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Separation anxiety disorder among outpatients with major depressive disorder: Prevalence and clinical correlates

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ABSTRACT

Prior studies have reported that separation anxiety disorder (SEPAD) can continue into or may begin in adulthood. Association of SEPAD with other psychiatric disorders has been frequently examined, and high rates of comorbidities have been found. The aim of this study was to investigate the prevalence and clinical correlation of SEPAD in adult patients undergoing treatment for major depressive disorder (MDD). The study sample was comprised of 100 outpatients. Participants underwent a DSM-5-based comprehensive assessment. Purposefully-designed semi-structured sociodemographic information and illness history forms were filled out by the researchers, and diagnoses of SEPAD were made using the Structured Clinical Interview for Separation Anxiety Symptoms, Separation Anxiety Symptom Inventory and Adult Separation Anxiety Survey. The frequency of SEPAD was 41% in patients with MDD, three-quarters of whom were adult onset. The use of new-generation antidepressants, adjunctive medications and comorbidity of other anxiety disorders were higher in patients with SEPAD ($p < 0.05$). SEPAD was highly prevalent, with a majority of cases starting in adulthood among patients with MDD, while SEPAD comorbidity was associated with high levels of anxiety and an increased likelihood of suboptimal response to usual depression treatment. Further studies are required to define the relevance and pathological basis for the comorbidity of SEPAD in people with MDD.

1. Introduction

Separation anxiety is the experience of intense anxiety that occurs with the state or expectation of leaving the basic attachment fig. [1]. This concept, which is based on attachment theory, is actually an adaptive response that ensures the continuity of care by preventing the child from moving away from the caregiver [2]. While separation anxiety is part of the normal developmental process between the ages of 1 and 3, it can take the form of separation anxiety disorder (SEPAD) when it becomes developmentally incompatible with a prolonged and severe course [1,2].

While the definition of SEPAD in the 10th revision of the International Classification of Diseases (ICD-10) and the 4th edition of the Diagnostic and Statistical Manual of Mental Disorder (DSM-IV) is limited to childhood, several studies have reported that fear and anxiety based on separation from an attachment figure or home can also be observed in adulthood [3–7]. The clinical picture described in adults comprises an inability to stay away from the attachment figure (e.g., parent, spouse, or child), control behaviors when separated from them (e.g., frequent conversations or long chats on the phone), trouble falling asleep alone, fear of untoward events to themselves or attachment figures that could potentially keep them separated, and emotional and cognitive symptoms including anxiety and panic attacks (rather than somatic symptoms as seen in children) [4,5,8].

With the changes introduced in the 5th edition of the Diagnostic and Statistical Manual of Mental Disorder (DSM-5), SEPAD has been classified under the heading of "anxiety disorders." Restriction of age of onset to under 18 years was removed, the symptoms were modified to include adults, and the duration criteria of symptoms were determined as at least four weeks for children and adolescents and six months for adults [1].

Studies carried out on large samples revealed that SEPAD starting in adulthood is considerably frequent. From the U.S. National Prevalence Study (NCS-R), conducted face to face with 9282 adults, childhood and adult SEPAD lifetime prevalence was 4.1% and 6.6%, respectively.

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Of those who were diagnosed with adult SEPAD, 77.5% were adult onset [9]. In the cross-country prevalence study, the lifelong prevalence of SEPAD was found to be an average of 4.8%, with 43% of this sample having an onset after the age of 18 [10].

In the NCS-R study, a second psychiatric comorbidity was reported in 88.5% of cases with adult separation anxiety disorder (SEPAD-A) [9]. SEPAD-A as a comorbidity was reported in several studies: 43% in a study of 454 anxiety and mood disorder patients presented to the outpatient clinic; 49.5% in a sample of panic disorder patients; 68.9% in complicated grief patients; and 53.3% in patients with attention deficit hyperactive disorder [11–14]. Although the association of SEPAD-A with other psychiatric disorders was frequently studied and high rates of comorbidities were reported, only a few studies have examined its coexistence with major depressive disorder (MDD), which is a common condition encountered in daily psychiatric practice [15–17].

