: Antisocial personality, resilience, somatization, depression, anxiety

ÖZ

Antisozyal kişilik bozukluğu (ASKB) etiyopatogenezi tam olarak bilinmeyen bireysel ve toplumsal açıdan önem arz eden psikiyatrik bir bozukluktur. Bu çalışmada ASKB tanılı bireylerde anksiyete, depresyon, psikolojik dayanıklılık ve somatizasyon arasındaki ilişkiyi incelemeyi amaçladık. Çalışmaya 40 ASKB tanılı erkek hasta, 40 sağlıklı kontrol grubu dahil edildi. Tüm katılımcıların sosyodemografik formları, Yetişkinler için Psikolojik Dayanıklılık Ölçeği (YPDÖ), Beck Depresyon Ölçeği (BDÖ), Beck Anksiyete Ölçeği (BAÖ), Somatizasyon Ölçeği (SÖ) ve uygulandı. ASKB tanılı hastaların YPDÖ-yapısal stil, gelecek algısı, aile uyumu, kendilik algısı, sosyal yetersizlik, sosyal kaynaklar alt ölçek puanları ile YPDÖ-total puanı kontrol grubundan anlamlı şekilde düşük bulundu. Hasta grubun Somatizasyon ölçeği, BDÖ ve BAÖ puanı kontrol grubundan anlamlı şekilde yüksek görüldü. YPDÖ-total ile Somatizasyon ölçeği arasında negatif yönde anlamlı bir ilişki bulundu ($r=-0,450$, $p=0,004$) Somatizasyon ölçeği ile BDÖ ($r=0,644$, $p<0,05$) ve BAÖ ($r=0,609$, $p<0,05$) arasında pozitif yönde anlamlı bir ilişki saptandı. BAÖ ile BDÖ arasında pozitif yönde anlamlı bir ilişki bulundu ($r=0,878$, $p<0,05$). Sonuç olarak, ASKB tanılı hastaların psikolojik dayanıklılıklarının düşük, somatizasyon, depresyon ve anksiyete belirtilerinin yüksek olduğu saptanmıştır. Hastalara uygulanacak psikoterapi ve medikal tedavilerin bu açıdan değerlendirilmesi yararlı olacaktır.

Anahtar sözcükler: Antisozyal kişilik, psikolojik dayanıklılık, somatizasyon, depresyon, anksiyete

Introduction

Antisocial personality disorder (ASPD) is a mental disorder characterized by problems such as adherence to social rules, criminal tendencies, neglect of individual or social consequences of crimes, deception of others for personal gain, and emotional weakness (Fisher and Hany 2019, APA 2013a). In 2013, the condition was included in the Alternative Model for Personality Disorders "Areas that Require Further Research" in the Diagnostic and

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Statistical Manual of Mental Disorders, Fifth Edition (DSM-5) by the American Psychiatric Association (APA 2013a). In the model, personality disorders are classified by impairments in personality functions and distinctive pathological personality traits. Impairments in self and interpersonal functions underlies personality psychopathologies that are measured in the alternative diagnostic model. The model, where personality functions are evaluated, was based on cognitive-behavioral, psychodynamic, developmental and evolutionary theories (Bender et al. 2011). Typical symptoms of antisocial personality disorder, one of the six personality disorders described in the DSM-5 Alternative Model include egocentrism, disinhibition, incompliance with the law, social insensitivity, lack of responsibility, deceit, and manipulative tendencies (APA 2013a). The prevalence of ASPD is 3.91% among young adults, it is 0.78% in adults 65 or older (Holzer et al. 2022). Its incidence among men is three times higher than women (Sadock 2016). The disorder could be accompanied by various psychiatric disorders such as depression, substance abuse, and anxiety (Glenn et al. 2013). Individuals with ASPD experience several problems such as disinhibition (impulsivity, risk taking), lack of empathy, and hostility, which lead to therapeutic difficulties (APA 2013). According to the psychodynamic approach, impulsive behavior and self-conflict are observed in individuals with ASPD. They experience severe problems in basic superego functions. Basic emotions of trust such as love, and belonging are not developed in these individuals. They experience problems with object relations. They often display aggressive attitudes (Koroğlu 2010). Excitement-seeking behavior and somatization could be observed in individuals with ASPD due to low serotonin levels (Espiridon and Kerbel 2020). Somatization, described as the experience of physical symptoms due to the inability to overcome mental conflicts, occurs when non-organic physical complaints are explained with psychosomatics (Kellerman 2009). It is known that individuals with ASPD frequently experience somatization, where their mental and psychosocial problems are reflected with physical symptoms, and their complaints are mostly somatic when they present at hospitals (Özen et al. 2010, APA 2013b).

