Triggering factors of depression in women: a clinical population cross-sectional study

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Abstract

Context: There is a high prevalence of depressive disorders in women and various social and environmental factors associated with the onset of the disease, but studies in populations using Mental Health Services are scarce.

Objectives: Determine, in a clinical population of adult women, the association between depressive disorders and sociodemographic factors, the time between the onset of complaints and psychotherapy screening, and triggers (number, type and classified by Interpersonal Theory).

Methods: Cross-sectional data of 822 women (18 and older) attending Psychotherapy at the Psychiatric Service of North Lisbon Hospital Center in Portugal. Triggering factors were obtained using the question: "What factors do you consider contributed to the difficulties experienced?".

Descriptive statistics, Chi-square tests to study the association with psychiatric diagnosis groups, ANOVA to test differences in average age and post hoc Scheffe were calculated.

Results: This study demonstrates the association between different depressive disorders and sociodemographic and clinical variables. The most frequent triggers were role transitions, particularly physical illness, both personal and from a family member, and interpersonal disputes, namely family and marital conflicts and professional problems. There is a statistically significant association between the type of diagnosis and both interpersonal conflicts and the number of triggers.

Conclusions: Depressive main triggers must be taken into account to outline psychotherapeutic interventions and to define prevention strategies.

Keywords: Depression, epidemiology, women, triggering factors, mental health, interpersonal theory.

Introduction

There is a high prevalence of depressive disorders and social and environmental factors associated with the onset of the disease. Depressive disorders are amongst the three main diseases causing morbidity in the Portuguese female population [1]. Epidemiological studies characterizing the general clinical population that uses Mental Health Services in Portugal are scarce. A Portuguese study on this subject including a sample of mostly women indicates that depressive mood disorders are the most significant psychiatric diagnoses [2].

Depression disorders are multifactorial [3] and there seems to be an association between their emergence, maintenance and worsening with adverse triggering events [4], such as marital conflicts, in different cultures and races [5], mourning [6], divorce or affective breakdown [7], and chronic or disabling medical conditions [8,9]. Adverse work environments seem to increase the risk of depressive symptoms, but data with clinically diagnosed depression patients is insufficient [10]. Unemployment may as well be related to the emergence of depressive disorders but only on a small scale; prospective assessments indicate that about half of those who are depressed after the loss of employment, have already experienced chronic depression, thus in these situations, unemployment is not considered the main trigger for the clinical disorder [11].

Consistent findings in mental health epidemiology show a higher prevalence of depression in women [12] and the complexity of the mechanisms that explain it [13]. It is considered that greater exposure to certain stressors is gender-specific and can play an important role [14].

Also, gender comparative models point out the recurrence of major depression in women, and increased risk factors concerning early and recent adverse events in life and socio-economic problems [15]. The triggering factors for depression seem to differ across gender [16]. In a study of depressive dizygotic twins, women exhibited more sensitivity to interpersonal relationships than to career and goal-oriented factors, by contrast to their male counterparts [17].

The connection between identified triggers and depressive disorder is bidirectional. For example, women who have experienced violence from their partners are more likely to experience depression; on the other hand, women who have experienced depression are at greater risk of subsequent partner violence [18].

Depressive disorder displays different symptomatic profiles, pathophysiology and response to treatment in different patients, which may be related to their specific depression diagnosis, triggers and associated mechanisms [19,20]. Recent studies suggesting the correlation of life events with symptom profiles are justified by the need to explain the heterogeneity of depressive disorders [21, 22] however; there is still a long path in the aforementioned research domain.

Patients with depression often report interpersonal problems, which is an important concept in theories explaining depression [23]. According to Interpersonal theory, depression is a complex and multi determined phenomenon and its onset, response to treatment and prognosis are influenced by the patient's interpersonal relationships with significant others [23]. This theoretical model considers that specific life events can trigger depressive episodes in vulnerable individuals [24]. These episodes tend to compromise interpersonal functioning, hinder experiences management and increase the onset of new negative life events [25]. The model identifies four major areas of negative life events, which are considered as triggering depression: interpersonal disputes, role transitions, grief and interpersonal deficits [26]. Based on the classification of triggers for depressive disorder in these four major areas, interpersonal psychotherapy proposes the development of effective strategies to deal with current problems related to the onset of symptoms and to support personal empowerment in coping with these problems outside of the therapeutic context [24, 25]. The implementation of interpersonal psychotherapy in a clinical context, with evidence-based efficacy and a defined structure, constitutes an alternative to other psychotherapies, valuable for clinicians and patients [27, 23].

