Avoidance and Fear in Social Phobia in Schizophrenic Patients

Evitação e Medo na Fobia Social em Pacientes Esquizofrênicos

Evitación y Miedo en la Fobia Social en Pacientes Esquizofrénicos

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Abstract

Aim: To evaluate avoidance and fear in comorbid social phobia (SF) in patients with schizophrenia (SZ). Method: cross-sectional study with patients already diagnosed with schizophrenia at the Schizophrenia Outpatient Clinic of the Hospital de Clínicas de Porto Alegre (HCPA) assessed for social anxiety comorbidity by the Liebowitz Social Anxiety Scale (LSAS). Results: the sample identified 59 patients with concurrent SZ-SF. Of these 17% had mild, 40.7% moderate and 42.4% severe SF. The study of SF dimensions defined by LSAS revealed significantly higher levels of avoidance (average 28.5 points), compared to fear (average 25 points). Conclusions: The study identified levels of social anxiety mostly at moderate and severe level (83.1%) in patients with comorbid SZ-SF after stabilization of psychotic symptoms. The component of avoidance of social situations is more frequent and intense than fear itself, and is related to additional problems in personal and professional life of patients after stabilization. If this evidence is confirmed with larger samples, it may call for increased surveillance and interventions addressing SF as part of the treatment in schizophrenia. Additionally, it will move treatment and training further from control of delusions and hallucinations, open the opportunity for creation and testing specific techniques for SA management and consequently increase chances of functionality improvement of patients with schizophrenia.

Keywords: avoidance, fear, social phobia, schizophrenia, cross-sectional study

Resumo

Objetivo: Avaliar a evitação e o medo na comorbidade de fobia social (FS) em pacientes com esquizofrenia. Método: Amostra de conveniência de 82 pacientes avaliados sequencialmente com diagnóstico de esquizofrenia no ambulatório de Esquizofrenia do Hospital de Clínicas de Porto Alegre (HCPA), avaliados para ansiedade social através da Liebowitz Escala de Ansiedade Social (LSAS). Resultados: a amostra identificou 59 pacientes com SZ-SF concomitante. Destes, 17% tinham SF leve, 40,7% moderado e 42,4% grave. O estudo das dimensões de SF definidas pelo LSAS revelou níveis significativamente mais altos de evitação (média de 28,5 pontos), em comparação ao medo (média de 25 pontos). Conclusões: O estudo identificou níveis de ansiedade social principalmente em nível moderado e grave (83,1%) em pacientes com SZ-SF comórbida após estabilização dos sintomas psicóticos. O componente de evitação de situações sociais é mais frequente e intenso do que o medo em si, e está relacionado a problemas adicionais na vida pessoal e profissional dos pacientes após a estabilização. Se essa evidência for confirmada com amostras maiores, pode exigir maior vigilância e intervenções abordando SF como parte do tratamento da esquizofrenia. Além disso, isso levará o tratamento e o treinamento mais longe do controle de delírios e alucinações, abrirá a oportunidade para a criação e teste de técnicas específicas para o gerenciamento de SA e, consequentemente, aumentará as chances de melhora da funcionalidade de pacientes com esquizofrenia.

Palavras-chave: evitação, medo, fobia social, esquizofrenia, estudo transversal

Resumen

Objetivo: evaluar la evitación y el miedo en la comorbilidad de la fobia social (FS) en pacientes con esquizofrenia. Método: estudio transversal con pacientes ya diagnosticados de esquizofrenia en el Ambulatorio de Esquizofrenia del Hospital de Clínicas de Porto Alegre (HCPA), a los que se evaluó la presencia de ansiedad social como comorbilidad mediante la Escala de Ansiedad Social de Liebowitz (LSAS). Resultados: la muestra identificó 59 pacientes con SF-ES concurrente. De ellos, el 17% tenía SF leve, el 40,7% moderada y el 42,4% grave. El estudio de las dimensiones de SF definidas por LSAS reveló niveles significativamente más altos de evitación (promedio de 28,5 puntos), en comparación con el miedo (promedio de 25 puntos). Conclusiones: El estudio identificó niveles de ansiedad social mayoritariamente de nivel moderado y severo (83,1%) en pacientes con SF-ES concurrente tras la estabilización de los síntomas psicóticos. El componente de evitación de situaciones sociales es más frecuente e intenso que el

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propio miedo, y se relaciona con problemas adicionales en la vida personal y profesional de los pacientes tras la estabilización. Si esta evidencia se confirma con muestras más amplias, puede exigir una mayor vigilancia e intervenciones que aborden la SF como parte del tratamiento en la esquizofrenia. Además, alejará el tratamiento y el entrenamiento del control de delirios y alucinaciones, abrirá la oportunidad para la creación y prueba de técnicas específicas para el manejo de la esquizofrenia y, en consecuencia, aumentará las posibilidades de mejora de la funcionalidad de los pacientes con esquizofrenia.