Psychological resilience is the ability to recover from challenging events, the capacity to adapt to new situations without the development of any psychopathology (Hunter 2001). Individuals with resilience were quite successful in fighting stress symptoms and adapting to daily life after a traumatic event (Zara and İçöz 2015). In addition to social and familial support systems, personality traits are also important in the activation of resilience during a trauma (Kararmak 2006). Low resilience could lead to various problems, including substance abuse and self-harm (Uğur et al. 2021). Resilience is an important individual trait that explains why certain individuals experience psychological and physical problems during or after stressful events, while others remain healthy. Thus, individuals with high resilience are expected to experience less somatization (Kaba and Keklik 2016).

We examined how levels of anxiety, depression, and resilience might influence somatization symptoms in individuals with ASPD. These patients pose challenges during examination and treatment across psychiatric and other clinics due to their impatience, non-compliance, and petulance. Interruptions in treatment are common, stemming from manipulative or aggressive behaviors towards healthcare staff or a general lack of cooperation. Identifying their physical complaints becomes crucial for accurate diagnosis and treatment. Our hypothesis centered on the impact of anxiety, depression, and resilience on somatization levels in ASPD patients. Recognizing this could facilitate better identification of ASPD individuals, leading to a more precise evaluation of their psychological and physical symptoms. Our aim was to analyze the emotional states and resilience of those with antisocial personality disorder while investigating their somatization levels. This study's findings may contribute to understanding the roots of ASPD and broaden treatment possibilities by shedding light on the interplay between mood, resilience, and somatic symptoms.

Method

Sample

The study was conducted on 49 patients who presented to the Fethi Sekin City Hospital Psychological Health and Diseases Clinic and diagnosed with ASPD based on the Diagnostic and Statistical Manual of Mental Disorders, 5th edition (DSM-5) and met the study criteria, and 45 healthy individuals without any symptoms described in DSM-5. Since ASPD diagnosis is more common among men and more male ASPD patients have been presented to our clinic, the patient and healthy control groups only included male individuals. Nine patients and 5 controls later left the study due to personal reasons. ASPD patients who were 18 - 65 years old, without systemic disease based on self-report and medical history, or a physical pathology or a neurological disease, or a diagnosis of alcohol or substance use other than treatment, or additional psychiatric medication treatment were included in the study. The control group included 18-65 years old healthy individuals who presented to the

hospital for routine check-up, had no known disease, or a history of psychiatric, metabolic or neurological disease, or medication use.

Procedure

The study was approved by the Firat University Faculty of Medicine ethics committee (25.11.2021, no: E-97132852-100-113046). The study was conducted in accordance with the ethical standards specified in the Declaration of Helsinki, 1983 revision. The sample size was calculated with power analysis on G*Power 3.1.9.2 software. The post hoc analysis was conducted on 40 patients and 40 controls. Thus, the power was calculated as 1,000 within 95% confidence interval.

The study was conducted at Fethi Sekin City Hospital Mental Health and Diseases Clinic between January 2022 and June 2023. Structured interviews based on DSM-5 were conducted by the psychiatrist with the participants that lasted about 30 minutes. All participants signed written consent forms, and completed sociodemographic data form, and then DSM-5 Personality Disorders Structured Clinical Interview, Beck Anxiety Inventory, Beck Depression Inventory, Somatization Scale and Resilience Scale for Adults were applied to all participants.

Measures

Sociodemographic Data Form

The form was developed by the authors and included questions on the duration of the psychiatric disorder, treatment history, alcohol use or smoking, and demographic data such as age and marital status.

