ORIGINAL RESEARCH

Self-Stigma, Mental Health and Healthy Habits in Parent of Children with Severe Mental Disorder

Rubén Trigueros[1], Noelia Navarro[2], Isabel Mercader[1], José M Aguilar-Parra[1], Remedios Lopez-Liria ⓘ[3], Patricia Rocamora-Pérez ⓘ[3]

[1]Department of Psychology, Hum-878 Research Team, Health Research Centre, University of Almeria, Almeria, 04120, Spain; [2]Department of Psychology, Hum-760 Research Team, Health Research Centre, University of Almería, Almería, 04120, Spain; [3]Department of Nursing Science, Physiotherapy and Medicine, Hum-498 Research Team, Health Research Centre, University of Almería, Almería, 04120, Spain

Correspondence: Isabel Mercader; Rubén Trigueros, Email imercade@ual.es; rtr088@ual.es

Background: Family members who have children with Severe Mental Disorder under their care have a hard impact on them as they are faced with the task of attending to their demands and care. This is a change in their lives as it significantly interferes with their physical and social well-being. The aim of this study was to explore the relationships between self-stigma, depression, stress and anxiety and their relationship with healthy habits, such as sport and a healthy diet.

Methods: The sample consisted of 538 parents aged between 38 and 52 years (M = 43.42; SD = 13.11). The parents have children with a diagnosis of mental disorder under their care. Participants completed the Spanish adaptation of the Self-Stigma in Relatives of people with Mental Illness (SSRMI), the Depression, Anxiety and Stress Scale (DASS-21), the Kidmed Scale and the WHO scale, whose responses were analysed using structural equation modelling.

Results: The results showed that self-stigma was positively related to anxiety, stress and depression and, in turn, these three variables were negatively related to sporting activity and healthy eating.

Conclusion: This study, therefore, is further evidence of the impact of self-stigma at the physical and mental level on family members, which highlights the need to provide them with support tools and resources, and to work on raising social awareness of mental disorders.

Keywords: self-stigma, mental disorder, caregivers, mental health

Introduction

Despite the growing interest in mental health issues and the increase in educational resources and tools available to raise awareness and sensitise the population, labelling and stigmatisation processes are still occurring.[1–3] Stigma towards mental disorders has a devastating effect on those who suffer from it in the first person, (more harmful, even, than the symptomatology itself), being a powerful barrier to access to treatment, recovery, social performance, which seriously compromises their personal autonomy.[4–6] Its multiple consequences have been studied, causing, among other effects, problems for incorporation into the world of work, less help-seeking, demoralisation, ostracism and isolation, hopelessness, low self-esteem.[7]

Unfortunately, prejudice, discrimination and stigmatising effects can also extend to family members and close associates, in what is known as "courtesy stigma", "associated stigma" or "stigma by association".[8,9] Struening et al,[10] in a study of 461 carers of people with mental disorder found that 43% of respondents felt that society devalued them merely because of their kinship. This situation is accentuated in the case of Severe Mental Disorder (SMD), which encompasses heterogeneous psychiatric diagnoses, of prolonged duration and highly limiting at a physical, psychological or social level, causing a loss of quality of life for them and their family.[11] This can lead in many cases to a loss of autonomy and the need for constant assistance. Moreover, after the implementation of the psychiatric reform, and the lack of care resources, it is mostly family members who assume the care of these people[12,13] which, in turn, has physical and socio-economic consequences.[14,15]

Discrimination, the weight of these established judgements, the fear and ignorance that certain diagnoses generate, together with the increase in family burden, are some of the multiple factors that could interfere significantly in the mental state of family members.[8] In this way, a maladaptive process develops in which the person accepts social prejudices and integrates these negative beliefs as part of their self-concept, which is known as self-stigma,[16] with depression, episodes of anxiety, stress, psychological burden and, ultimately, deterioration of mental health being quite common.[17] Self-stigma could be defined as

the subjective process characterised by the endorsement of stereotypes about mental disorders, negative feelings about oneself and maladaptive self-discriminatory behaviours[16]

which would imply a profound transformation of personal identity, replacing previous roles with roles in line with the negative image consistent with stigma.[18] Self-stigma also has a negative impact on self-esteem, self-efficacy, work failures, the achievement of life goals and objectives,[19,20] the deterioration of interpersonal relationships, and ultimately interferes with quality of life.[17,21] In this sense, one of the most recurrent consequences found in family members and relatives is the presence of depressive and anxious symptoms,[22] also associated with feelings of guilt and shame,[23] as there is still a certain social judgement that, to some extent, points to them as directly responsible.