Depressive disorders, as significant health problems, can result in disability and cause serious economic losses. The lifetime prevalence of MDD is 16.2%, and with a rate of 59%, the most common accompanying psychiatric conditions are anxiety disorders [18]. In addition, comorbidity is one of the important factors considered in the evaluation of treatment resistance in depressive disorders [19]. There have been arguments in the literature that the frequent comorbidity of SEPAD-A, which was often undetected due to outdated diagnostic systems, could be an area that improves success in combating depression [9,20,21]. The aim of the present study is to determine the frequency of, and some associated factors connected to, SEPAD-A, in addition to investigating the relationship of SEPAD-A comorbidity with certain clinical features of MDD in adult outpatients undergoing treatment for depression. It is anticipated that the findings will contribute to increasing awareness of this new adult diagnosis among psychiatrists and will provide some insight into understanding the impact of SEPAD-A comorbidity in people with MDD.

2. Methods

2.1. Study design and sample

The study took place between 4 January 2018 and 1 January 2019 in the psychiatry outpatient clinic of Göztepe Training and Research Hospital, Faculty of Medicine of Istanbul Medeniyet University. Inclusion criteria were having a diagnosis of MDD according to DSM-5 criteria, being between the ages of 18 and 65, and being literate enough to read and answer the questions. Exclusion criteria were having bipolar disorder, non-affective psychotic disorders, cognitive impairment and intellectual disability. Informed consent was taken from all participants.

Participants were recruited into the study according to their order of presentation to the clinic. Out of the patients who were under treatment for MDD, those who agreed to participate in the study underwent a DSM-5 based comprehensive assessment for current psychopathology and past (lifetime) psychiatric disorders. Each assessment was conducted by the researchers and took at least one hour. For data collection, a semi-structured, socio-demographic data form and an "illness history form" were designed and filled out by the researchers. Electronic patient files were also examined for each patient assessed.

A Structured Clinical Interview Form for Anxiety Symptoms (SCI-SAS) was used to assess separation anxiety symptoms by the researchers. Although DSM-IV-based instruments were used to determine the presence of SEPAD, these instruments comply with DSM-5 criteria for SEPAD. There is no DSM-5 adopted version of this form, but all items were checked and almost no differences were found, so the form was viewed as being in line with DSM-5 items. People with three or more symptoms in the adulthood section of the SCI-SAS were asked to complete the Adult Separation Anxiety Questionnaire (ASA-27), and those who passed the cutoff score on the ASA-27 were considered as having SEPAD-A. Participants who had three or more separation symptoms in the childhood section of the SCI-SAS were directed to fill in the Separation Anxiety Symptom Inventory (SASI), and those who exceeded the cutoff score were diagnosed with childhood onset separation anxiety disorder (SEPAD-C). Cases whose symptoms started during childhood and continued into adulthood were also classified as SEPAD-A.

The sample size was determined by carrying out a power analysis (with 80% power and statistical significance set at $p < 0.005$), which highlighted that a minimum of 100 patients were needed. 117 patients with MDD were assessed during the study period. Out of this sample, 12 did not meet the inclusion criteria for various reasons. Five patients who had SEPAD only during childhood were not included in order to control the potential influence of childhood SEPAD on current psychopathology. Therefore, data analysis was carried out with the remaining 100 patients with MDD.

The present study was carried out with the approval of the ethics committee of Istanbul Medeniyet University and within the framework of the Helsinki Declaration.

2.2. Assessments tools

2.2.1. Sociodemographic data form

A sociodemographic data form is a semi-structured form designed by researchers to determine the sociodemographic characteristics of the research samples. It was filled out by the researchers and included questions on participants' age, gender, marital status, level of education, occupational characteristics, family psychiatric history, experiences of being away from parent/s in childhood, loss of parent/s, exposure to violence, and presence of physical illness in childhood and/or adulthood. Information about patients' personal history was based on their own accounts and was not corroborated by any other informants.

2.2.2. Illness history form

The illness history form was designed and filled in by the researchers, which was used to record the specifics of MDD and the details of the participants' psychiatric history. It was composed of questions on current and past episodes of MDD, specifically years of illness, number of episodes, presence of psychotic and suicidal features with depressive episodes, hospitalization history, psychotropic medications prescribed, ECT treatment, and comorbid psychiatric disorders. The form was filled out on the basis of a psychiatric interview carried out by the researchers and an examination of the patients' past notes from the electronic records.

2.2.3. Structured clinical interview for separation anxiety symptoms

A Structured Clinical Interview for Separation Anxiety Symptoms (SCI-SAS) consists of two parts, each with eight items. The first one retrospectively scans the symptoms of childhood separation anxiety, while the second part scans the current adult symptoms. Cyranowski et al. developed an adult version by modifying childhood separation anxiety symptoms. In accordance with DSM-IV criteria, in the presence of at least three out of eight criteria, childhood and/or adult separation anxiety is considered. There is no DSM-5 adopted version of this form, but all items were checked and almost no differences were found, so it was viewed as being in line with DSM-5 items. A Turkish adaptation and validation was conducted by Diriöz in 2010, and the form was found to be good at detecting cases. The Cronbach alfa coefficient was 0.59 [6,22].

