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Social and family support, emotional dysregulation and depression: Associations and pathways

Apoio social e familiar, desregulação emocional e depressão: associações e caminhos

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Abstract

Objective

Emotional dysregulation, family and social support are associated with depression. The present study aims to explore, by path analysis, relationships between these variables.

Method

The path analysis method was applied, and, additionally, comparisons of the means were made between participants with and without a diagnosis of depression and suicide attempts. The sample consisted of 712 Brazilians ($M = 23.8$; $SD = 8.13$), 66.7% of whom were women.

Results

The results show a correlation between both types of support for emotional dysregulation and depression. Emotional dysregulation was found to be an associated variable in depression. Positive correlations were observed between emotional dysregulation and depression. Both were negatively correlated with family and social support.

Conclusion

People with a diagnosis and previous suicide attempts had higher averages in emotional dysregulation and depression, and lower averages in family and social support.

Keywords: Depression; Emotional regulation; Family support; Social support.

Resumo

Objetivo

Desregulação emocional, suportes familiar e social estão associadas a depressão. Este estudo visa explorar, via análise de caminho, as relações entre estas variáveis.

Método

Foi aplicado o método de análises de caminho e de modo complementar foram feitas comparações das médias entre participantes com e sem diagnóstico de depressão e tentativas de suicídio. A amostra foi composta por 712 brasileiros, ($M = 23,8$; $DP = 8,13$), sendo 66,7% mulheres.

Resultados

Os resultados mostram associação entre ambos os suportes para desregulação emocional e depressão. A desregulação emocional mostrou-se como variável ligada a depressão, assim foram observadas correlações positivas entre desregulação emocional e depressão. Ambas se correlacionaram negativamente com apoio familiar e social.

Conclusão

Pessoas com diagnóstico e tentativas anteriores de suicídio apresentaram maiores médias em desregulação emocional e depressão, e menores em apoio familiar e social.

Palavras-chave: Depressão; Regulação emocional; Apoio familiar; Apoio social.

Emotions are characterized by distinct psychological experiences, with their affective cores having negative or positive valences, which signal how pleasant or uncomfortable a given situation is perceived (Thompson, 2019). In addition to feeling emotions, it is important to control them in a way that is coherent with the context, with failures in mood regulation having been associated with inadequate strategies for stressful events. This regulation or control occurs due to the unique ability of humans to reflect on their experiences and actions, and make projections about the future, with higher levels of emotional self-regulation indicating better adaptation to the environment (McRae & Gross, 2020).

For example, difficulties related to emotional regulation or even beliefs about one's inability to self-regulate, indicate important harm to mental health (Lange & Tröster, 2018). Supporting this statement, the findings of a cross-sectional study, conducted by Ford et al. (2018) ($n = 136$ adolescents, aged 14-18 years), indicated that young people with stronger beliefs about their emotional self-regulation incapacity presented low emotion regulation and more severe depressive symptoms. This pattern was maintained when the researchers conducted a longitudinal investigation with another sample ($n = 227$, aged 10-18 years), demonstrating that beliefs about their emotional self-regulation inability can be established as a risk factor for depression.

Depression is a multicausal psychopathology. There are regression models in the literature that demonstrate emotion regulation as a predictor of depression, attesting to its influence on affective and biological (neurohormonal and endocrinological) functioning (Krkovic et al., 2018). Also, Family Support has shown associations and predictions with emotion regulation and depression. This relationship may take place because, during human development, the interactions between caregiver and child/future adult can mediate coping skills for conflicting emotions. Furthermore, parents with depression represent a risk factor for the development of the pathology in their children, probably for biological reasons, however, also due to the influence of social learning in coping with problems (Spruit, et al., 2020; Szkody & Mckinney, 2019; Van Lissa et al., 2019).

In addition to Family Support, the Social Support variable also needs to be considered, as the way in which subjects regulate their emotions can also be influenced by relationships established throughout life (Szkody & Mckinney, 2019). Urano and Ikeda (2020) conducted regression analyses that indicated that the provision of social support attenuates the association between psychological strategies and distress, as well as the negative effects of dysfunctional emotional regulation. They indicate that emotion regulation is not a separate construct, given the need to be able to consider the social resources offered.