There is insufficient knowledge on the aetiology of depression, as there are few studies in clinical populations with significant samples. The identification of depression triggers prevalence in female populations is essential to adjust health resources and policies for risk reduction and to adequate tertiary interventions. Different adverse events are likely to trigger different psychological adaptations. The focus on the reasons behind depressive disorders, through the recognition of self-reported triggering factors, shall allow the definition and implementation of interventions that specifically enhance adaptive skills and the design of targeted and effective preventive strategies.

The objectives of this study were to explore in a clinical sample of women with depressive disorders attending psychotherapy screening, the distributions of (1) sociodemographic characteristics – age, educational level, relationship status and household composition, (2) the time between the onset of complaints and the psychotherapy screening, and (3) the number and type of self-reported triggers of the clinical condition (aggregated in four variables - Interpersonal disputes, Role transitions, Grief and Interpersonal deficits). The triggering factors classification, according to the interpersonal theory principles, aims to support the indication of specific psychotherapeutic interventions. Further objectives were to examine associations between the above-mentioned variables and the different diagnosis groups of depressed women, namely diagnosis of Major Depression Disorder (MDD), Persistent Depression Disorder (PDD) and Unspecified Depression Disorder (UDD).

Methods

Study design and setting: The study has a cross-sectional design. Data were collected through an ongoing Epidemiological Study of the Clinical Population at the Psychiatric Service of Santa Maria Hospital in Lisbon, Portugal, among patients attending a psychotherapeutic screening between October 2011 to October 2019. The study was approved by the Health Ethical Committee of the North Lisbon Hospital Center (registration number1184/13).

Study population and data collection: A selection was used, considering eligible patients fulfilling the inclusion criteria during the study period. Inclusion criteria were: females, age of eighteen and older, having a diagnosis of depression, without other psychiatric diagnosis and/or an intellectual and cognitive disability. Participants were informed about the study and consented to participate voluntarily.

The sample of this study consisted of 822 women, with psychiatric diagnoses [8] of MDD, PDD and UDD.

The information was collected through the records filled in by the assistant psychiatrist and the psychotherapy screening record sheets filled in by a clinical psychologist, taking into account all data protection procedures.

Measures and variables: An analysis grid was prepared with the following sections: 1) sociodemographic data - age, education, relationship status, household composition; 2) clinical data - depressive psychiatric diagnosis according to DSM-5 [8], the self-reported time between the onset of complaints and psychotherapy screening, and self-reported triggering factors of depression.

For the current study, the following variables were considered:

(1) Sociodemographic data.

(1.1) Age – nominal variable, 4 groups were considered (18 to 30 years, 31 to 40 years, 41 to 50 years, 51 years and older) and also as a continuous variable.

(1.2) Years of education – nominal variable, 3 groups were considered (less than 10 years of education, 10 to 12 years of education and 13 or more years of education).

(1.3) Relationship status – nominal variable, 4 groups were considered (single, married, divorced and unmarried relationship).

(1.4) Household composition - dichotomous variable (living alone; living accompanied)

(2) Clinical data.

(2.1) Psychiatric diagnosis – nominal variable, 3 groups were considered: Major Depression Disorder (MDD), Persistent Depression Disorder (PDD) and Unspecified Depression Disorder (UDD) diagnosed by the assistant psychiatrist.

(2.2) The time between the onset of complaints and the psychotherapy screening (first complaints) - nominal variable, 4 groups were considered (up to 1 year, 2 to 3 years, 4 to 5 years and longer than 5 years) and also as a continuous variable.

(2.3) Triggering factors - Number and type of factors identified as triggers of the clinical condition. The self-reported triggering factors were obtained from the screening records through an open-ended question: "What factors do you consider that contributed to the difficulties experienced?". 24 triggering factors were identified during data collection and all were considered for the present study as dichotomous variables.