On the other hand, there are many studies that have found a significant negative relationship between depression, anxiety and involvement in healthy habits such as sports or eating a healthy diet,[24–26] but not in the context of SMD, and even less so in the context of family caregivers. In this sense, a study by Strohle,[27] showed that the lack of control and discomfort present in those who experienced depressive and anxious symptoms meant that they did not feel they had sufficient capacity and initiative to carry out these types of activities. Similarly, a study conducted with workers by Mingote et al[28] concluded that those with emotional symptoms of depression and anxiety such as irritability, apathy, tendency to isolation, anhedonia or feelings of chronic emptiness that cause self-limitation of the development of activities that require physical effort. However, these studies turn out to be very diffuse in terms of the study population, with family members being the ones who are subjected to the burden of caring for their relatives with SMD. In this sense, research focused on the effects of self-stigma on family members with mental disorders is still very scarce and focuses on overload, burnout and care services and not on the psychological and emotional state in which these family carers find themselves, nor the effects they have on their quality of life through the development of daily activities such as eating and physical activity.[29,30]

Thus, the aim of this study is to explore the relationship between self-stigma in family members of people with SMD and its influence on healthy habits. More specifically, the following hypotheses are proposed: (1) Self-stigma will positively predict stress, depression and anxiety; (2) Depression, stress and anxiety will in turn exert a negative influence on the involvement in healthy habits, such as sports practice and eating a Mediterranean diet.

Method

Participants

The study included 538 family members who are caregivers of relatives with SMD. Of the participants, 213 were men and 325 were women, ranging in age from 38 to 52 years (M = 43.42; SD = 13.11). The sampling followed an incidental non-probabilistic procedure, as we contacted various associations in Andalusia who put us in contact with various family members.

The inclusion criteria for parents were to have under their care a child with an ICD-10 diagnosis within the framework of WHO (such as schizophrenia, schizoaffective disorder, borderline personality disorder and bipolar disorder).

Measurements

Self-Stigma Scale in Relatives of People with Mental Illness

The Spanish version of Trigueros et al[31] of the Self-Stigma in Relatives of people with Mental Illness (SSRMI) by Morris et al[32] was used. This questionnaire assesses the self-perceived social stigma of parents. The questionnaire consists of 30 items divided into 5 factors: stereotyping (eg, "I need to hide my child's mental illness"); discrimination (eg, "I would feel comfortable telling

my friends that my child has a mental illness"); separation (eg, "My child's mental illness reflects negatively on me"); culpability (eg, "I feel guilty about my child having a mental illness"); and devaluation (eg, "My child's mental illness makes me feel uncomfortable when we are in social situations"). Each parent completed a Likert-type scale where 1 is strongly disagree and 5 is strongly agree.

Depression, Anxiety and Stress Scale (DASS-21): The Spanish version of Bados et al[33] of Lovibond and Lovibond[34] was used. The scale is designed to measure emotional distress in three subcategories depression (eg, loss of self-esteem /incentives and depressed mood), anxiety (eg, fear and anticipation of negative events) and stress (eg, persistent state of overload and low frustration tolerance). The scale is composed of 21 items, spread across the three factors above. Parents responded to each item on a four-point Likert scale ranging from 0 (does not apply to me at all) to 3 (applies to me a lot, or most of the time).