DSM-5 Personality Disorders Structured Clinical Interview (SCID-5-PD)

This is the DSM-5 structured interview form for personality disorders (APA 2013c). Validity and reliability of the form in Turkish language was conducted by Bayad et al. (2021)

Resilience Scale for Adults (RSA)

The scale was developed by Friberg et al. and includes the Perception of the Self, Planned Future, Social Competence, Family Cohesion, Social Resources, and Structured Style dimensions. The 33-item scale and items 1-3-4-8-11-12-13-14-15-16-23-24-25-27-31-33 are reverse scored items. The minimum scale score is 33 and the maximum scale score is 165. The validity and reliability of the scale in Turkish language was determined by Basım and Çetin (2011). The Cronbach Alpha coefficient of the scale was 0.92 in the study.

Somatization Scale

In the study, 33 items in the Minnesota Multiphasic Personality Inventory (MMPI) associated with somatization disorder were employed. The total scale score is between 0 and 33, and a higher score indicates higher somatization. The validity and reliability of the scale in Turkish language was determined by Dülgerler (2001). The Cronbach Alpha coefficient of the scale was 0.81 in the study.

Beck Depression Inventory (BDI)

The inventory, developed by Beck (1961), includes 21 items. The total scale score is between 0 and 63, and a higher score indicates a higher depression level. The validity and reliability of the scale in Turkish language was determined by Hisli (1989). The Cronbach Alpha coefficient of the scale was 0.73 in the study.

Beck Anxiety Inventory (BAI)

This scale measures the frequency of anxiety symptoms experienced by an individual (Beck et al. 1988). It includes 21 items. It is a Likert type scale, and a high score indicates a high level of anxiety. The Cronbach Alpha coefficient of the scale is 0.85.

Statistical Analysis

The study data were analyzed on SPSS (Statistical Package for Social Sciences; SPSS Inc., Chicago, IL) v. 22 software. In the study, categorical data are presented as n and %, and continuous data as means \pm standard deviations (Mean \pm SD). Inter-group categorical variable comparisons were conducted with chi-square analysis (Pearson Chi-square), and the normal distribution of of continuous variables was determined with the Kolmogorov-Smirnov test. Student t-test was employed to compare paired groups, and Pearson correlation test

was used to determine the correlations between continuous variables. Receiver operating characteristic (ROC) curves were plotted to measure the weight of various scales in the diagnosis of antisocial personality disorder. Significance level was determined as $p < 0.05$.

Results

The study was conducted with 80 individuals: 40 ASPD patients and 40 healthy controls. The mean age of the patients was 32.9 ± 9.5 , the mean age of the control group was 33.8 ± 8.8 , and there was no significant difference between the groups ($p = 0.670$). The employment rate in the patient group (37.5%) was significantly lower when compared to the control group (72.5%) ($p = 0.002$). The alcohol use ($p < 0.001$) and smoking ($p < 0.001$) rate was significantly higher in the patient group when compared to the control group. Known mental health problems ($p < 0.001$), psychiatric disease in the family ($p < 0.001$), auto-mutilation ($p < 0.001$), past suicide attempt ($p < 0.001$) and drug use ($p < 0.001$) incidents were significantly higher in the patient group when compared to the control group (Table 1).

		Patient (n=40)		Control (n=40)		p
		n	%	n	%	
Age, Mean \pm SD		32.9 \pm 9.5		33.8 \pm 8.8		0.670**
Marital status	Single	26	65.0	18	45.0	0,072
	Married	14	35.0	22	55.0	
Education	Primary	26	65.0	18	45.0	0,072
	Secondary or higher	14	35.0	22	55.0	
Residence	Rural	13	32.5	9	22.5	0,317
	Urban	27	67.5	31	77.5	
Employment	Employed	15	37.5	29	72.5	0,002
	Unemployed	25	62.5	11	27.5	
Alcohol/substance use	Yes	28	70.0	0	.0	<0,001
	No	12	30.0	40	100.0	
Smoking	Yes	31	77.5	13	32.5	<0,001
	No	9	22.5	27	67.5	
Psychiatric disorder history	Yes	32	80.0	1	2.5	<0,001
	No	8	20.0	39	97.5	
Psychiatric disorder history in the family	Yes	14	35.0	1	2.5	<0,001
	No	26	65.0	39	97.5	
Self-mutilation history	Yes	33	82.5	1	2.5	<0,001
	No	7	17.5	39	97.5	
Suicidal history	Yes	15	37.5	2	5.0	<0,001
	No	25	62.5	38	95.0	
First suicide attempt age,	Mean \pm SD	20.7 \pm 5.1		23.0 \pm 8.5		0.576**
Medication	Yes	22	55.0	0	.0	<0,001
	No	18	45.0	40	100.0	
Medication type	Mood stabilizers	7	31.8	-		-
	Antipsychotic	5	22.7			
	Antidepressant	1	4.5			
	Other	3	13.6			
	Multiple	6	27.3			