Palabras clave: evitación, miedo, fobia social, esquizofrenia, estudio transversal

Introduction

Large proportion of the research on anxiety disorders addresses the involvement of genes regulating hypothalamic-pituitary-adrenal axis, neurotransmitter systems and/or neuronal plasticity, in which the disruption of gene expression of these genes through epigenetic mechanisms is believed to contribute to the pathogenesis of anxiety (Trancoso, 2022). Anxiety in schizophrenia usually is studied as a risk factor or residual, and received secondary importance. The major focus is the control of psychotic symptoms, and if persists after an acute state, considered as dependent on residual psychosis, treated with neuroleptics eventually associated with cognitive-behavior interventions focusing on psychosis and fear of consequences of delusions.

This approach misses the point that anxiety is frequent, intense and devastating to people with the diagnosis of schizophrenia, and even if antecedent, concomitant or residual, has important consequences over the lives of patients and relatives. Social anxiety disorder (SAD) or social phobia (SF) is considered the most common anxiety disorder, often without remission, and is usually related to significant functional and psychosocial impairment (Levitan et al., 2011). It refers to the heightened situational discomfort that the individual feels when interacting socially, the fear of feeling embarrassed and humiliated by others (Francisco, Toledo & Tavares, 2019).

Fear and anxiety overlap but also differ, the former being an emotional response to real or perceived imminent threat and most often associated with surges of autonomic arousal necessary for fight or flight, thoughts of immediate danger, and avoidance behaviors, and anxiety the anticipation of a future threat, most often linked to muscle tension and vigilance in preparation for future danger or avoidance behaviors (American Psychiatric Association (APA, 2022).

Fear is a sensation that is related to the emotional process including the amygdala and the hypothalamus, the first being linked in processing information about the potential risk of an event and can generate responses that will result in fear, escape or paralysis, and the second associated with the limbic areas, where it receives information from the internal environment, and can act in a direct way (Fuentes et al., 2014).

SF (F40.1), along with Agoraphobia (F40.0) and Specific/isolated phobias (F40.2), are part of the phobic-anxious disorders group (F40) in ICD-10 and refer to the fear of being exposed to the close observation of others and leading to avoidance of social situations (DATASUS, 2008).

The behavioral pattern of individuals with SF is characterized by a typical fear and a desire to avoid social situations in which they need to expose themselves, because the central fear is to be the center of attention, to expose their weaknesses and, thus, to have their performance negatively evaluated (Burato et al., 2009).

Social phobics usually present hand tremor, blushing, nausea, or an urgent desire to urinate, and sometimes they are convinced that one or more of these secondary manifestations constitutes their primary problem. The symptoms can develop into a panic attack (DATASUS, 2008).

The feared situations can be restricted (such as meeting the opposite sex, eating or public speaking) or diffuse (any situation outside the family environment can cause stress to the patient). Seeking avoidance of the feared occasions, the patient with SAD symptoms shows a behavior of avoidance of social interactions and, in more extreme cases, complete social isolation (Francisco, Toledo & Tavares, 2019).

Avoidance of social occasions is frequent and constant, which characterizes phobic avoidance, but when such situations are unavoidable, important manifestations of anxiety are evidenced that are often accompanied by autonomic symptoms (Osório et al., 2005).

The use of security behavior by people with SF has been pointed out as an important factor in the maintenance of this disorder, by preventing feared situations from being faced (Burato et al., 2009).

SF is not just shyness, since the person with this disorder experiences fears that generate feelings of total discomfort, with a sense of personal inferiority, with dysfunctional thoughts that reduce their motivation, and with a sense of humiliation due to the belief of inability to produce something. These aspects interfere with social relationships, negatively affecting the subject's life, either individually or socially (Da Silva et al., 2019), where epidemiological studies indicate that FS disorder has a major negative functional impact, socially, educationally and occupationally (Peres, 2018).

Schizophrenia (SZ) is one of the fifteen leading causes of disability due to illness in the world, where approximately half of individuals have concomitant mental and/or behavioral disorders (National Institutes of Health (NIMH) 2006). One cause is the greater difficulty in facing social situations due to a high degree of anxiety, which makes patients feel safer away from social gatherings at work, leisure and family (Weittenhiller et al., 2021).