Physical Activity Practice
The WHO scale, validated in the Spanish context by Balaguer,[35] was used. Specifically, the items referring to the practice of physical activity were used. An index was calculated according to the number of days per week of each physical activity and the duration of the sessions. This index ranges from 1 to 6. For a more detailed explanation of the indices and their validity, see Balaguer.[35]

Mediterranean Diet
The Spanish version of the scale to analyse dietary patterns related to the Mediterranean diet of family members[36] was used. This scale has a score ranging from 0 to 12 (eg, "Eat fish at least 2–3 times a week"). This score is obtained through a scale of 16 items that are evaluated with −1 and those with a positive connotation had a value of +1.

Procedure
In order to carry out this study, initial contact was made with several associations that focus their attention on people with SMD. Through these associations, we contacted family members who were caring for a child with SMD. Approximately 1300 parents were contacted, and 538 adults agreed to participate. Family members who wished to participate in the study were asked for informed consent and the aims of the study were explained to them. Responses to the questionnaires were anonymous and individual.

This study was conducted in accordance with the recommendations of the American Psychological Association. The experiment was conducted in accordance with the Declaration of Helsinki. Ethical approval was obtained from the Research Ethics Committee of the University of Almeria, Spain (Ref. UALBIO 2020/004).

Data Analysis
In the present study, the statistical package SPSS v.25 was used to perform the statistical analyses related to the mean, standard deviation, bivariate correlations and reliability analysis (Cronbach's alpha and omega index);[37] In addition, the AMOS v.20 statistical package was used to analyse the predictive relationships through structural equation modelling (SEM) as explained in the hypotheses.

The SEM followed the maximum likelihood procedure, especially recommended when using Likert-type question-naires. In addition, a bootstrapping of 6000 iterations was used. Despite the non-normality of the estimators, the estimators were not affected and were therefore considered robust. The fit indices for accepting or rejecting the SEM are shown in Table 1.[38]

Results
Preliminary Analysis
Table 2 presents the following results: mean, standard deviation, Cronbach's α, omega index and bivariate correlations. The reliability analyses (Cronbach's α and omega index) reflected scores above 0.70, and were therefore considered good. As for the correlations, they reflected a positive score between each of the factors, except with the practice of physical activity and Mediterranean diet.

Table 1 Adjustment Indexes

Stadistics Index	Adequate Index
χ^2/df	Between 2 to 3
CFI (Comparative Fit Index)	Over 0.95
IFI (Incremental Fit Index)	Over 0.95
TLI (Tucker Lewis Index)	Over 0.95
RMSEA (Root Mean Square Error of Approximation) más su intervalo de confianza (IC) al 90%	Equal to or less than 0.06
SRMR (Standardized Root Mean Square Residual)	Equal to or less than 0.08

Note: Iacobucci.[38]

Table 2 Descriptive Statistics and Correlations Between All Variables

Factors	M	SD	α	ω	1	2	3	4	5	6
1. Self-Stigma	3.17	1.07	0.83	0.84	–	0.42***	0.39***	0.50***	−0.18**	−0.39**
2. Anxiety	2.13	0.49	0.82	0.82		–	0.31**	0.48***	−0.24**	−0.43***
3. Depress	1.88	0.62	0.79	0.80			–	0.29**	−0.32**	−0.40**
4. Stress	2.02	0.55	0.78	0.78				–	−0.20***	−0.29**
5. Physical Activity	2.79	1.24	–	0.82					–	0.57***
6. Mediterranean diet	7.36	0.74	–	–						–

Notes: ***p< 0.001; **p< 0.01.
**Abbreviations**: α, Cronbach's Alpha; ω, McDonalds's Omega; SD, Standard Deviation.

Structural Equational Modelling Analysis

The hypothesised model of predictive relationships (Figure 1) showed that the fit indices were adequate: χ^2 (343, N= 538) = 794.65, χ^2/df= 2.32, p< 0.001, IFI= 0.97, TLI= 0.97, CFI= 0.97, RMSEA= 0.049 (90% CI= 0.042–0.053), SRMR= 0.041. These results were in accordance with the established parameters, so the proposed model was accepted as adequate. Similarly, the contribution of each of the factors to the prediction of other variables was examined through the standardised regression weights. The unstandardised values can be found in Table 3.