2.2.4. Separation anxiety symptom inventory

The Separation Anxiety Symptom Inventory (SASI) was developed by Silove et al. It is a 15 item self-report scale for adults, providing a four-point Likert-type measurement. Each item questions the symptoms of separation anxiety likely to occur in childhood, with a distribution between zero (never felt) and three (felt very often). The Turkish validity and reliability study was carried out with a diagnostic cutoff score of 12. The Cronbach alfa coefficient was 0.89 [23,24].

2.2.5. Adult separation anxiety questionnaires (ASA-27)

This self-report scale was developed by Manicavasagar et al. and includes questions on the diagnostic criteria of SEPAD in DSM-IV and additional symptoms of adulthood separation anxiety. These 27 items are measured on a four-point Likert scale from zero (never felt) to three (very often felt). Turkish validity and reliability studies were conducted by Diriöz et al. The cutoff score was accepted as 25. The Cronbach alfa coefficient was 0.93 [23,25].

2.3. Statistical analysis

Statistical analyses were performed using SPSS software (ver. 20.0; SPSS Inc., Chicago, IL, USA). An assessment of normality was initially made with the Kolmogorov-Smirnov test. All numerical data was expressed as means ± standard deviations, while all categorical variables were expressed as numbers and percentages (n, %). Categorical variables were compared with the $\chi 2$ test, and a Student's *t*-test was used to determine the differences between numerical variables. Statistical significance was set at p-value <0.05.

3. Results

Of the 100 patients who participated in the study, 81 (81%) were female and 19 (19%) were male. The average age of the general group was 45.67 (sd 1.14). Within the sample, 41% (N: 41) of the patients with MDD who presented to the outpatient clinic were found to have SEPAD-A. Out of these, 10 had a history of SEPAD-C.

Findings regarding the socio-demographic characteristics of the participants are shown in Table 1. The vast majority of patients were married and had low vocational and educational characteristics. No statistically significant differences were found between patients with or without SEPAD-A in terms of gender, age, marital status, educational status, and professional characteristics.

When the quantitative and qualitative clinical features of lifelong depressive episodes of the participants and their relationship with the SEPAD-A comorbidity were examined, there appeared to be no statistically significant differences between patients with and without SEPAD-A in terms of years of illness, number of episodes, presence of psychotic symptoms, suicidality, history of hospitalization and use of ECT (Table 2). With regard to use of psychotropic agents in the treatment of MDD, use of other antidepressants (agomelatine, vortioxetine, bupropion) and adjunctive medications (β-blockers, benzodiazepines) was significantly higher (p: 0.005, p: 0.023, respectively) in patients with SEPAD-A comorbidity (Table 2).

When the comorbidities other than SEPAD-A were examined, it was observed that other anxiety disorders were the most commonly co-occurring disorder with MDD. Those who had SEPAD-A were more likely to have another anxiety disorder compared to those without SEPAD-A (p: 0.002, p: 0.025; Table 3). The other commonly seen comor-

Table 1
Sociodemographic features.

	SEPAD-A (+) (N:41)	SEPAD-A(−) (N:59)	p
	n (%)		
Age (mean ± ss)	44.09 ± 13.03	47.27 ± 9.80	0.168
Gender			0.193
Female	33(80)	48(81)	
Male	8(20)	11(19)	
Marital status			0.330
Married	32(78)	49(83)	
Single-divorced- widow	9(22)	10(17)	
Employment			0.777
Unemployed retired	27(66)	41(69)	
Employed	14(34)	18(30)	
Education level			0.912
None	1(2)	0(0)	
Primary	25(61)	39(66)	
High	6(15)	15(25)	
University	8(19)	7(12)	
Family unit			0.240
Nuclear	39(95)	35(59)	
Extended	2(5)	24(41)	
Parents			0.690
Together	39(95)	55(93)	
Separate	2(5)	4(7)	
Loss of mother/father	35(85)	52(88)	0.272
Psychiatric disorder in parents	20(49)	25(42)	0.883
Staying away from parents for a long time	31(76)	47(80)	0.937
Exposure to domestic violence in childhood	21(51)	25(42)	0.383
Exposure to domestic violence in adulthood	22(54)	30(51)	0.782
History of physical illness in childhood	10(24)	14(24)	0.885
History of physical illness in adulthood	6(15)	9(15)	0.944

SEPAD-A: Separation Anxiety Disorder in adults with either adulthood or childhood onset.