The diagnosis of SZ involves a set of signs and symptoms and impaired professional or social functioning (APA, 2022). Its symptoms affect perception, thought, affect and behavior (Ruiz-Iriondo et al., 2019), without any pathognomonic symptoms (APA, 2022), and involve distortions of perception in relation to oneself and external reality (Silva et al., 2016).

Gabbard (2016) mentions a useful organization of the descriptive symptomatology of SZ into three groups: positive symptoms, negative symptoms and disturbed interpersonal relationships. The latter tends to develop over a long period and includes numerous and varied interpersonal difficulties, such as: withdrawal, inappropriate expressions of aggression and sexuality, lack of awareness of the needs of others, excessive demands and inability to make meaningful contacts with other people.

SF-SZ comorbidity have been described in many studies (Aikawa et al., 2018; Kibru et al., 2020; Teixeira & Belmonte-De-Abreu, 2022, 2023), negatively affecting quality of life, treatment outcomes (Nemoto et al., 2019; Kibru et al., 2020), medication adherence (Kibru et al., 2020), social cognition, social functioning, with different risk factors such as illness duration (Aikawa et al., 2018), age of onset (Aikawa et al., 2018; Kibru et al., 2020), gender, poor social support, prior hospitalization, and suicide ideation and attempts (Kibru et al., 2020).

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Despite the high morbidity of SF in schizophrenia, only half of the patients throughout their lives will seek specific treatment, with a median delay time of 16 years. With this delay, these people often miss several opportunities for personal and professional growth, developing a negative self-image and becoming more withdrawn in social functioning (Levitan et. al, 2011). Due to this high impact, early and correct identification of this comorbidity is considered extremely important to minimize suffering and to prevent the associated impairment (Osório et al., 2005).

As a result of the above considerations, the study explored SF comorbidity in patients diagnosed with schizophrenia, quantifying the dimensions of fear and avoidance of social situations. The major hypothesis is that SF is significant and must be identified and treated in SZ.

Methods

Design

This is a cross-sectional study of the association characteristics of comorbid social phobia in schizophrenic patients. The research has ethical approval (CAAE 63681021.8.0000.5327).

Sample

The patients were treated at the Schizophrenia Program of the Hospital de Clínicas de Porto Alegre (HCPA), aged between 18 and 70 and were of both sexes. Of the 82 subjects sequentially evaluated, 23 had no FS, and 59 patients with comorbid SZ-SF defined by the LSAS (Liebowitz Social Anxiety Scale). The patients had previously received confirmation of the diagnosis of schizophrenia in at least three situations- a direct clinical interview, an interview with the family and a data review with a senior researcher analyzing information gathered from the patient, family, caregivers and medical records. Once the diagnosis was confirmed, they underwent a detailed assessment of the severity of symptoms and the presence of FS.

Assessment

The evaluation process comprised two steps. The first comprised a pilot study with application and analysis of the scales and the Second the sequential study of Outpatients. The patients had a previous diagnosis of schizophrenia based both on ICD-10 and DSM-5-TR. After selection patients were assessed for severity by the Brief Psychiatric Rating Scale (BPRS).

Sociodemographic information included age, gender, education, family income, age of illness onset, duration of illness, number of psychiatric hospitalizations, comorbidities, and medications used.

The following instruments were applied:

a. Liebowitz Social Anxiety Scale (LSAS): A 24 item scale with two subscales: social interaction (11 items) and performance (13 items), assessed on a four-point Likert scale (zero to three). Six subscales are considered for Coding (fear, fear of social interaction, fear of performance, avoidance, avoidance of social interaction, and avoidance of performance), with the total score obtained by the sum of the subscales. The LSAS has its psycho-

metric qualities widely studied, with 11 studies identified, and from these six evaluating the hetero-applied version, four the self-applied version, and one study of both versions. Seven studies used the original version of the scale (English) and four versions in French, Hebrew, Turkish and Spanish (Osório et al., 2005). The Turkish version of the LSAS demonstrated excellent internal consistency measured by Cronbach's alpha (0.95), and reliability as measured by test-retest (0.97) (Burato et al., 2009). Dos Santos (2012) cut-off point of 32 points was used, resulting in three grades of FS: mild (32-43 points), moderate (44-81), and severe (82 or more points).

b. Brief Psychiatric Rating Scale (BPRS): 18 items with grading criteria referring to aspects of the patient's symptomatology, severity and type – positive, negative, affective and cognitive domains (Park et al., 2019) The 7-point anchored version was used (1= not reported/observed or absent to 7= very severe/extreme) indicating the presence and severity of symptoms observed during the interview or reported by the patient (Van Dorn et al., 2016). The cut-off score for symptom remission was less than 5, with ranges for mild, moderate, and severe severity of 5- 9, 10-19, and greater than 20, respectively (Park et al., 2019).