Additionally, the 24 triggers were recoded into 4 variables, created according to interpersonal theory [24]: Interpersonal disputes - conflict in an affective, social or professional relationship; Role transitions - changes in relational/social role played by the self, following changes in personal life and/or the surrounding context; Grief - the death of a significant person; Interpersonal deficits - difficulty in the interpersonal relationship caused by personal characteristics. These 4 variables were computed using the corresponding triggering factors as follows: Interpersonal disputes - family conflicts, marital conflicts, marital violence, family violence, husband alcoholism, problems with family of origin, professional problems.

Role transitions – divorce, family member physical illness, family member psychiatric illness, physical illness, psychiatric illness, problems with children, affective breakdown, financial difficulties / unemployment, child birth or pregnancy, theft / accident, moving from country / city, physical fatigue, adaptation / learning problems in college.

Grief - the death of a loved one.

Interpersonal deficits - social isolation and low self-esteem.

The sum score obtained was recoded into a categorical variable with 3 categories, no triggers (0), 1 trigger (1) and ≥ 2 triggers (2).

The triggering factor child sexual abuse was not included in the 4 previous variables and was only considered as a dichotomous triggering factor.

Statistical analysis: The data was analyzed using SPSS version 22 for Windows. Descriptive statistics were performed, obtaining the percentage values, means and standard deviations. For the sociodemographic variables and triggering factors, Chi-square tests were used to study the association with the 3 psychiatric diagnosis groups. For the continuous variables, ANOVA and post hoc Scheffé were calculated.

Results

Participants sociodemographic characteristics (age, years of education, marital status, household composition and time between the onset of complaints and the psychotherapy screening) are presented in table 1.

In this sample, MDD (n = 465, 56.6%) is the diagnosis with the highest prevalence, followed by PDD (n = 183, 22.2%) and UDD (n = 174, 21.2%%).

The age group with a higher percentage is the ≥ 51 years (30.7%), the mean age is 43.2 ± 12.24 and, in general, the older the age group the bigger the sample. However, in the subgroup of women with UDD, this trend is not observed, with a higher percentage of those aged between 18 and 30 (30.5%). The average age in the three diagnosis groups is significantly different (z = 20,106, p ≤ .001). Subsequent comparisons between pairs of means using the post hoc test (Scheffé) show that women with UDD (M = 38.47 ± 12.02) are younger than women with MDD (M = 43.76 ± 11.76) and with PDD (M = 46.27 ± 12.41).

Concerning education level, the predominant groups are "10 to 12 years of education" (37.4%) and "up to less than 10 years of education" (37.2%) and there is no significant statistical association in the distribution according to the diagnosis.

Regarding relationship status, the sample is mostly composed of married women (40.1%). There is a significant statistical association between marital status and diagnosis groups (x^2 = 15.207, p ≤ .05). The higher difference between the expected and observed percentages are found in the UDD group, where the percentage of single women is higher (35.9%). In the PDD group, there is a higher percentage of married women than expected (47.8%).

Only 13.1% of the participants live alone, and there is no significant statistical association according to the type of diagnosis.

In 37.3% of the sample, the time between the onset of complaints and psychotherapy screening is "longer than 5 years", followed by "2 to 3 years" (26.1%) and "equal to or less than 1 year" (25.3%). These data show that around half of the sample (51.4%) make use of the psychotherapy screening visit in the first 3 years after the complaints arise.

There is a higher proportion of women with MDD who report the beginning of complaints less than 1 year ago (28.5%) and a lower proportion who report complaints more than 5 years ago (31.2%); in the group of women with PDD diagnoses, there is a lower proportion who report the beginning of complaints less than 1 year ago (15.6%) and a higher proportion who report the beginning of complaints more than 5 years ago (54.7%) (x^2 = 32.185, p ≤ .001).

The average time between the onset of complaints and psychotherapy screening (M = 4.38 ± 6.171) differs significantly between the three diagnosis types (z =10.590, p ≤ .001). Post hoc comparisons (Scheffé) revealed that women with a diagnosis of PDD report a longer time between the onset of complaints and the screening (M= 6.17 ± 8.03) compared to women with a diagnosis of MDD (M= 3.69 ± 5.467) and with UDD (M= 4.27 ± 5.207).