Table 2
Life-long clinical and treatment-related features of MDD subjects with/without SEPAD-A.

	SEPAD-A (+) (N:41)	SEPAD -A(−) (N:59)	p
	n (%)		
Year of illness (mean ± ss)	9,66 ± 9,17	10,35 ± 8,60	0,707
Number of episodes (mean ± ss)	4,22 ± 4,52	3,67 ± 4,52	0,554
History of hospitalization	7(17)	6(10)	0,652
History of ECT	1(2)	0(0)	0,176
History of psychotic symptoms	6(15)	5(8)	0,330
History of suicide	8(19)	7(12)	0,272
Selective serotonin reuptake inhibitors	35(85)	48(81)	0,597
Serotonin-Noradrenalin reuptake inhibitors	15(36)	25(42)	0,561
Other antidepressants	29(71)	25(42)	**0,005**
Antipsychotics	15(36)	20(34)	0,782
Mood stabilizers	4(10)	7(12)	0,771
Adjunctive drugs	21(51)	17(29)	**0,023**
Polypharmacy	14(34)	18(30)	0,702

SEPAD-A: Separation Anxiety Disorder in adults with either adulthood or childhood onset.
Bold font denotes statistical significance.

Table 3
Frequency of other comorbid psychiatric disorders in MDD subjects with/without SEPAD-A.

		SEPAD-A(+) (N:41)	SEPAD-A(−) (N:59)	p
		n (%)		
Other anxiety disorders	*Current*	26(63)	20(34)	**0,002**
	Lifetime	34(83)	37(63)	**0,025**
Obsessive-compulsive disorder	*Current*	0 (0)	1(2)	0,242
	Lifetime	4(10)	1(2)	0,067
Trauma and stressor-related disorders	*Current*	0 (0)	1(2)	0,180
	Lifetime	14(34)	13(22)	0,150
Somatic symptom and related disorders	*Current*	4(10)	5(8)	0,796
	Lifetime	7(17)	11(19)	0,885
Dissociative disorders	*Current*	0 (0)	2(3)	0,147
	Lifetime	4(10)	3(5)	0,355
Impulse control disorders	*Current*	3(7)	1(2)	0,151
	Lifetime	5(12)	3(5)	0,189
Eating disorders	*Current*	0 (0)	1(2)	0,307
	Lifetime	4(10)	2(3)	0,181
Alcohol-substance use disorder	*Current*	2(5)	0	0,055
	Lifetime	5(12)	3(5)	0,189

SEPAD-A: Separation Anxiety Disorder in adults with either adulthood or childhood onset.
Bold font denotes statistical significance.

bidity was trauma and stress-related disorders, but this was not statistically significant. In patients with a past history of obsessive compulsive disorder, SEPAD-A was found to be more frequent, nearing statistical significance (p: 0.067). There were no meaningful differences between the groups when comparing the presence of other comorbid psychiatric disorders, including eating disorders, somatic symptoms and related disorders, dissociative disorders, impulse control disorders and alcohol-substance abuse disorder.

4. Discussion

SEPAD has attracted more interest in the literature after the recognition of adult onset SEPAD-A and the observation of continuation of childhood symptoms into adulthood [26,27]. Only a few studies have examined the relationship between SEPAD and various psychiatric disorders, and to the best of our knowledge, this is the first study focusing on SEPAD-A comorbidity specifically in people with MDD.

The study found that the frequency of SEPAD-A was 41% among patients diagnosed with MDD from an outpatient psychiatric service, three-quarters of whom developed SEPAD-A in their adult life. The frequency of SEPAD-A was reported to be in the range of 20–50% in various groups of adult patients with psychiatric disorders [11,12,26,28]. The rate of those diagnosed with adult onset SEPAD-A in the NCS-R study was 77.5%, which was in line with this study's findings, and it was 43% in another major prevalence study [9,10]. This data indicates that SEPAD-A is, in fact, quite a common condition in general adult psychiatry practice and that symptoms often develop in adulthood. In the patient group, 66% of 15 people who were diagnosed with SEPAD-C continued to meet the criteria for SEPAD in adulthood. The presence of SEPAD-C was reported as a predisposing factor of other psychiatric diseases such as anxiety and mood disorders in previous studies [29,30].