Data analysis

Statistical data analysis was performed using the Statistical Package of Social Science (SSP) version 27.0 software. A descriptive analysis of the clinical and sociodemographic characteristics of the research participants was performed. Quantitative variables (age, time of diagnosis of schizophrenia, number of psychiatric hospitalizations) were described using mean and standard deviation or median and interquartile range. Categorical variables (gender, family income, education, scales, medications, comorbidities) were described by absolute frequencies and percentages.

Results

Of the original 82, fifty-nine patients had comorbid SZ-SF, with 41 of those (69.5%) of male sex and 18 (30.5%) female. The mean age was 46.8 years, and the most frequent education was complete high school (44.1%), followed by complete elementary school (33.9%). The median number of psychiatric hospitalizations was 2 (two), the mean age of onset of schizophrenia was 21.7 years, and the mean duration of illness was 25.1 years.

Regarding clinical comorbidities, 76.3% had an associated condition, the most frequent being obesity (32.2%), dyslipidemia and diabetes (16.9%), and smoking (13.6%). Regarding psychiatric medication, 94.9% of the patients used Clozapine and 42.2% used Clonazepam (table 1).

Table 1

Demographic and Clinical Characteristics of the Sample: Age; Sex, Educational Status; Family Income; Number of Hospitalizations; Duration of Illness; Comorbidities, Medications

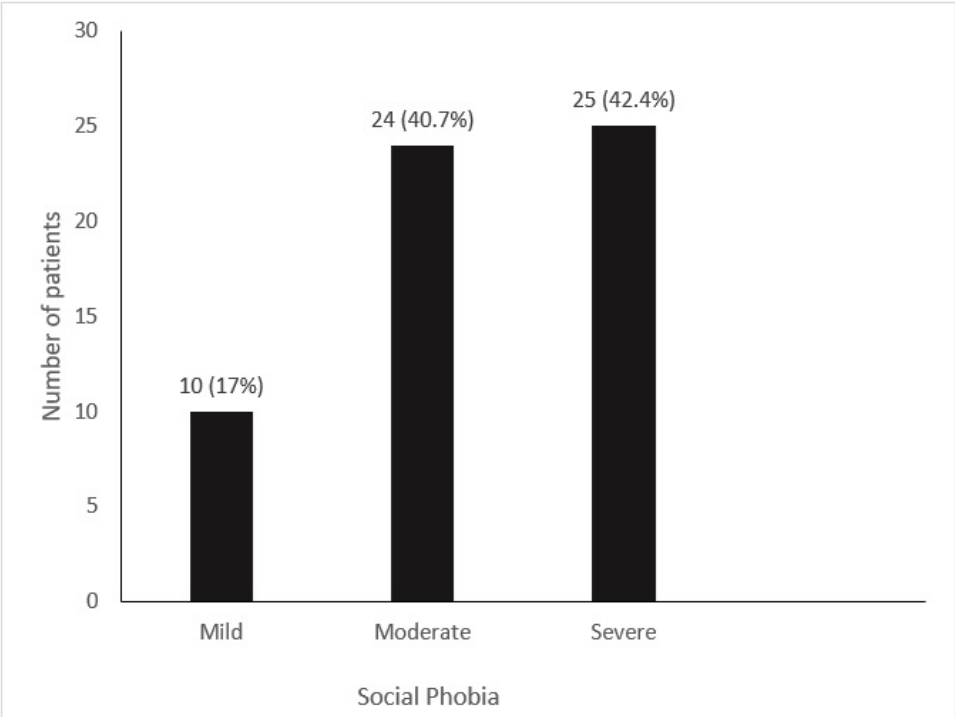
Variables	Sample (n=59)
Age (years) – mean ± DP	46,8 ± 11,4
Sex – n(%)	
Male	41 (69,5)
Female	18 (30,5)
Education – n(%)	
1º degree incomplete	11 (18,6)
1º degree complete	20 (33,9)
2º degree complete	26 (44,1)
3º degree complete	2 (3,4)
Income (s.m.) – median (P25 – P75)	2 (2 – 3)
Age at onset (years) – mean ± DP	21,7 ± 6,4
Duration of disease (years) – mean ± DP	25,1 ± 11,2
Number of hospitalizations – median (P25 – P75)	2 (1 – 4)
Clinical Comorbidities – n(%)	
Yes	45 (76,3)
No	14 (23,7)
Types of Comorbidities – n(%)	
Dyslipidemia	10 (16,9)
Smoking	8 (13,6)
Diabetes	10 (16,9)
Obesity	19 (32,2)
Drug use – n(%)	
Clozapine	56 (94,9)
Other antipsychotics	21 (35,6)
Clonazepam	25 (42,4)
Amitriptyline	5 (8,5)

The comorbidity of social phobia in schizophrenic patients

From 59 patients identified with SF, 17% had mild, 40.7% moderate and 42.4% severe, according to the LSAS scale (figure 1).

