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ORIGINAL RESEARCH

Social Anxiety Symptoms in The Visually Impaired Versus Healthy Control: Saudi Arabian Samples

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Purpose: This study aims to compare self-esteem and social anxiety disorder (SAD) symptoms levels between visually impaired and sighted individuals, and to explore the relationship between social anxiety and various sociodemographic factors.

Materials and Methods: A case-control study was conducted from March to June 2017 in Riyadh, Saudi Arabia, involving 62 participants (24 visually impaired and 38 sighted). Participants completed a demographic form, the Liebowitz Social Anxiety Scale (LSAS), and the Rosenberg Self-Esteem Scale (RSES). Data analysis included descriptive statistics, and *t*-tests to compare psychological outcomes between groups.

Results: The mean age of visually impaired participants was significantly higher than that of sighted participants (24±2.8 vs 22.4±2.2 years, p=0.013). No significant differences were observed between the two groups in terms of gender, marital status, or education level. The RSES scores indicated no significant difference in self-esteem between visually impaired and sighted individuals (18.13 ±2.66 vs 17.42±2.04, p=0.244). Similarly, LSAS scores did not significantly differ between the two groups (32.63±24.19 vs 36.68 ±22.68, p=0.506).

Conclusion: The findings suggest that visually impaired individuals do not have significantly different levels of self-esteem or social anxiety compared to their sighted peers, indicating that visual impairment may not directly contribute to lower self-esteem or higher social anxiety. Future research should involve larger, more diverse samples and longitudinal studies to further explore these relationships.

Keywords: social anxiety disorder, self-esteem, visually impaired, sighted individuals, case-control study, Saudi Arabia

Introduction

Social anxiety disorder (SAD), also known as social phobia, is a prevalent anxiety disorder characterized by intense fear and anxiety in social settings due to negative self-evaluation, which often results in anticipatory anxiety and avoidant behaviour.[1] Distinguishing between normal shyness and the pathological anxiety of SAD can be challenging, as the condition involves impairments in social, personal, and occupational functioning.[2] SAD typically emerges in adolescence, with lifetime prevalence rates of 11% in men and 15% in women.[3] It is associated with an increased risk for comorbid conditions, such as depression and substance use disorders, particularly as it impacts crucial social development stages.[4] Despite its high prevalence, SAD is often underdiagnosed and undertreated, as individuals may avoid seeking help due to fear of social scrutiny.[5] Factors like co-occurring depressive and anxiety disorders, symptom severity, and avoidant personality traits have been linked to poorer treatment outcomes.[6]

The epidemiology of SAD in non-Western populations has not been extensively studied, and many available studies utilize Western-developed measurement tools that may not account for cultural differences.[7] Some research suggests variations in prevalence and presentation across cultures. For instance, in Saudi Arabia, SAD was found to be more common among young men than women,[8,9] and cultural values can influence the manifestation of social anxiety symptoms.[10] Furthermore, the cultural context can shape the way social anxiety presents and is perceived, as seen in

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culture-specific conditions like taijin kyofusho (TKS) in East Asia, where the focus is more on the fear of offending others rather than self-embarrassment.[11]

Biological and psychological vulnerabilities play a role in the development of SAD, with genetic factors contributing significantly to its onset.[12] Individuals with a genetic predisposition may experience heightened anxiety following social or performance-related stressors, leading to maladaptive cognitive processing, such as excessive self-focused attention.[13] This focus on self is believed to impair the accurate assessment of social threats and may reinforce anxiety in social settings.[14]

While the relationship between SAD and various sociodemographic factors has been explored, there is a notable gap in research examining the prevalence of SAD in visually impaired individuals. Vision loss could influence social interactions and thus may alter the typical presentation or severity of social anxiety. To address this gap, the present study aims to investigate the social anxiety disorder symptoms and self-esteem among visually impaired individuals compared to sighted controls and explore the relationship between social anxiety and sociodemographic variables. We hypothesize that the prevalence of social anxiety will be significantly lower in the visually impaired group compared to the control group.

Materials and Methods

Study Design

A case-control study was conducted between March and June 2017. Visually impaired participants were recruited from a charity association for the blind, while the control group participants were from King Saud University. Both recruitment sites were in Riyadh, Saudi Arabia. Participants were matched based on age, gender, and educational level. Recruitment strategies ensured equal opportunity for participation across both groups. The study received ethical approval from the ethical review committee (H-06-KM-001) of the Armed Forces Hospital Southern Region (AFHSR), Khamis Mushait, Saudi Arabia, before data collection. The study's objectives and procedures were explained to all participants, and informed consent was obtained. All collected data were securely stored, with access restricted to the research team. This study was conducted in accordance with the Declaration of Helsinki.

Inclusion and Exclusion Criteria

Eligible participants were males and females aged between 18 and 65 years, with confirmed visual impairment for the visually impaired group (Group A) and matched controls from the general population for the control group (Group B). Exclusion criteria included being a non-Arabic speaker, unable to read and write, under 18 years old, or having a disability affecting communication, such as deafness.