Accordingly, it is important to emphasize the relationship between social support and the prevention of depressive symptoms and suicide, as this variable has a close relationship with the pathology, having been the subject of studies for decades. The same occurs with family support, with greater support, whether family or social, equating to a lower probability of illness (Bell et al., 2018, Chukwuorji et al., 2019; Krkovic, et al., 2018; Shi, 2021). The concept of integrating these variables in the assessment of depressive symptoms allows a broader understanding of the phenomenon, since different types of support, as well as emotional dysregulation, can predict depression, suicidal ideation, and suicide attempts.

Depression is a psychopathology that affects several countries around the world. In the Brazilian context, depression is an alarming psychopathology, and in Latin America, Brazil is the country with the highest prevalence. The National Health Survey identified an increase in the prevalence of depression from 7.6% to 10.2% (95% CI 7.2; 8.1 to 95% CI 9.9; 10.6) between 2013 and 2019 ($n = 90,846$, adults) (Brito et al., 2022). Research frequently reports associations between the variables: social or family support, emotional dysregulation, and depression (Bell et al., 2018; Ford et al., 2018; Lange & Töster, 2018; Shi, 2021; Suwinyattichaiorn, & Johnson, 2020). The present investigation aims to explore the relationships between Perceived Family Support (PFS), Perceived Social Support (PSS), Emotional Dysregulation (ED), and depression together using a path analysis. As a secondary objective, the scores of the scales that assess PFS, PSS, ED, and depression will be compared with the positive affirmation of a closed self-report questionnaire of the previous diagnosis of depression or suicide attempt.

Method

Participants

The convenience sample consisted of Brazilians from a region of the Brazilian northeast. Of these, 632 are university students and 80 are users of a public health service, totaling 712 volunteers. The analyses were performed with the total number of volunteers ($n = 712$). Descriptive analyses revealed participants aged between 18 and 60 years old ($M = 23.8$; $SD = 8.13$). In terms of marital status, the majority were single (83.66%), with an incomplete higher education (90.96%). Concerning the higher education courses, 48.62% were taking psychology and 51.38% were taking other undergraduate degrees. From the sample, 11.70% of participants reported by self-relation a diagnosis of depression, and 14.60% reported having made at least one suicide attempt. All public health service participants self-reported a diagnosis of depression (Table 1).

Instruments

Identification Questionnaire – The identification questionnaire consisted of questions designed to investigate sociodemographic, gender, education, and marital status variables, as well clinical information like as depression diagnosis and a history of suicide attempts. All questions and instruments are self-reported.

Escala de Desregulação Emocional Versão Adulto (EDEA, Emotional Dysregulation Scale, Adult Version, Baptista et al., 2023) – The Emotional Dysregulation Scale was developed to assess the respondent's emotional self-regulation strategies and characteristics related to the sadness emotion. It was constructed from the Emotional Self-Regulation Scale, Adult version (EARE-A, Noronha et al., 2019).

Table 1
Descriptive analysis of sociodemographic characterization

Variable	<i>n</i>	%	<i>M</i>	<i>SD</i>
Marital Status				
Single	594	83.66		
Married/Stable union	93	13.10		
Divorced/Separated	21	2.96		
Widowed	2	0.28		
Schooling				
Incomplete elementary	11	1.55		
Complete elementary	4	0.56		
Incomplete high school	2	0.28		
Complete high school	14	1.98		
Incomplete higher education	644	90.96		
Complete higher education	26	3.67		
Specialization	5	0.71		
Master's/Doctorate	2	0.28		
Course				
Psychology	335	48.62		
Others	354	51.38		
Diagnosis				
Without depression	617	86.90		
With depression	86	11.70		
Not reported	9	1.40		
Years of diagnosis			16.79	8.16
Suicide attempt	101	14.60		
Number of suicide attempts			1.72	1.04

The EDEA is composed of 15 items arranged in 4 factors called: (1) Appropriate Coping Strategies (e.g. "I try to calm down") with reliability through coefficient $\alpha = 0.72$; (2) Externalization of Aggressiveness (e.g. "I want to hit others") $\alpha = 0.92$; (3) Pessimism (e.g. "I believe that everything will get worse"), $\alpha = 0.96$; and (4) Paralysis (e.g. "I don't know what to do") $\alpha = 0.68$. Regarding the internal consistency for the general EDEA scale, the results were obtained through Cronbach's alpha ($\alpha = 0.94$) and McDonald's omega ($\omega = .96$) (Cremasco, et al., 2020; Noronha, et al., 2019).