Figure 1

Classification of Social Phobia Positive by LSAS According to Severity



Regarding the fear and avoidance sub-scores of the LSAS (table 2), we noticed significantly higher levels for avoidance in the items "Talking to people in a position of authority", "Talking to people you don't know very well", "Expressing a disagreement or disapproval to people you don't know well", "Having a party", with higher avoidance (28.5 points) than fear (25 points).

The highest scores of fear were "Acting, performing or speaking in front of an audience," "Meeting strangers," "Being the center of attention," and "Speaking at a meeting." Additionally the highest avoidance scores were: "Talking to people in a position of authority", "Acting, performing, or speaking in front of an audience", "Talking to people you don't know very well", "Meeting strangers", "Being the center of attention", and "Speaking at a meeting".

It is noticeable that there are four items that stand out in both sub-scores, these are "Acting, performing or speaking in front of an audience", "Meeting with strangers", "Being the center of attention" and "Speaking at a meeting", referring to sentence numbers six, twelve, fifteen and sixteen of LSAS.

Table 2

Comparison of LSAS Items Regarding Fear and Avoidance

Items	Fear	Avoidance	p
	Median (P25 – P75)	Median (P25 – P75)	
1. Making phone calls in public.	0 (0 – 2)	1 (0 – 3)	0,068
2. Participation in small groups.	1 (0 – 2)	1 (0 – 3)	0,838
3. Eating in public places.	0 (0 – 2)	0 (0 – 2)	0,660

Items	Fear	Avoidance	p
	Median (P25 – P75)	Median (P25 – P75)	
4. Drinking with others in public places.	0 (0 – 2)	0 (0 – 2)	0,115
5. Talking to people in a position of authority.	1 (0 – 2)	2 (0 – 3)	**0,030**
6. Acting, performing or speaking in front of an audience.	2 (1 – 3)	2 (1 – 3)	0,948
7. Going to a party.	1 (0 – 2)	1 (0 – 2)	0,657
8. Work being observed.	1 (0 – 2)	1 (0 – 2)	0,946
9. Write being observed.	1 (0 – 2)	1 (0 – 2)	0,451
10. Call someone you don't know very well.	1 (0 – 2)	1 (0 – 2)	0,128
11. Talking to people you don't know very well.	1 (0 – 2)	2 (0 – 2)	**0,033**
12. Meeting with strangers.	2 (0 – 3)	2 (0 – 3)	0,783
13. Urinating in a public bathroom.	0 (0 – 2)	0 (0 – 2)	0,484
14. Enter a room where others are already seated.	1 (0 – 2)	1 (0 – 2)	0,831
15. Being the center of attention.	2 (0 – 3)	2 (0 – 3)	0,537
16. Speaking in a meeting.	2 (0 – 2)	2 (0 – 2)	0,349
17. Taking a test.	1 (0 – 2)	1 (0 – 2)	0,765
18. Expressing a disagreement or disapproval to people you don't know well.	0 (0 – 2)	1 (0 – 2)	**0,040**
19. Looking into the eyes of people you don't know well.	0 (0 – 2)	0 (0 – 2)	0,851
20. Report something to a group.	1 (0 – 2)	1 (0 – 2)	0,450
21. Try to flirt with someone.	1 (0 – 2)	1 (0 – 3)	0,090
22. Returning goods to a store.	1 (0 – 2)	0,5 (0 – 2)	0,614
23. Throw a party.	0 (0 – 2)	1 (0 – 3)	**0,009**
24. Resist the pressures of a salesperson.	1 (0 – 2)	1 (0 – 2)	0,684
Total Score	25 (12,5 – 42,3)	28,5 (14 – 43)	**0,013**
Performance Anxiety	13 (6,8 – 23)	14,5 (7 – 23)	0,073
Social Anxiety/Social Phobia	14 (6 – 21)	15 (7 – 21)	**0,005**

Discussion

Avoidance of social situations was identified with high frequency and intensity in the patients in the sample, with a greater intensity than fear itself. In other words, from 82 schizophrenic patients with stable conditions 59 (72%) had comorbid SF. And from those, more than 80% had moderate to severe SF. Additionally the subjects avoided more social situations than directly feared it. The subject avoided feared situations more than experienced it. What's more, it is possible to consider that avoidance is associated with increased social harm, with consequent reduced detachment from social interactions.