Variables	N	Total Sample N (%)	MDD[a] N=465	PDD[b] N=183	UDD[c] N=174	(χ^2) [e]/ z [f]
Age groups	N=822					
18-30 years		144(17.5)	68(14.6)	23(12.6)	53(30.5)	
31-40 years		190(23.1)	112(24.1)	38(20.8)	40(23.0)	
41-50 years		236(28.7)	136(29.2)	50(27.3)	50(28.7)	
≥ 51 years		252(30.7)	149(32.0)	72(39.3)	31(17.8)	
Average age (M±SD)	N=822	(43.2±12.24)	(43.76± 11.76)	(46.27±12.41)	(38.47± 12.02)	z=20.106 p<.001
Education (years)	N=802[d]					
≤10 years		298(37.2)	171(37.3)	72(40.9)	55(32.7)	
10 to 12 years		300(37.4)	172(37.6)	62(35.2)	66(39.3)	
≥13 years		204(25.4)	115(25.1)	42(23.9)	47(28.0)	χ^2= 2.555 p=ns
Relationship status	N=799[d]					
Single		208 (26.4)	112(25.3)	36(20.0)*	60(35.9)*	
Married		316 (40.1)	172(38.9)	86(47.8)*	58(34.7)	
Divorced		191(24.2)	117(26.5)	41(22.8)	33(19.8)	
Unmarried relationship		74 (9.4)	41(9.3)	17(9.4)	16(9.6)	χ^2= 15.207 p<.05
Household Composition	N=787[d]					
Living alone		103(13.1)	64(13.8)	29(15.9)	23(13.3)	
Living accompanied		684(86.9)	399(86.2)	135(74.1)	150(86.7)	χ^2= 1.349 p=ns
First complaints	N=788[d]					
≤ 1year		199 (25.3)	126(28.5) *	28(15.6) *	45(26.9)	
2 to 3 years		206(26.1)	120(27.1)	40(22.3)	46(27.5)	
4 to 5 years		89(11.3)	54(12.2)	13(7.3)	22(13.2)	
> 5 years		294(37.3)	142(32.1) *	98(54.7) *	54(32.3)	χ^2= 32.185, p<.001
First complaints (M±SD)	N=788[d]	(4.38±6.171)	(3.69±5.467)	(6.17±8.030)	(4.27±5.207)	z=10.590, p<.001

Table 1: Association between sociodemographic elements in the total sample and in subgroups by diagnosis

a) Major Depressive Disorder; b) Persistent Depression disorder; c) Unspecified Depressive Disorder;

d) N reported is different from total N due to missing data; e) Chi-square test adjusted residuals ≥ 2.0; f) Test Anova

The main triggers identified in the total sample are family conflicts (22.0%), death of a loved one (21.2%) and marital conflicts (20.6%), followed by professional problems (13.6%), family member physical illness (11.3%) and physical illness (11.1%). The remaining eighteen triggers are reported by less than 10% of the total sample, of which four triggers are residual representing less than 1% (Table 2).

Regarding the three depressive disorder diagnosis, the main triggers in MDD patients follow the same tendency as the total sample, being family conflicts the most observed (23.7%), followed by the death of a loved one (23.3%), marital conflicts (20.0%) and professional problems (15.5%). In the PDD group, marital conflicts is the trigger with a higher rate of responses (25.3%), followed by family conflicts (22.5%), death of a loved one (18.9%) and professional problems (13.7%). In the UDD group, the most frequently identified triggering factor is the death of a loved one (19%), followed by family conflicts and marital conflicts, both with the same percentage of reports (17.2%) and family member physical illness (14.4%).