Escala Baptista de Depressão Versão Adulto (EBADEP-A, Baptista Depression Scale, Adult Version, Baptista, 2012) – This is a self-administered instrument for the assessment of depressive symptoms. It is unifactorial, with 45 items divided into two sentences per item, with a four-point Likert-type response scale (e.g. "I solve my problems x I feel less able to face my problems"). The score for each item ranges from zero to three. Psychometric data were obtained based on the Item Response Theory and on the Classical Test Theory. Initially, regarding the fit parameters of the model, both with regard to items and people, the values were considered to indicate good adequacy, with a misfit percentage considered low. Regarding reliability, the EBADEP-A showed excellent reliability indices, both in relation to Cronbach's alpha ($\alpha = 0.95$) and the actual reliability found according to the Rasch model ($\alpha = 0.92$). The EBADEP-A can be applied both individually and collectively.

Escala de Percepção do Suporte Social (EPSUS, Social Support Perception Scale, Adult Version, Cardoso & Baptista, 2015) – assesses how much people perceive social relationships in terms of affectivity, social interactions, and practical aids that help them in the decision-making process and coping with problems. It is intended for people aged 18 to 62 years and can be applied both individually and collectively, consisting of 36 items, grouped into four factors, namely: affective (composed of 17 items; e.g. "They show me affection"; $\alpha = 0.92$); social interactions (five items, e.g. "They invite me to social activities"; $\alpha = 0.75$); instrumental (seven items, e.g. "They provide me with as much food as I need"; $\alpha = 0.82$) and coping with problems (seven items; "They discuss my problems"; $\alpha = 0.83$).

Inventário de Percepção de Suporte Familiar (IPSF, Family Support Perception Inventory, Baptista, 2009) – The purpose of this inventory is to identify the individual's perception of family support and family relationships in terms of affection, autonomy, and adaptation among the members. It can be applied to the basic family structure (father, mother, siblings, others) or to the foster family (uncles, godparents, others), which will not necessarily be nuclear or traditional in structure. The perception of the current family can also be evaluated, whether the individual is married or cohabiting, with or without children. Intended for people between 11 and 57 years of age, the instrument has 42 items distributed in three dimensions: Affective-Consistent (composed of 21 items; e.g. "The people of my family know when something bad has happened to me, even if I don't say"; $\alpha = 0.91$); Family Adaptation (13 items, scored inversely; e.g. "In my family we fight and yell at each other"; $\alpha = 0.83$); and Family Autonomy (eight items; e.g. "My family allows me to be the way I want to be"; $\alpha = 0.80$). The IPSF can be applied both individually and collectively.

Procedures

The database used for the present study is composed of two convenience samples: (1) university students and (2) users of a public health service. The project was submitted to the Research Ethics Committee of Universidade São Francisco (CAAE: 42917015.4.0000.5514, protocol nº 2.493.832). After approval, the project was presented to the Health Department of the State of Sergipe and to a private university in a large city in the interior of the State of Sergipe, and received consent from both. Participants who agreed received, read, and signed the Free and Informed Consent Form. Important: this occurs only after institutional approval.

Data collection with university students was carried out in groups, collectively, and the instruments were applied in classrooms. With the public health service users, the instruments were applied individually. The collections took place during the 2018 school year, and both samples responded to all instruments. It took approximately 50 minutes for application and explanations about the research and instruments.