These findings bring attention to the need to reevaluate the usual assessment and treatment guidelines (medication, psychological and psychosocial) for patients diagnosed with schizophrenia including the possibility of comorbid SZ-SF.

Although it may be premature to assemble treatment guidelines for FS in schizophrenia, the study shows the opportunity to include pharmacological, psychological, and environmental strategies in controlling these symptoms and possibly expanding the repertoire of drugs for FS control further than antipsychotics.

Besides medications, several strategies already used separately in SZ and SF, have not yet been tested in SZ-SF comorbidity, despite potential effects, such as rehabilitation programs, cognitive-behavioral psychotherapy (CBP), virtual reality (VR), augmented reality (AR), and mindfulness.

Some rehabilitation programs that usually train social living skills, independence, work, and romantic interpersonal relationships (Vasconcelos et al., 2021) may be modified and tested in the management of SF. Additionally, individual or group psychotherapy can focus on fear and avoidance reduction with further gains on social integration, communication, and thought coordination (Zacharias, 2019 cited by Vasconcelos et al., 2021).

A large array of CBT techniques, ranging from the classical in vivo exposure cognitive therapy, to new modalities like third wave therapies such as internet-delivered therapy, virtual reality exposure, cognitive bias modification can be tested for identification and management of predisposing factors, search for appropriate responses in the face of stressful situations beyond the control of delusions and hallucinations. AR in particular had a greater potential, by combining real and virtual worlds in the search for systematic desensitization and social interaction of the patient (Mauro & Mauro, 2021).

Other interventions with evidence of efficacy in SF like mindfulness addressing moment awareness without judgment, emotional and behavioral self-regulation, and meditation based on mindfulness (Crane et al., 2017; Liu et al., 2021), may be modified and tested to increase awareness of social anxiety and include curiosity and experimentation in place of fear and avoidance, further expanding different meditation exercises and techniques in SZ-SF comorbidity (Goldin et al., 2021).

Final Considerations

This study sought to carefully evaluate patients with schizophrenia for the presence of FS as comorbidity. Among the 82 patients studied, close to ¾ (59) had SZ-FS, with only 23 without any level for this comorbidity. We also found that these patients who shared some of the items on the two scales are more likely to display avoidance behaviors than fear behaviors.

The study demonstrates additional evidence of significant frequency and probably negative impact of SF in SZ individuals. It is conceivable that avoidance may have negative personal and professional consequences for these patients leading to increased social isolation. The majority of post-acute patients appear to fear situations, fail to experience them and end up withdrawing from the outside world.

Psychotherapies, particularly CBP alone or associated with pharmacotherapy with evidence in the treatment of isolated SF (Alomari et al., 2022; Pelissolo et al., 2019) may be tested in SZ-SF comorbidity, and checked for possible effect on different outcomes like distress and suffering, relapse, and family and environment integration (Soares, 2019).

Despite the initial evidence, there is a need for further investigation regarding neurophysiological and biochemical mechanisms of this frequent comorbidity, and the potential effect

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of medications and psychological interventions to reduce social phobia in patients with the diagnosis of schizophrenia.

References

Aikawa S., Kobayashi H., Nemoto T., Matsuo S., Wada Y., Mamiya N., Yamaguchi T., Katagiri N., Tsujino N., Mizuno M. (2018). Social anxiety and risk factors in patients with schizophrenia: Relationship with duration of untreated psychosis. *Psychiatry Research*, 263, 94-100. PMID: 29510345.

Alomari, N. A., Bedaiwi, S. K., Ghasib, A. M., Kabbarah, A. J., Alnefaie, S. A., Hariri, N., Altammar, M.A., Fadhel, A.M., & Altowairqi, F.M. (2022). Social Anxiety Disorder: Associated Conditions and Therapeutic Approaches. *Cureus, 19;14(12*), e32687. http://dx.doi.org/10.7759/cureus.32687

American Psychiatric Association (APA). (2022). *DSM-5-TR: Manual diagnóstico e estatístico de transtornos mentais*. 6ª ed. Revisão Texto. Artmed.