Triggering factors	TOTAL		MDD[a]		PDD[b]		UDD[c]	
	n	%	n	%	n	%	n	%
Interpersonal Disputes								
Family conflicts	181	22.0	110	23.7	41	22.5	30	17.2
Marital conflicts	169	20.6	93	20.0	46	25.3	30	17.2
Marital violence	58	7.1	33	7.1	17	9.4	8	4.6
Family violence	13	1.6	12	2.6	0	0.0	1	0.6
Husband alcoholism	7	0.9	5	1.1	2	1.1	0	0.0
Problems with family of origin	51	6.2	27	5.8	10	5.5	14	8.0
Professional problems	112	13.6	72	15.5	25	13.7	15	8.6
Role Transitions								
Divorce	72	8.8	48	10.3	14	7.7	10	5.7
Family member physical illness	93	11.3	46	9.9	22	12.1	25	14.4
Family member psychiatric illness	11	1.3	3	0.6	4	2.2	4	2.3
Physical illness	91	11.1	52	11.2	17	9.3	22	12.6
Psychiatric illness	34	4.1	17	3.7	7	3.8	10	5.7
Problems with children	62	7.5	35	7.5	16	8.7	11	6.3
Affective breakdown	52	6.3	30	6.5	12	6.6	10	5.7
Financial difficulties/ unemployment	39	4.7	26	5.6	7	3.8	6	3.4
Child birth / pregnancy	29	3.5	13	2.8	9	4.9	7	4.0
Theft / accident	14	1.7	5	1.1	3	1.6	6	3.4
Moving from country / city	6	0.7	5	1.1	1	0.5	0	0.0
Physical fatigue	5	0.6	3	0.6	1	0.5	1	0.6
Adaptation/learning problems in college	4	0.5	2	0.4	0	0.0	2	1.1
Grief								
Death of a loved one	174	21.2	108	23.3	33	18.1	33	19.0
Interpersonal Deficits								
Social isolation	37	4.5	17	3.7	12	6.6	8	4.6
Low self-esteem	20	2.4	9	1.9	3	1.6	8	4.6
Other								
Child sexual abuse	8	1.0	4	0.9	3	1.6	1	0.6

Table 2: Distribution of triggering factors in the total sample and in the subgroups by diagnosis

a)Major Depressive Disorder; b) Persistent Depression disorder; c) Unspecified Depressive Disorder

Analyzing the association between the triggering factors and the psychiatric diagnoses groups, there is a significant association with interpersonal disputes ($\chi2$ = 12.629, p < .05). Women with PDD report a lower percentage of not having triggers of interpersonal disputes (34.1%). In the UDD group, women report a higher percentage of not having interpersonal disputes triggers (49.4%) and there is a lower percentage who report 2 or more triggering factors (9.8%).

There is no significant association between the triggering factors role transitions, grief and interpersonal deficits, and the type of diagnosis.

Number and Type of Triggering Factors	Total sample	MDD[a]	PDD[b]	UDD[c]	Chi-square test (χ^2)
	N (%)	N (%)	N (%)	N (%)	
Interpersonal disputes					
0 none	344(41.9)	196(42.2)	62(34.1)*	86(49.4)*	
1 trigger	344(41.9)	186(40.0)	87(47.8)	71(40.8)	
$\geq$ 2 triggers	133(16.2)	83(17.8)	33(18.1)	17(9.8)*	χ^2= 12,629 p<.05*
Role transitions					
0 none	331(40.7)	190(41.0)	72(39.8)	69(40.6)	
1 trigger	396(48.6)	221(47.7)	93(51.4)	82(48.2)	
$\geq$ 2 triggers	87(10.7)	52 (11.2)	16(8.8)	19(11.2)	χ^2= 1,159 p=ns
Grief					
0 none	647(78.8)	357(76.8)	149(81.9)	141(81.0)	
1 trigger	174(21.2)	108(23.2)	33(18.1)	33(19.0)	χ^2= 2,688 p=ns
Interpersonal deficits					
0 none	769(93.6)	441(94.8)	169(92.3)	159(91.4)	
1 or 2 triggers	53(6.4)	24(5.2)	14(7.7)	15(8.6)	χ^2= 3,077 p=ns

Table 3: Association between number and type of triggering factors in the total sample and in subgroups by diagnosis

a) Major Depressive Disorder; b) Persistent Depression disorder; c) Unspecified Depressive Disorder; d) only 4 cases had 2 triggers *Chi-square test ($\chi2$) adjusted residuals≥2.0

Discussion

In this study, Major Depression Disorder (MDD) is the most frequent disorder observed, consistent with a recent epidemiological study using mental health data from ten European countries (n =37 289), including Portugal [28]. Contrary to the data from that research, which states that married women report fewer mental health problems than separated or divorced women [28], our sample is mostly composed of married women, with emphasis on the group diagnosed with Persistent Depression Disorder (PDD).