Discussion

The aim of this study was to analyse the influence of self-stigma on variables such as anxiety, stress and depression, which in turn exert their own influence on the practice of sport and the intake of a healthy diet, with these variables showing adequate reliability indices (Cronbach's α >0.70).

The results through the SEM have shown that firstly, self-stigma has been positively related to stress, depression and anxiety. These results cannot be compared with other studies related to parents of children with SMD as they are not available. Therefore, similar studies in SMD patients have shown that self-stigma is a precursor of emotional distress.[5,39,40] In this regard, the study by Hasan & Musleh[39] showed how self-stigma in people with SMD causes an increase in depression and anxiety. Similarly, a study by Grambal et al,[41] with patients with schizophrenia and borderline personality disorder showed that self-stigma acted as a predictor of depression and anxiety. Therefore, the results achieved may be due to the fact that from the moment a diagnosis of SMD is made, important changes in family roles occur. These changes may involve important personal resignations, changes and adjustments within the family, which may be aggravated by a lack of knowledge about the disorder and the influence of factors such as the fact that the diagnosis is associated with chronicity, that there is no definitive treatment or that it requires specific and costly attention and care at an economic level. Furthermore, social judgement and certain theories such as, for example, the Expressed Emotion Theory,[42] which for a long time has pointed to family members and certain patterns of environment and interaction between family members as being responsible, impact on family members by increasing their vulnerability, feelings of guilt and rejection, isolation and exclusion, which could be very harmful in the long term.[43] Furthermore, the high personal investment that family members make in order to be able to respond to such high demands would often have repercussions on their professional life, leading to a worsening of the economic situation,[44] as well as on leisure and
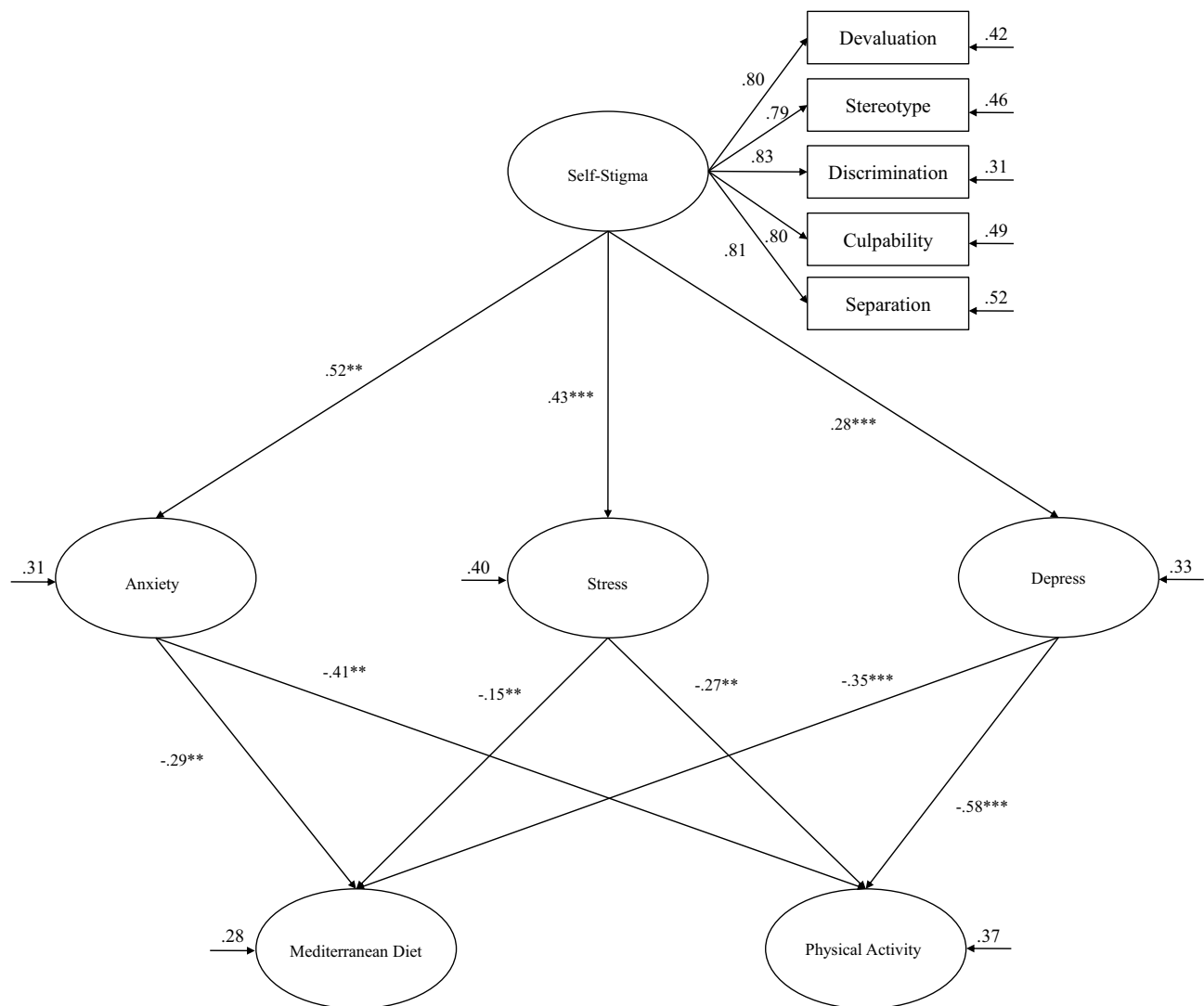
Figure 1 Hypothesized model. All parameters are standardized and are statistically significant.
Notes: *** p< 0.001;**p< 0.01. The observable variables are the rectangles; the latent variables are the ellipses.