Burato, K. R., Crippa, J. A. S, Loureiro, S. R. (2009). Transtorno de ansiedade social e comportamentos de evitação e de segurança: Uma revisão sistemática. *Estudos de Psicologia*, 14(2), 167–174. https://doi.org/10.1590/S1413-294X2009000200010

CRANE, Rebecca S. et al. (2017). What defines mindfulness-based programs? The warp and the weft. *Psychological medicine*, v. 47, n. 6, p. 990-999, 2017.

DATASUS. Ministério da Saúde. (2008). *F40-F48 Transtornos neuróticos, transtornos relacionados com o "stress" e transtornos somatoformes*. http://www2.datasus.gov.br/cid10/V2008/WebHelp/f40_f48.htm

Da Silva, G. F. A, Alves, J. M. P., De Lima, N. M. (2019). Características da Fobia Social em Meios Acadêmicos. *Revista Multidisciplinar do Sertão*, *1*(4), 547–556. https://doi.org/10.37115/rms.v1i4.157

Dos Santos, L. F. (2012). *Estudo de validade e fidedignidade de Escala de Ansiedade Social de Liebowitz – versão auto-aplicada.* Dissertação (Mestrado em Ciências, área Saúde Mental). Faculdade de Medicina de Ribeirão Preto da Universidade de São Paulo (USP) 2012. Disponível em: https://teses.usp.br/teses/disponiveis/17/17148/tde-03112012-112449/pt-br.php. Acesso em: 10 fevereiro de 2021.

Francisco D. K. S., Toledo, J. D. K., Tavares, F. S. (2019). Adversidade da Ansiedade Social aplicada na fase da Adolescência. *Revista Científica Fagoc Multidisciplinar*, IV, 1–xx.

Fuentes, D. D., Malloy-Diniz, L. F., De Camargo, C. H. P., Cosenza R. M. (2014). *Neuropsicologia: Teoria e prática*. 2ª ed. Artmed.

Gabbard, G. O. (2016). *Psiquiatria psicodinâmica na prática clínica.* 5ª ed. Artmed.

Goldin, P. R., Thurston, M., Allende, S., Moodie, C., Dixon, M. L., Heimberg, R. G., & Gross, J.J. (2021). Evaluation of Cognitive Behavioral Therapy vs Mindfulness Meditation in Brain Changes During Reappraisal and Acceptance Among Patients With Social Anxiety Disorder: A Randomized Clinical Trial. *JAMA Psychiatry*, 78(10):1134-1142. https://doi.org/10.1001/jamapsychiatry.2021.1862

Kibru, B., Getachew, T., Demeke, D., Endalamaw, S. (2020). The Prevalence and Correlates of Social Anxiety Symptoms among People with Schizophrenia in Ethiopia: An Institution-Based Cross-Sectional Study. *Schizophrenia research and treatment*. 24:2020:3934680. ID 3934680.

Levitan, M. N., Chagas, M. H. N., Crippa, J. A. S., Manfro, G. G., Hetem, L. A. B., Andrada, N.C., Salum, G.A., Isolan, L., Ferrari, M.C.F., & Nardi, A.E. (2011). Guidelines of the Brazilian Medical Association for the treatment of social anxiety disorder. *Brazilian Journal of Psychiatry, 33*(3). https://doi.org/10.1590/S1516-44462011000300014

Liu, X., Yi, P., Ma, L., Liu, W., Deng, W., Yang, X., Liang, M., Luo, J., Li, N., & Li, X. (2021). Mindfulness-based interventions for social anxiety disorder: A systematic review and meta-analysis. *Psychiatry Research*. 300, 113935. https://doi.org/10.1016/j.psychres.2021.113935

Mauro, S. S. S., & Mauro, M. Y. C. (2021). O Uso da Robótica, Games, Realidade Virtual e Realidade Aumentada no Tratamento de Autismo, Demência, Esquizofrenia e Fobia. *Caderno de Pesquisa Aplicada*, *1*(3), 1–11. http://isca.edu.br/revista/index.php/cpesqaplic/article/view/62

National Institutes of Health (NIMH). (2006). Mental Health Information, Statisticis, Schizophrenia. Bethesda (Washington). *National Institutes Of Health.* https://www.nimh.nih.gov/health/statistics/schizophrenia#:~:text=Schizophrenia%20is%20one%20of%20the%20top%2015%20leading%20causes%20of%20disability%20worldwide.&text=Individuals%20with%20schizophrenia%20have%20an,age%20than%20the%20general%20population).&text=The%20estimated%20average%20potential%20life,the%20U.S.%20is%2028.5%20years

Nemoto, T., Uchino, T., Aikawa, S., Saito, J., Matsumoto, H., Funatogawa, T., Yamaguchi, T., Katagiri, N., Tsujino, N., Mizuno, M. (2019). Social anxiety and negative symptoms as the characteristics of patients with schizophrenia who show competence-performance discrepancy in social functioning. *Psychiatry and Clinical Neurosciences 73*(7), 394–399.