Data Collection

Data collection was conducted by trained psychologists with university degrees, who received specific training in administering the questionnaires. A standardized protocol was implemented to ensure consistency and minimize bias during data collection. This protocol included specific training for psychologists and teachers on how to interact neutrally with participants, ensuring that assistance was limited to reading or explaining questionnaire items without influencing responses. Measures such as using neutral language and avoiding suggestive cues were emphasized during training. These steps were designed to maintain the integrity and reliability of the data collected. All assessments were conducted in quiet, controlled settings to minimize distractions and ensure participant comfort. For visually impaired participants, sessions were held in designated rooms within the Blind Association, while control group participants completed assessments in similarly controlled environments at the university. Efforts were made to schedule assessments at consistent times of day for all participants, where feasible, to reduce variability in responses due to external factors such as fatigue or daily routines. Participants completed a demographic form alongside three psychological assessments: the Liebowitz Social Anxiety Scale (LSAS) and the Rosenberg Self-Esteem Scale (RSES) both in Arabic. Questionnaires were completed on-site, with visually impaired participants receiving assistance from psychologists and teachers.

Study Tools

1. Demographic Information Form: This form collected details such as age, gender, marital status, and education level.
2. Liebowitz Social Anxiety Scale (LSAS): The LSAS is a 24-item scale that assesses fear and avoidance in social situations.[15] It includes two subscales measuring fear of social interaction and performance anxiety. Scores range from 0 (none) to 3 (severe), with a cutoff score of 60 indicating the severity of symptoms.
3. Rosenberg Self-Esteem Scale (RSES): The RSES measures self-esteem and includes ten items rated on a four-point Likert scale.[16] It evaluates global self-worth, with scores below 15 indicating low self-esteem.

Translation Procedure

Translation followed the guidelines for cross-cultural adaptation.[17] Two translators independently translated the scales from English to Arabic. Differences were resolved by consensus, followed by back-translation by two additional independent translators. An expert committee reviewed the translations for consistency and suitability. The final version was in classical Arabic to ensure broad applicability across Arabic-speaking regions. LSAS and RSES have excellent reliability (Cronbach's $\alpha = 0.94$ and 0.89) in this study's population.

Statistical Analysis

The primary independent variables were the LSAS and RSES scores. Data analysis was performed using IBM SPSS software, version 22. Descriptive statistics, including means, standard deviations (SD), and percentages, were used to summarize quantitative and categorical variables. Pearson's chi-squared test assessed associations between categorical variables, while t-tests for equality of means were used for comparing continuous variables and differences between groups. A p-value of <0.05 indicated statistical significance.

Results

Basic Characteristics of the Studied Sample

The study included 62 participants, with 24 (38.7%) visually impaired individuals and 38 (61.3%) sighted individuals. The mean age of the total sample was 23 years with a standard deviation (SD) of 2.54. The sample included 44 males (71%) and 18 females (29%). Most participants were single (95.2%), and only 4.8% were married. Regarding education, 4.8% of participants had a secondary-level education, while the majority (95.2%) had university-level education (Table 1).

Table 1 Basic Characteristics of The Studied Sample

Variables	\No	%
Age mean (±SD)	23 (2.54)	
Gender		
Male	44	71
Female	18	29
Marital		
Single	59	95.2
Married	3	4.8
Education Level		
Secondary	3	4.8
University	59	95.2
Vision Status		
Impaired	24	38.7
Sighted	38	61.3

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Distribution of the Sample Based on Vision Status

Comparing visually impaired and sighted groups, there was a significant difference in age between the two groups (p = 0.013). The mean age was higher among visually impaired individuals (24 ± 2.8 years) compared to sighted participants (22.4 ± 2.2 years). There were no significant differences between the groups concerning gender (p = 0.082), marital status (p = 0.845), or educational level (p = 0.308) (Table 2).

Comparison of Psychological Measurements Between Groups

The mean score on the Rosenberg Self-Esteem Scale (RSES) was slightly higher for visually impaired participants (18.13 ± 2.66) compared to sighted participants (17.42 ± 2.04). However, this difference was not statistically significant (p = 0.244). Similarly, the mean score on the Liebowitz Social Anxiety Scale (LSAS) was 32.63 ± 24.19 for visually impaired individuals and 36.68 ± 22.68 for sighted individuals, but this difference was not significant (p = 0.506) (Table 3).