social relations.[45] The combination of all these factors could explain the occurrence of emotions such as fear, guilt, irritability, stress, as well as depression, stress and anxiety.[46,47] It is necessary to clarify that the type of diagnosis may possibly nuance the results, as all disorders do not have the same social image or bear the same degree of stigma. For example, in the collective consciousness, diagnoses such as schizophrenia or bipolar disorder are more strongly associated with the traditional image of "madness" and its association with violence, while disorders such as depression or anxiety are more normalised and socially accepted as "something that could happen to all of us".[48,49]

On the other hand, statistical analyses revealed that depression, stress and anxiety negatively predicted involvement in self-care behaviours, such as physical activity and consumption of a balanced diet, typical of the Mediterranean diet. These results can only be compared with respect to health professionals or in a pandemic situation. In this sense, the study by Nashwan et al[50] showed that nurses suffering from work-related stress, depression and anxiety were more likely to develop unhealthy eating habits. Similarly, a study by Vicario-Merino & Munoz-Agustin[51] showed that the Covid-19 pandemic generated an increase in stress and anxiety that led to a decrease in physical activity, the abandonment of a healthy diet and an increase in alcohol consumption. Parents perceive how their health, social and personal life changes.[52] In most cases, the degree of dependency in the satisfaction of basic and instrumental needs is such that parents are exposed to a loss of emotional control and depersonalisation that seriously compromises their well-being.[53] Thus, the