In the present study, gender was not found to be an associated factor for SEPAD-A. In the majority of past studies, SEPAD-A was more common among women, and even in one study, female gender was reported as a risk factor [10,31]. However, in the NCS-R study, while SEPAD-C was more common among women (OR: 2.2), the ratio became closer to being equal among patients with SEPAD-A (OR: 1.4). The reason for this finding was interpreted as being that more men were diagnosed with adult onset SEPAD than women and that the symptoms in boys tended to continue into adulthood more often than in girls [9]. In the present sample, since the study focused on patients with MDD, which is already more common in women, a majority of the participants were women. Hence, it is difficult to arrive at a conclusion about the effect of gender from this study.

The mean age of patients with and without SEPAD-A was found to be close. There are various findings in the literature regarding the age of onset for SEPAD. In the NCS-R study, it was reported as early-middle childhood for SEPAD-C and early 20s for SEPAD-A [9]. It is believed that these periods are especially related to the emerging requirements to leave home (school, marriage, work, etc.) [31]. In a recent meta-analysis, the average age of onset for SEPAD was found to be 10.6 years [32]. On the other hand, some studies reported that SEPAD may start at an older age or that its symptoms may continue until advanced ages [33]. According to a prevalence study conducted by Silove et al., approximately 10% of patients developed SEPAD after 40 years of age [10]. In another study, the frequency of SEPAD-A was 6% in the geriatric group between the ages of 62 and 87, and it was associated with a past psychiatric history of mood and anxiety disorders [34]. Although we did not inquire about the exact age of onset of SEPAD, our results support the finding that SEPAD continues to exist in the middle age group.

No significant relationship was found between the sociodemographic characteristics of the participants, including their marital status, educational and professional status, and the presence of SEPAD-A. In Pini et al., of the patients with SEPAD-A in the sample with anxiety and mood disorders, 70% were female, 44% were married, and 42% were employed [16]. In the NCS-R study, among those who were unmarried and individuals with low professional and economic levels, a higher rate of SEPAD-A was detected [9]. Similarly, most studies reported that SEPAD causes the inability to function in various areas of life [9,16,31]. The reason for not seeing any difference between the groups in this study may be due to the presence of MDD in both groups.

No differences were found between the groups in terms of family background and the early life experiences examined. Such result are in line with studies exploring the frequent comorbidity of MDD and anxiety disorders, which have suggested that one disorder can lower the threshold for the other to occur, or that common etiological factors may be effective [35]–[37]. Several studies have shown that stressful life events, socio-economic problems, impaired family structure, problematic peer relationships and psychiatric disorders in parents are risk factors for both MDD and anxiety disorders [36]. Although the etiology of SEPAD is not yet clear, there are studies on the influence of many genetic, biological and environmental factors [31]. Familial transition, parental attitude (over-protective mother model), insecure attachment styles, parental psychiatric illness, loss and separation of parents are risk factors for the emergence of many psychopathologies, including SEPAD, in childhood and adulthood [38–41]. Factors such as negative self-models, low self-esteem, and self-criticism, which provide the susceptibility to depression in adults with attachment anxiety, may also play a role in the emergence of separation anxiety [40,42,43]. The results of this study therefore seem to support the existing evidence that SEPAD and MDD may have some common or overlapping pathomechanisms, which should encourage clinicians managing patients with MMD to be more vigilant about potential comorbidity with SEPAD.

Although no statistically significant relationships were found between the groups in terms of factors indicating the severity of depression (duration of illness, number of episodes, history of hospitalization, presence of psychotic and suicidal features, and ECT history), there was a trend for a higher prevalence for most clinical variables associated with a worse prognosis in patients with comorbid SEPAD. In the literature, negative impacts of other anxiety disorders on the course of depression were reported, despite some contradictory results about the effect of SEPAD on the severity of depressive symptoms [44,45]. In one study, the presence of SEPAD-A was reported as having increased the severity of depressive symptoms [28]. Pini et al. showed that although patients with SEPAD were not more likely to have a diagnosis of MDD, they scored higher on depression scales [16]. In another study, which compared panic disorder patients with and without SEPAD-A, MDD comorbidity or higher severity in depressive symptoms were not evident in those with SEPAD [17]. Absence of a correlation between the severity of MDD and the presence of SEPAD-A comorbidity in the present study could be due to other factors related to depression (other psychiatric and medical comorbidities, family history, trauma history, etc.) playing a stronger role in the prognosis than the SEPAD comorbidity itself. Nevertheless, it is possible that a larger sample could yield some significant differences.