For the data analysis, samples were joined, descriptive statistics in relation to the sample were initially observed, followed by correlation matrices between the totals of the scales, and later a Path Analysis was carried out with the constructs, Family Support and Social Support, predicting Emotional Regulation (mediation), and having the symptoms of depression as an outcome variable. After this procedure, mean comparisons were performed using Student's t-test for the total scores of the scales used and the prior diagnosis of depression and suicide attempt variables. The analyses were performed using the IBM®SPSS® version 21 and AMOS programs (Arbuckle, 2014).

Results

The correlation analysis significantly ($p < 0.001$) demonstrated that ED was positively associated with depressive symptoms ($r = 0.75$), and negatively associated with PSS ($r = -0.45$) and PFS ($r = -0.46$). It was possible to assess that depression was negatively correlated with PSS ($r = -0.53$) and PFS ($r = -0.42$) in the sample (Table 2).

The Path Analysis model is presented in Figure 1. In the proposed model, both the perception of family support (PFS) and the perception of social support (PSS) were used as exogenous variables, with depression mediated by Emotional Dysregulation (ED) as the endogenous variable.

Table 2

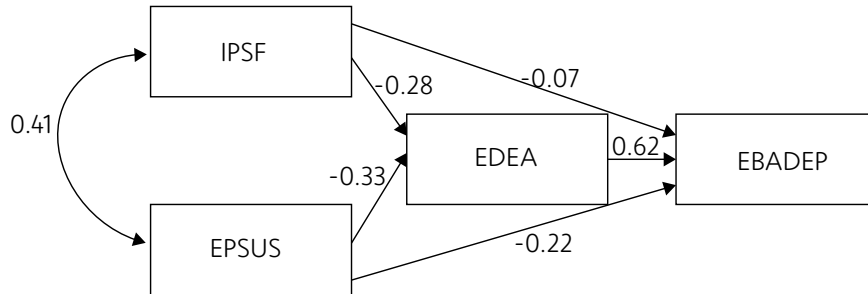
Table of correlation between the variables

Variable and measurement	EDEA	EPSUS	IPSF	EBADEP
Escola de Desregulação Emocional Versão Adulto	1	-0.45***	-0.46***	0.75***
Escola de Percepção do Suporte Social		1	0.46***	-0.53***
Inventário de Percepção de Suporte Familiar			1	-0.42***
Escola Baptista de Depressão Versão Adulto				1

Note: *** $p < 0.001$. EDEA: Escola de Desregulação Emocional Versão Adulto; IPSF: Inventário de Percepção de Suporte Familiar; EPSUS: Escola de Percepção do Suporte Social; EBADEP-A: Escola Baptista de Depressão Versão Adulto.

Figure 1

Model tested through Path Analyses



Note: EDEA: Escola de Desregulação Emocional Versão Adulto; IPSF: Inventário de Percepção de Suporte Familiar; EPSUS: Escola de Percepção do Suporte Social; EBADEP-A: Escola Baptista de Depressão Versão Adulto.

In Figure 1, it is possible to observe that PFS had a weak negative direct relationship with Depression ($\beta = -0.07$) and PSS had a negative relationship with this variable ($\beta = -0.22$). Furthermore, PFS also predicted ED ($\beta = -0.28$) as did PSS ($\beta = -0.33$). Conversely, ED proved to be able to positively predict Depression with high magnitude ($\beta = 0.62$). That is, according to the indications of these analyses, individuals with low ED are at greater risk for depression, predicted by family and social support, which predict emotional regulation. The analysis estimates are presented in Table 3.

In addition, analyses were conducted only with undergraduate students. The number of participants was reduced from 712 to 644, but there were only small variations in age ($M = 23.8$; $SD = 8.13$ versus $M = 22.61$; $SD = 6.6$). Minor changes occurred on the path from PSS to ED ($\beta = -0.33$ to $\beta = -0.35$) and ED to Depression ($\beta = -0.62$ to $\beta = -0.63$). Thus, the total sample ($n = 712$) was maintained.