Discussion

The study aimed to compare self-esteem and social anxiety levels between visually impaired and sighted individuals. The results showed that the average age was higher in the visually impaired group (24±2.8 years) compared to the sighted group (22.4±2.2 years), with a statistically significant difference (p = 0.013). This difference might be explained by the recruitment process or the possibility that older individuals with visual impairments are more likely to participate in research studies, given their interest in addressing social and psychological challenges. The gender

Table 2 Distribution of the Studied Sample Based on Vision Status

Variables	Vision Status		P-value
	Impaired	Sighted	
	N=24 (38.7%)	N=38 (61.3%)	
Age mean (±SD)	24±2.8	22.4±2.2	0.013*
Gender			
Male	14 (58.3)	30 (78.9)	0.082
Female	10 (41.7)	8 (21.1)	
Marital Status			
Single	23 (95.8)	36 (94.7)	0.845
Married	1(4.2)	2 (5.3)	
Education Level			
Secondary	2 (8.0)	1 (2.7)	0.308
University	23 (92.0)	36 (97.3)	

Note: * P < 0.05 (significant).

Table 3 Comparison of Psychological Measurements Between Groups

Independent Samples Test					
	Vision status	N	Mean	Std. Deviation	p-value
Rosenberg self-esteem scale	Impaired	24	18.13	2.659	0.244
	Sighted	38	17.42	2.035	
Liebowitz social anxiety scale	Impaired	24	32.63	24.191	0.506
	Sighted	38	36.68	22.680	

distribution, marital status, and educational level were not significantly different between the groups, suggesting that these demographics were relatively balanced across visually impaired and sighted participants.

In terms of psychological measures, the Rosenberg Self-Esteem Scale (RSES) scores were not significantly different between visually impaired (mean = 18.13) and sighted participants (mean = 17.42; p = 0.244). Similarly, the mean scores on the Liebowitz Social Anxiety Scale (LSAS) were comparable between visually impaired (mean = 32.63) and sighted individuals (mean = 36.68; p = 0.506). These findings indicate that, despite differences in visual abilities, self-esteem and social anxiety levels did not differ significantly between the groups.

The findings of this study are consistent with previous research, which has often reported that visually impaired individuals can achieve similar levels of self-esteem to sighted individuals when they have access to social support and adaptive skills. For instance, Pinquart and Pfeiffer[18] concluded that visually impaired individuals could maintain self-esteem levels comparable to their sighted peers when they are well-integrated into social environments. The lack of significant differences in social anxiety scores aligns with studies by Wong and Brown,[19] who found that visually impaired individuals who received social skills training did not exhibit significantly higher levels of social anxiety compared to sighted controls.

However, other studies have reported elevated levels of anxiety in visually impaired individuals, often attributing this to social isolation and difficulties in communication.[20] The discrepancy between this study and those findings may be due to the specific context of Saudi Arabia, where social norms and family structures can provide strong social support systems for visually impaired individuals, potentially mitigating the impact of their impairments on anxiety.[21]

Limitations

This study has several limitations that should be considered when interpreting the results. First, the sample size was relatively small (24 visually impaired and 38 sighted), which may limit the generalizability of the findings to the broader population of visually impaired individuals. Also, the small sample size, particularly for the visually impaired group, is due to the lack of approval from other charity associations for the blind to participate in the study, limiting our access to a broader pool of participants. Additionally, the reliance on self-reported measures could also introduce response bias, particularly in a cultural context were admitting to psychological distress may carry a stigma. Finally, the study only included individuals from Riyadh, which may not reflect the experiences of visually impaired individuals from other regions of Saudi Arabia or different cultural backgrounds.

Despite these limitations, the study has several strengths. The use of validated psychological scales like the RSES and LSAS allows for reliable assessment of self-esteem and social anxiety. Furthermore, the translation and adaptation of the scales into classical Arabic ensures cultural relevance and applicability to other Arabic-speaking populations. The inclusion of a control group also strengthens the comparative analysis, offering insights into the psychological experiences of visually impaired individuals relative to their sighted peers.

Future research should aim to include a larger and more diverse sample to enhance the generalizability of the findings.[22] Longitudinal studies would also help in understanding how self-esteem and social anxiety evolve over time among visually impaired individuals, especially in response to interventions such as social skills training.[23] Additionally, exploring the role of family and community support systems could provide a deeper understanding of the protective factors that contribute to psychological resilience in this population.[24]

Conclusion

This study highlights important implications for understanding and supporting visually impaired individuals. It suggests that visual impairment alone may not directly lead to higher social anxiety or lower self-esteem, emphasizing the mitigating role of strong cultural and social support systems. These findings can inform mental health professionals in developing targeted interventions focusing on enhancing social integration and support for visually impaired individuals. The study also identifies gaps in existing literature, providing a foundation for future research, such as longitudinal

studies on the psychological trajectories of this population. Policymakers can use these insights to design inclusive programs addressing both psychological and social needs.

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Author Contributions

The author made a significant contribution to the work reported, whether that is in the conception, study design, execution, acquisition of data, analysis and interpretation, or in all these areas; took part in drafting, revising or critically reviewing the article; gave final approval of the version to be published; have agreed on the journal to which the article has been submitted; and agree to be accountable for all aspects of the work.

Disclosure

The author reports no conflicts of interest in this work.

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