Table 3 Unstandardized Coefficient, S.E., and Exact p-values for Every Path

Relations Factors			Unstandardized Coefficient	S.E.	P-values
Anxiety	←	Self-Stigma	0.45	0.041	0.002
Depress	←	Self-Stigma	0.22	0.034	***
Stress	←	Self-Stigma	0.31	0.039	***
Dieta Mediterránean Diet	←	Anxiety	−0.28	0.052	0.011
Dieta Mediterránean Diet	←	Stress	−0.34	0.051	0.002
Dieta Mediterránean Diet	←	Depress	−0.44	0.057	***
Physical Activity	←	Anxiety	−0.43	0.061	0.004
Physical Activity	←	Depress	−0.55	0.059	***
Physical Activity	←	Stress	−0.40	0.040	0.004
Devaluation	←	Self-Stigma	1.00		
Stereotype	←	Self-Stigma	0.52	0.024	***
Discrimination	←	Self-Stigma	0.36	0.026	***
Culpability	←	Self-Stigma	0.47	0.033	***
Separation	←	Self-Stigma	0.67	0.023	***
Item 2	←	Anxiety	1.00		
Item 4	←	Anxiety	0.83	0.045	***
Item 7	←	Anxiety	0.77	0.038	***
Item 9	←	Anxiety	0.78	0.036	***
Item 15	←	Anxiety	0.82	0.031	***
Item 19	←	Anxiety	0.76	0.048	***
Item 20	←	Anxiety	0.81	0.048	***
Item 1	←	Stress	1.00		
Item 6	←	Stress	0.77	0.056	***
Item 8	←	Stress	0.81	0.059	***
Item 11	←	Stress	0.83	0.057	***
Item 12	←	Stress	0.84	0.058	***
Item 14	←	Stress	0.80	0.057	***
Item 18	←	Stress	0.79	0.052	***
Item 3	←	Depress	1.00		
Item 5	←	Depress	0.82	0.052	***
Item 10	←	Depress	0.85	0.064	***
Item 13	←	Depress	0.79	0.062	***
Item 16	←	Depress	0.78	0.061	***
Item 17	←	Depress	0.81	0.055	***
Item 21	←	Depress	0.83	0.056	***

Note: ***p< 0.001.

decrease in free time together with anhedonia, apathy or feelings of emptiness linked to anxious and depressive symptomatology could explain the absence of involvement in behaviours that have an impact on health, such as the practice of physical activities or dietary care.[28] It is also possible that not benefiting from the effects of sport and eating a healthy diet have a negative impact on mental health, so that healthy habits and anxious/depressive symptomatology reciprocally influence each other, generating an escalating coercive circle that results in an increase in caregivers' discomfort.[54]

In this way, this study allows us to deepen our understanding of the influence of self-stigma on the mental and physical health of family members or close relatives of people with SMD, who often assume the role of informal caregiver. Despite the preponderant role of family members and caregivers as indisputable pillars for recovery and social integration, and the multiple effects on a personal level and in terms of quality of life, research focused on self-stigma in family members and how they experience the internalisation of social stigma is anecdotal.[31] However, some limitations need to be taken into account, as well as pointing to possible approaches for future studies. Firstly, it is necessary to take

into consideration that methodologically this is a transversal/correlational study, so it is not possible to establish cause-effect relationships. Therefore, the interpretation that has been made of them and their integration into a model responds to the judgement of the researchers, in accordance with the findings available in the literature, but other explanations would also be possible, taking into account the social context. In addition, future studies should examine how the different pathologies linked to children's SMD may affect emotional well-being and parents' perception of self-stigma. It is also necessary to always bear in mind that each family constellation is controlled by different variables, so that the model must always be adapted to the idiosyncrasies of each situation, analysing how specific factors of the social context, biographical history and behavioural repertoire influence it. For example, the presence of stigma towards family members is greater when the disorder occurs early and has a long duration,[55] or that self-stigma may be mediated by individual coping strategies.[56] Therefore, these results should be considered as a first exploratory approximation that points to important factors and relationships to be taken into account, the nature of which should be analysed in greater detail by clinicians in the establishment of a functional analysis in which the specific variables that would be controlling each family system are obtained.

Conclusions

In short, the results showed that self-stigma was positively related to depression, stress and anxiety. In turn, the healthy and balanced diet of the Mediterranean diet and the practice of physical activity were positively predicted by depression, stress and anxiety. These results highlight the need to provide social support and empathy to these family members, who are sometimes the forgotten ones when talking about severe mental disorder.[57,58]

In this sense, education and awareness-raising are the best strategies to tackle this type of difficulties, and it is necessary to implement educational programmes that raise awareness and educate the population, reducing social rejection and stereotypes that are at the basis of stigmatisation processes, while promoting active support for both patients and their families.

Disclosure

The authors report no conflicts of interest in this work.

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