Among the patients in the study, those with SEPAD-A had significantly more current and past anxiety comorbidities (panic disorder, agoraphobia, generalized anxiety disorder, social anxiety disorder, and specific phobia) than those without SEPAD-A, with panic disorder (PD) being the most frequent within the anxiety disorders group. One of the most important features of SEPAD cited in the literature is its high comorbidity. Out of individuals diagnosed with SEPAD-A, 88.5% were reported to have another psychiatric disorder [9]. For many years in the past, PD-agoraphobia and separation anxiety were evaluated together in a categorical classification, the theory being that childhood separation anxiety re-emerged as agoraphobia as a result of exposure to stress in adulthood [2,46]. One of the findings that support such a situation biologically is that the sensitivity of patients with SEPAD-C and adult PD to 35% CO2 were also detected in patients with SEPAD-A [47]. In this regard, besides the specificity of the relationship

between SEPAD-PD, studies claim that this relationship is not specific and that SEPAD has a similar relationship pattern with other psychiatric disorders [29,31,48,49]. This information could explain the prevalence of SEPAD in patients with MDD who participated in our study and its relationship with other anxiety disorders.

In this study, the use of certain groups of antidepressants (vortioxetine, agomelatine, and bupropion) and some adjunctive drugs (β blocker and benzodiazepine) was found to be higher in patients with SEPAD-A when their treatment history was examined. The majority of evidence suggests the use of antidepressants, ranging from selective serotonin reuptake inhibitors to Serotonin-Noradrenalin reuptake inhibitors for the treatment of depression. In the case of resistance, increasing the dose of the antidepressant selected, changing or adding another antidepressant, and strengthening with psychological behavioral interventions and/or physical treatments are considered as treatment options [50]–[52]. Our results revealed that clinicians resorted to using "other antidepressant medications" and adjunctive medications (β blocker and benzodiazepine) more often in patients with SEPAD-A. Although treatment preferences for SEPAD-A comorbidity are beyond the scope of this paper, the findings still suggest that clinicians faced more anxiety symptoms and some sort of suboptimal response to usual antidepressants. There is some evidence in the literature that seems to be in line with the results of this study. For example, the presence of anxiety symptoms accompanied by depression was linked to resistance to treatment [19]. It was also reported that the failure to recognize SEPAD as a primary diagnosis or overlooking the core symptoms of SEPAD reduced recovery rates in these patients [20]. In the NCS-R study, 74% of the patients with SEPAD-A sought treatment for various other reasons, and SEPAD-A was only included in the management plan for one-third of them [9]. Similarly, in a study in which 57 patients with PD were followed for 12 months while undergoing medical treatment, the most important factor causing the low treatment response was found to be SEPAD-A [53]. In another study, it was observed that 80% of 46 patients who were considered to be unresponsive to the treatment of an anxiety disorder had SEPAD-A comorbidity, and when psychodynamic psychotherapy focused on attachment for this small group of patients, their scale scores improved, with a higher ability to function [54]. In light of the current understanding of SEPAD-A, it would be reasonable to suggest that clinicians should consider SEPAD-A in differential diagnosis or as a comorbidity when dealing with patients with MDD who are not responding to usual treatment.

5. Limitations

The present study comes with certain limitations. The small sample size, with a female dominance, makes it difficult to generalize the findings, and those seeking treatment could be potentially different from those who do not. We did not carry out specific assessment for personality disorders, which are likely to have some degree of overlap with SEPAD, particularly dependent personality disorder. We also relied on patients' own accounts regarding information on childhood, which is prone to recall bias. Additionally, cross-sectional design of the study limits our understanding of the direction of the relationships found.

6. Conclusion

With SEPAD taking its place in the DSM-5 as an adulthood disorder, many other areas have emerged that need to be researched. The present study was carried out on people being treated for MDD and demonstrated that SEPAD-A is a common comorbidity in this patient group, with a majority of them experiencing onset in adulthood. This study may also imply an overlapping pathomechanism for MDD and SEPAD-A, as there did not appear to be any distinctive factors among the depressed patients with or without SEPAD. However, patients with SEPAD-A comorbidity appeared to present more anxiety symptoms, with a likelihood of suboptimal response to usual depression treatment. Therefore, the study suggests that clinicians treating patients with MDD should always consider this common comorbidity and plan their management accordingly. There is a need for further studies on a larger sample with longitudinal design in order to better define the relevance and pathological basis for the comorbidity of SEPAD-A in people with MDD, in addition to research on specific treatment options for SEPAD-A.

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