Unspecified Depression Disorder (UDD) diagnosis represents a high percentage, almost ¼ (21.%) of women with depression in this study, which usually is not reported in the literature, since MDD and PDD are considered the two main depressive disorders and those most included in research [29].

The majority of women with MDD and PDD are in the older age groups. Results found in studies with general populations report the median age of MDD onset at 25 years, with the peak period of risk between adolescence and 40 years [30] and a slight decrease in the prevalence of MDD with increasing age [31]. The results may indicate differences between the general population and the clinical population, or reflect the existence of recurrent major depressive conditions in the sample of women who attend psychotherapy. This data is of particular importance given the evidence that symptoms of MDD changes after the first episode and that triggers of each type of episode may also be different [32].

There is a homogeneous distribution between a higher, intermediate and lower number of years of education, which may be an indicator that access to differentiated health care is independent of schooling. Recent research points to greater ease of access with improved educational level [33], in opposition to our results.

Almost half of the sample reports four or more years after the onset of complaints to attend psychotherapy screening that may suggest the need for earlier signaling and referral. Women with PDD tend to have longer time while women with MDD show the opposite trend, possibly explained by the difference in symptoms´ intensity and resulting limitations. This data is aligned with the hypothesis that depressed population do not search for psychiatric support and/or attend primary health services when experiencing first complaints [34].

In our findings according to interpersonal theory, role transitions and interpersonal disputes are the triggers with higher expression. These results may suggest the establishment of specialized psychotherapeutic groups, focused on developing new skills to deal with the more reported triggering factors, namely: physical illness, both personal and from a family member, and family and marital conflicts and professional problems. We propose the possibility to conduct an assessment according to this model in the psychotherapy screening, followed by a more informed referral for interpersonal group psychotherapy considering the most relevant triggering factors reported.

Although there is scientific evidence of the effectiveness of psychological treatment in depressive disorders [35, 36] and, therefore, encouraging the search for help and involvement in psychotherapeutic treatment should be a priority for health authorities [37, 38], one of the reasons for low adherence to psychotherapy still is the low referral rates by general practitioners and family doctors [39].

The inability to respond to needs due to the lack of specialized psychology and psychotherapy resources in health services is also a reality in several European countries [40, 41], of which Portugal is no exception [29]. The articulation between primary health services and specialized mental health interventions should be, in the authors' opinion, a priority area in health policies.

Strengths and limitations

Results from this study should be interpreted with caution, since a potential error of the self-report triggering factors may exist. The possibility of bias introduced by the fact that the same variable may be cause or consequence of the disorder [42] was cautioned by the identification of the triggering factors on the clinical screening.

Quantitative validated instruments of depressive disorders were not used, since this study used data collected in a more extensive epidemiological study and the psychiatric diagnosis were made by the assistant psychiatrist.

The sample size and the data collection over a long period, by a clinical psychologist using the same analysis grid, are strengths of this study.

Conclusions

This study highlights the importance of identifying depressive triggers in women and, consequently, the possibility of outlining psychotherapeutic interventions according to specific needs.

The identification of role transitions and interpersonal disputes as triggers with higher prevalence may allow defining prevention strategies, focused on the promotion of protective factors, such as problem-solving skills, self-regulation, flexibility and interpersonal communication. Beyond its clinical interest, this study leaves a message for public policies in the area of mental health promotion, precisely the investment in a service organization that includes programs to promote personal and socio-emotional skills.

Future studies should include specific characteristics and triggering factors of women with UDD; the recording of single and recurrent depressive episodes and, in the latter, the number of recurrences; and the identification of time between the onset of symptoms and search for primary health services, psychiatric treatment and, later, psychotherapy.

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