*Chi-square analysis, **Student t-test.

The RSA-structural style subscale ($p = 0.012$), RSA-future perception subscale ($p < 0.001$), RSA-family cohesion subscale ($p < 0.001$), RSA-perception of the self subscale ($p < 0.001$), RSA-social competence subscale ($p = 0.048$), RSA-social resources subscale ($p < 0.001$), and total RSA ($p < 0.001$) scores of the patient group were significantly lower when compared to the control group. The Somatization Scale ($p = 0.005$), BDI ($p = 0.032$) and BAI ($p = 0.047$) scores of the patients were significantly higher when compared to the control group (Table 2).

There were statistically significant negative correlations between age and RSA-family cohesion subscale and total RSA scores. There were positive correlations between RSA-family coherence subscale, RSA-social competence subscale, and RSA-social resources subscale scores, and there was a significant negative correlation between the RSA-family coherence and somatization scores. Significant negative correlations were determined between the

RSA-social competence and somatization, and RSA and BAI scores. There was a significant negative correlation between total RSA and somatization scores. There were significant positive correlations between somatization, BDI and BAI scores. There was a significant positive correlation between BDI and BAI scores (Table 3).

Table 2. Comparison of group scale scores

	Patient (n=40)	Control (n=40)	p [*]
	Mean±SD	Mean±SD	
RSA-structural style	11.6±2.0	13.4±3.9	0.012
RSA-planned future	11.1±2.2	15.1±3.5	<0.001
RSA-family coherence	16.3±3.9	20.4±6.1	<0.001
RSA-perception of the self	18.9±3.8	23.8±5.6	<0.001
RSA-social competence	17.5±3.9	19.7±5.5	0.048
RSA-social resources	17.3±3.9	25.8±4.3	<0.001
RDS-total	92.9±10.2	118.1±17.9	<0.001
Somatization	18.9±6.1	14.5±7.6	0.005
BDI	10.3±6.7	7.3±5.3	0.032
BAI	9.9±6.1	7.3±5.4	0.047

*Student t-test; RSA: Resilience scale for adults ; BDI:Beck Depression Inventory; BAI: Beck Anxiety Inventory

Table 3. Correlations between the scale scores of patients with antisocial personality disorder

		Yaş	1	2	3	4	5	6	7	8	9	10
First suicide attempt age (1)	r	.281										
	p	.311										
RSA-structural style (2)	r	.216	-.069									
	p	.181	.806									
RSA-planned future (3)	r	-.116	-.090	.058								
	p	.476	.750	.724								
RSA-family coherence (4)	r	-.366	.195	.285	-.110							
	p	.020	.486	.074	.499							
RSA-perception of the self (5)	r	-.280	.038	.055	-.157	.186						
	p	.080	.893	.738	.334	.252						
RSA-social competence (6)	r	-.029	-.107	.080	-.048	.332	-.275					
	p	.858	.705	.624	.767	.036	.086					
RSA-social resources (7)	r	-.216	-.441	.283	.246	.338	-.013	.259				
	p	.181	.100	.077	.126	.033	.936	.107				
RSA-total (8)	r	-.344	-.148	.458	.199	.742	.309	.497	.721			
	p	.030	.598	.003	.217	.000	.052	.001	.000			
Somatization scale (9)	r	.087	.202	-.293	.026	-.352	.087	-.549	-.226	-.450		
	p	.591	.470	.067	.874	.026	.592	.000	.162	.004		
BDI (10)	r	-.067	.011	-.075	.142	-.125	.181	-.531	.009	-.163	.644	
	p	.683	.968	.644	.383	.443	.264	.000	.954	.314	.000	
BAI (11)	r	-.197	.144	-.297	.147	-.104	.171	-.519	-.100	-.235	.609	.878
	p	.223	.609	.063	.364	.524	.291	.001	.539	.144	.000	.000