Osório, F. L., Crippa, J. A. S., Loureiro, S. R. (2005). Instruments for the Assessment of Social Anxiety Disorder. *Revista Psiquiatria Clínica*., *32*(2), 73–83. https://doi.org/10.1590/S0101-60832005000200003

Park, Seon-Cheol, et. al. (2019). Establishing the cut-off scores for the severity ranges of schizophrenia on the BPRS-6 scale: findings from the REAP-AP. Psychiatry and Clinical Psychopharmacology, 29:4, 895-898.

Pelissolo, A., Abou Kassm, S., & Delhay, L. Therapeutic strategies for social anxiety disorder: Where are we now? Expert Review Neurotherapeutics *19*(12), 1179–1189. https://doi.org/10.1080/14737175.2019.1666713

Peres, K. R. L. (2018). *Transtorno de ansiedade social: Psiquiatria e psicanálise* [Dissertação de mestrado, Programa de Pós-Graduação em Psicologia Clínica, Universidade de São Paulo]. Biblioteca Digital de Teses e Dissertações da USP. https://www.teses.usp.brlico › peres_me

Ruiz-Iriondo, M., Salaberría, K., Echeburúa, E., Iruín, Á., Gabaldón, O., Fernández-Marañón, I. (2019). Global functioning among middle-aged patients with chronic schizophrenia: The role of medication, working memory and verbal comprehension. *Anales de. Psicologia*, *35*(2), 204–213.

Silva, A. M., Dos Santos, C. A., Miron, F. M., Miguel, N. P., Furtado, C. C., Bellemo, A. I. S. (2016). Esquizofrenia: Uma revisão bibliográfica. *Revista UNILUS Ensino e Pesquisa*, *13*(30), 1-8.

Soares, L. M. D. (2019). A Esquizofrenia na Terapia Cognitivo comportamental: Uma Relação Possível? [Trabalho de Conclusão, Curso de Psicologia, Faculdade de Educação e Meio Ambiente (FAEMA)]. https://repositorio.faema.edu.br/bitstream/123456789/2623/1/

Laura%20Maria%20Duque%20Soares%20.pdf

Teixeira, A. D., Belmonte-De-Abreu, P. S. (2022). Prevalence of Social Anxiety Disorder in patients with Schizophrenia. Abstract. In Congresso Brasileiro Online de Pesquisas e Inovações em Saúde – I CONASAU. *Multidisciplinary Journal on Health*, *3*(4), https://ime.events/conasau/anais?fbclid=PAAaZPTR_0NR4_nclVv4tS6xe3_7ZEJdZyQInPKAYt1nyavW3X_mUBL0-dfkQ

Teixeira, A. D., Belmonte-De-Abreu, P. S. (2023). Prevalence of Social Anxiety Disorder in patients with Schizophrenia. Poster format. In I há conversa no Chlo. *Meeting of the Psychiatry and Mental Health Service of the Centro Hospitalar de Lisboa Ocidental*.

Trancoso, I. I. V. (2022). Epigenética nas Perturbações de Ansiedade (Dissertação de Mestrado em Medicina, Faculdade de Ciências da Saúde, Departamento de Ciências Médicas, Universidade Beira Interior]. https://ubibliorum.ubi.pt/handle/10400.6/12838

Van Dorn, R. A., Desmarais, S. L., Grimm, K. J., Tueller, S. J., Johnson, K. L., Sellers, B.G., & Swartz, M.S. (2016). The latent structure of psychiatric symptoms across mental disorders as measured with the PANSS and BPRS-18. *Psychiatry Research*, 30(245), 83–90. https://doi.org/10.1016/j.psychres.2016.08.029

Vasconcelos, E. H. S., Pinto, M. P. C., Ortiz, S. P., Nishihara, V. Y. K., Carvalho, E. B., & Cançado, P. L. (2021). Esquizofrenia e seus Prelúdios Cognitivos: Uma Revisão Integrativa, Sistemática e Abrangente. *Revista Ibero-Americana de Humanidades, Ciências e Educação*, *7*(8), 658–671. https://doi.org/10.51891/rease.v7i8.1995

Weittenhiller, L. P., Mikhail, M. E., Mote, J., Campellone, T. R., Kring, A. M. (2021). What gets in the way of social engagement in schizophrenia? *World Journal Psychiatry, 11*(1), 13–26.

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