For the diagnosis of depression, participants with a diagnosis presented higher scores in the EBADEP-A scale ($M = 77.56$; $SD = 31.23$; $t = -9.76$; $d = 1.42$ $p < 0.001$) and in ED ($M = 43.13$; $SD = 12.13$; $t = 12.08$; $d = 1.45$ $p < 0.001$). Participants without a diagnosis of depression had higher scores in PFS ($M = 55.55$; $SD = 17.09$; $t = 4.12$; $d = 0.56$ $p < 0.001$) and PSS ($M = 76.97$; $SD = 18.82$; $t = 4.87$; $d = 0.58$ $p < 0.001$).

Considering suicide attempts, of the 101 participants that responded positively, there was a prevalence of females ($n = 77$). The mean for depression and ED was higher for those that responded positively in relation to a suicide attempt history ($M = 67.24$; $SD = 27.44$; $t = 10.35$; $d = 1.14$; $p < 0.001$; $M = 43.18$; $SD = 11.68$; $t = -10.44$; $d = 1.18$ $p < 0.001$, respectively). Those with higher means in PFS ($M = 55.94$, $SD = 17.52$; $t = -4.93$; $d = 0.59$ $p < 0.001$), and PSS ($M = 77.12$ $SD = 19.78$, $t = -5.70$; $d = 0.66$ $p < 0.001$) answered the question negatively (Table 4).

Table 3
Standardized regression weights

Associate between variables			Estimate	S.E.	C.R.	<i>p</i>
EDEA	←	IPSF	-0.275	0.030	-6.666	*
EDEA	←	EPSUS	-0.333	0.026	-8.0079	*
EBADEP	←	IPSF	-0.071	0.050	-2.217	0.027
EBADEP	←	EPSUS	-0.219	0.044	-6.786	*
EBADEP	←	EDEA	0.624	0.066	20.751	*

Note: **p* < 0.001. EDEA: *Escala de Desregulação Emocional Versão Adulto*; IPSF: *Inventário de Percepção de Suporte Familiar*; EPSUS: *Escala de Percepção do Suporte Social*; EBADEP-A: *Escala Baptista de Depressão Versão Adulto*.

Table 4
Comparison between participants with and without a diagnosis of depression and suicide attempts for the depressive symptoms scores, perception of family support, perception of social support and emotional self-regulation

Depression diagnosis	With depression		Without depression		Statistics			
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>t</i>	<i>df</i>	<i>Cohen's d</i>	<i>p</i>
<i>Escala Baptista de Depressão Versão Adulto</i>	77.56	31.23	37.93	24.00	-9.76	70.19	1.42	*
<i>Inventário de Percepção de Suporte Familiar</i>	45.21	19.59	55.55	17.09	4.12	79.38	0.56	*
<i>Escala de Percepção do Suporte Social</i>	61.65	26.07	76.97	18.82	4.87	84.40	0.58	*
<i>Escala de Desregulação Emocional Versão Adulto</i>	43.13	12.13	26.00	11.36	12.08	535	1.45	*
Suicide attempt	Yes		No		Statistics			
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>t</i>	<i>df</i>	<i>Cohen's d</i>	<i>p</i>
<i>Escala Baptista de Depressão Versão Adulto</i>	67.24	27.44	37.33	24.89	10.35	631	1.14	*
<i>Inventário de Percepção de Suporte Familiar</i>	45.93	15.96	55.94	17.52	-4.93	582	0.59	*
<i>Escala de Percepção do Suporte Social</i>	63.66	20.44	77.12	19.78	-5.70	570	0.66	*
<i>Escala de Desregulação Emocional Versão Adulto</i>	43.18	11.68	29.22	11.82	-10.44	588	1.18	*

Note: **p* < 0.001.

Discussion

This study aimed to explore by path analysis the associations between PFS and PSS, ED, and depression. As a secondary objective, the scores of the scales that assess PFS, PSS, ED, and Depression were compared with the positive affirmation for a closed self-report questionnaire of the previous diagnosis of depression or suicide attempt. The study results agreed with the data found in the literature, as the correlation loading between the variables was also observed, with emphasis on the relationship between ED and Depression. In this way, the results indicated that ED can be an important variable for depressive symptoms (Vanderlind et al., 2020; Yoon & Rottenberg, 2020).