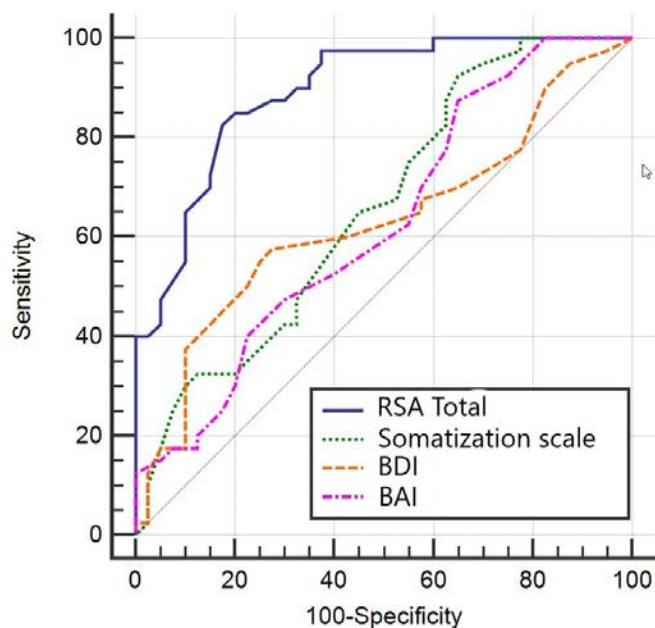
RSA=Resilience scale for adults; BDI=Beck Depression Inventory; BAI=Beck Anxiety Inventory

The predictive power of various values for antisocial personality disorder was investigated with ROC analysis and cut-off values were determined. RSA-structural style subscale score, RSA-future perception subscale score, RSA-family coherence subscale score, RSA- perception of self subscale score, RSA-social resources subscale score, total RSA score, somatization, BDI and BAI scores predicted the status of the disorder at the determined cut-off values (Table 4).

Table 4. Specificity and sensitivity of the measured parameters in the prediction of antisocial personality disorder

	Domain	p	%95 GA	Sensitivity	Specificity	PPD	NPD
RSA-structural style ≤ 12	0.636	0.036	0.521-0.741	77.5	55	63.3	71
RSA-planned future ≤ 15	0.818	<0.001	0.716-0.896	97.5	52.5	67.2	95.5
RSA-family coherence ≤ 20	0.720	<0.001	0.609- 0.815	92.5	52.5	66.1	87.5
RSA-perception of the self ≤ 24	0.753	<0.001	0.644-0.842	95	50	65.5	90.9
RSA-social competence ≤ 15	0.607	0.096	0.491-0.714	37.5	80	65.2	56.1
RSA-social resources ≤ 20	0.924	<0.001	0.843-0.971	82.5	90	89.2	83.7
TSA-total ≤ 98	0.894	<0.001	0.805-0.952	82.5	82.5	82.5	82.5
Somatization scale > 10	0.660	0.009	0.545-0.762	92.5	35	58.7	82.4
BDI > 9	0.630	0.041	0.515-0.736	55	75	68.7	62.5
BAI > 3	0.627	0.042	0.512-0.733	87.5	35	57.4	73.7

RSA: Resilience scale for adults; BDI: Beck Depression Inventory; BAI: Beck Anxiety Inventory

**Figure 1. ROC plot for the prediction of antisocial personality disorder by various scale scores**

RSA=Resilience scale for adults; BDI=Beck Depression Inventory; BAI=Beck Anxiety Inventory