It is important to consider that the identification and naming of emotions occur in primary family and social relationships. In this sense, the analyses indicated, that the PFS can be one of the inversely significant predictors for ED. This can occur due to the quality of the relationships provided during the early stages of human development, when distinctions are created regarding the perception of oneself and others. The family group as the basis for the constitution of individuals can provide references of security or insecurity for the subjects' development. Therefore, it is possible that failures in the process of providing family support directly affect the ability to regulate emotions (Girme et al., 2021; Harel & Finzi-Dottan, 2018; Thompson, 2019).

Considering human development helps to understand the empirical data found in the results of the present study. In this way, a little later, during development, the relationships restricted to the family environment are complemented by other social interactions that are also capable of being supportive. It is in these relationships that adaptations to the expression of affections, feelings, and

the regulation of emotions are created (Szkody & McKinney, 2019), in addition to being influenced by them. Similarly, the PSS also integrated these relationships by negatively predicting ED and depression (Urano & Ikeda, 2020). Although the sample is not exclusively composed of university students, part of the sample is composed of young university students, and this is a period in which family support tends to have less influence when compared to social support (peers), since during this period less time tends to be spent with the family than with peers. In addition to quantity, the quality of relationships with family members and peers seems to be an important protective factor against depressive symptoms. This is due to the emotional and instrumental support that helps the individual in difficult times of life, as well as the fact that peer support is important in early adulthood and later (Alsubaie et al., 2019).

The results obtained showed that ED had a high prediction and correlation for symptoms of depression, being an important mediating variable evaluated in conjunction with the PFS and PSS. This can occur since low emotion regulation strategies can lead to a worsening of the clinical condition and are characteristic of human development variables. It is possible that self-regulation would be a mediator/moderator of several psychopathologies, including depression. Emotional dysregulation is a critical variable in the development of various psychopathologies, because they can be interpreted as a consequence of dysfunctions in the process of regulating emotions, as self-regulation would act as a fundamental proximal variable for the control of triggers of other distal variables (e.g., genetics, temperament, socialization) (Cole et al., 2019; Thompson, 2019).

Regarding the secondary aims, suicide attempts, participants who had made one or more attempts presented higher scores on the depression scale. It is possible that the high mean for depression in the affirmative group for suicide attempts is due to the fact that depression is an important risk factor for suicide ideation and attempts (Li et al., 2020). The other variables also behaved as expected, with the participants who responded negatively to having made a suicide attempt presenting higher means in the scales that measured family and social support. This is because these variables can be considered protective factors for depression (Omary, 2021). Family and social support can act as shock absorbers related to the stressful events that adolescents and young adults face in life (Suwinyattichaiporn & Johnson, 2020).

Finally, regarding the limitations of the study, it is possible that the main limitation refers to the use of convenience sampling. Convenience sampling is a form of non-probability sampling often used for mental health research (Barbeau et al., 2019). An important fact is that the associations found in a convenience sample cannot be generalized. In this sense, it is possible that a randomized sample with a greater number of volunteers allows better representation and generalization of the data. Thus, the reading and interpretation of the results should consider this limitation. Nonetheless, this type of sampling can be used to develop hypotheses and provide important indications for more rigorous future research (Stratton, 2021). Another interesting issue to be mentioned is that, despite the exploratory removal of possible outliers for an exclusive university sample, the data proved to be very similar to those obtained for the total number of volunteers. Therefore, it was decided to analyze and expose the results from the total sample.

Conclusion

It was determined that the work's objectives could be met. However, it may be interesting for new studies with the constructs presented to include in the sample the control of variables related to ethnic groups, sexual orientation, history of childhood development, and possible types of violence

suffered or vulnerabilities during the first decades of life. The results of this study support the findings in the literature on the importance of emotional regulation ability for the assessment of depression and the need to focus on aspects that include social variables as protective factors. Finally, it may be interesting to carry out further investigations with emotional regulation and other variables related to human development, as the literature indicates that, together with family support, the form of attachment can be predictive of socioemotional resources to access support and coping strategies. Also, it is possible that social and family support have different functions in life cycles other than the beginning of adolescence, which should be evaluated with more specific samples.

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