Dicussion

Higher levels of anxiety, depression, and somatization were notably found in individuals diagnosed with ASPD compared to the healthy control group. Conversely, resilience levels were significantly lower among those in the patient cohort. Common comorbidities associated with antisocial personality disorder included substance use disorder, anxiety, and depressive disorders (Martens 2000). Previous studies have indicated heightened levels of depression among ASPD patients (Sırlıer Emir et al. 2023). Additionally, Türkçapar et al. noted that out of 72 ASPD patients, 20 also experienced depression in their study conducted in 2004. Studies have shown a correlation between certain traits across different psychological disorders. For instance, individuals with depression often display irritability and anger, while those with anxiety disorders, featuring anger attacks, frequently exhibit signs of depression (Fava and Rosenbaum 1999). Furthermore, research has linked impaired serotonergic systems with both antisocial personality disorder and depression. Serotonergic dysfunction has been associated with sensitizing the dopamine system, leading to impulsivity and substance addiction. It also inhibits memory and awareness of negativity, contributing to demoralization, low self-esteem, despair, and pessimism (Deakin 2003). Anxiety disorders have been found to be prevalent among individuals diagnosed with ASPD, with more than half experiencing lifelong anxiety, as reported by Godwin et al. (2003). Ullrich and Coid (2009) demonstrated that ASPD patients with comorbid anxiety disorders were more likely to seek psychiatric treatment than those without such a diagnosis. Aligning with existing literature, our observations revealed high

levels of depression and anxiety among ASPD patients, with a majority of them being unemployed. It's plausible that unemployment may have adversely impacted the psychological well-being of individuals with ASPD.

A study involving 111 individuals who had breached the law reported notably low levels of resilience among the participants (Nowakowski and Wróbel 2021). Research suggests that adverse childhood experiences can impact resilience, potentially leading to behavioral issues and personality disorders in adulthood (Flynn et al. 2022). Our observations noted similarly low resilience among ASPD patients. Resilient individuals typically possess effective communication skills, future-oriented goals, and adequate coping mechanisms to navigate through challenging life events (Thomsen 2002). However, this seems to be lacking among individuals with ASPD. Studies have indicated that those with low resilience often exhibit intense somatization symptoms (Ran et al. 2020). Consistently, we found low resilience coupled with high somatization symptoms within the patient group. Notably, prior studies have not co-analyzed resilience and somatization in ASPD patients, making this research the first of its kind. The findings suggest that individuals with ASPD tend to conceal their mental distress, highlighting physical complaints to seek treatment.

Instances of self-harm and suicide attempts are prevalent among those with antisocial personality disorder (Güleç 2016). Moreover, smoking and substance abuse, including alcohol, are frequent among this demographic (Bilici et al. 2012). Consequently, our study's outcomes align with earlier reports. A significant negative correlation was found between somatization and overall RSA scores ($r = -0.450$, $p = 0.004$). Similar to our findings, Cevizci et al. (2019) demonstrated a moderate negative correlation between somatization and total RSA scores ($r = -0.335$, $p = .000$). Furthermore, consistent with our results, previous studies have reported positive correlations among somatization, anxiety, and depression (Gümüş et al. 2012, Gül et al. 2016). The ROC analysis highlighted the predictive potential of RSA-structural style, RSA-planned future, RSA-family cohesion, RSA-perception of the self, RSA-social resources, total RSA, somatization, BDI, and BAI scores in determining the disorder's state using specific cut-off values. These scales could serve as predictive tools in clinical settings for evaluating ASPD patients and their symptoms.

The study faced limitations, including participants undergoing psychiatric treatment, potential age-related variability in variables such as resilience and somatization (Zhong et al. 2016, Cincioğlu et al. 2016), the age range of participants (18-65), potential reliability concerns regarding self-reported data from ASPD patients, and the cross-sectional application of the scales. However, the study's strength lay in the deliberate selection of exclusively male participants, providing an analysis of a homogeneous sample excluding females, given the tendency for men to commonly present with physical complaints.

Conclusion

In summary, our observations highlighted elevated levels of depression, anxiety, and somatization, along with reduced resilience among individuals diagnosed with ASPD. It's crucial to discern whether these issues stem directly from the disorder or if they are secondary outcomes resulting from the challenges they face. Addressing the mental health concerns and enhancing coping mechanisms among these individuals could potentially enhance both their personal and societal well-being, consequently aiding in lowering crime rates. Recognizing and addressing these psychological parameters in ASPD patients could significantly impact the efficacy of psychiatric treatments, warranting further investigation through prospective studies.

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