



Sriwijaya Journal of Ophthalmology

Journal Homepage: <https://sriwijayaophthalmology.com/index.php/sjo>

Relationship between Usage of Eye Prosthetics with Anxiety: A Literature Review

Gina Sonia Fensilia Yolanda^{1*}

¹Department of Ophthalmology, Faculty of Medicine, Universitas Sriwijaya / Dr. Mohammad Hoesin General Hospital, Palembang, Indonesia

ARTICLE INFO

Keywords:

Eye prosthetics
Anxiety
Quality of life

Corresponding author:

Gina Sonia Fensilia Yolanda

E-mail address:

ginajuli2021@gmail.com

All authors have reviewed and approved the final version of the manuscript.

<https://doi.org/10.37275/sjo.v4i1.60>

ABSTRACT

Eyes are not only a functioning organ for vision but also an integral part of one's self esteem if it functions normally. A loss of this function with or without disfigurement will give a significant impact on someone's mental wellbeing and if not identified and managed quickly it will deranged into mental illness. While eye prosthetics help, it is not without flaws. One of the most prominent mental disease related to these cases are anxiety. This journal serves as a review for the updated evidence for this particular topic especially the risks involved in developing said mental illness so modulation of intervention could be given to patients with eye prosthetics.

1. Introduction

Each element of the human body has a unique significance and function but the face is particularly important as it is the means by which people are recognised and what is remembered about them when they are absent. Through interactions with others, an individual develops a self-image which is mainly based on how others react to them and how they see themselves in any particular setting. Men (but mostly women) are judged by their appearance and their self-esteem is influenced by the reactions of others.

The eyes and the surrounding periocular region are the dominant facial component for the purpose of interpersonal communication which conveys understanding, self-expression and non-verbal communication. When an eye is blinded through loss or disfigurement individuals must adjust to a new self-image as well as cope with impaired depth perception and reduced visual range on the affected

side. They must also overcome anxieties about the health of their remaining eye and mucoid discharge associated with prosthetic eye wear. One of the solutions for this problem is the usage of prosthetic eye. Although prosthetic eye wearers mostly express high levels of satisfaction with their eye prosthesis, living with an ocular prosthesis has a significant impact on psychosocial factors and social interactions.

Prosthetic eye wearers report considerable psychological issues, such as excessive shyness, depression, and generalised and social anxiety. A study reported that changes in appearance, ongoing issues with the eye socket's response to prosthetic eye wear, and impaired visual perception, were common sources of complaint for prosthetic eye wearers. In Germany, the incidence is 88% (65% on a daily basis). A previous study identified recreational, social and workplace activities as the

main areas where functional difficulties are experienced by prosthetic eye wearers and demonstrated how eye loss and prosthetic eye wear can negatively affect anophthalmic patients' behaviour and cognitive processing. But while the loss of an eye is a shocking and traumatic event it should be noted that negative feelings reduce significantly over time and that feelings of acceptance and happiness significantly increase.

Previous literature, employing psychometric scales, has explored the psychological impact of living with an ocular prosthesis and the relationships between psychosocial, clinical, and demographic factors. However, the majority of this research has focused on the impact of appearance-related concerns while the role of other important concerns such as mucoid discharge, visual perception and functional problem areas have not been considered in any depth.

Anxiety

Anxiety disorders – defined by excess worry, hyperarousal, and fear that is counterproductive and debilitating – are some of the most common psychiatric conditions in the Western world. The prevalence of anxiety disorders in the United States is estimated to be 18%, and their annual cost is reported to be \$42.3 billion. In the European Union (EU), over 60 million people are affected by anxiety disorders in a given year, making them the most prevalent psychiatric conditions in the EU. The Global Burden of Disease (GBD) study estimated that anxiety disorders contributed to 26.8 million disability adjusted life years in 2010. While a number of reviews have focused on the burden of depression and its economic, social, and health care policy implications, substantially fewer have assessed anxiety. The past decade has seen increased research interest into anxiety disorders, in large part because of a greater recognition of their burden and the implications associated with untreated illness. Clinical reviews have shown that the presence of an anxiety disorder is a risk factor for the development of other anxiety and mood disorders and substance abuse. In clinical and population based studies, the

development of comorbidities makes the treatment of primary and secondary disorders difficult, contributes to low remission rates, poor prognosis and risk of suicide. Untreated anxiety has been associated with significant personal and societal costs, related to frequent primary and acute care visits, decreased work productivity, unemployment, and impaired social relationships.

Eye prosthetics and anxiety

The etiology of eye loss did not significantly influence anxiety in the experienced prosthetic eye wearers who participated in a previous study but negative feelings have been shown to be more intense for young people when they first lose their eye, especially through accidents. The participants were equally concerned about appearance, mucoid discharge and reduced depth perception and visual range, but concerns about appearance generated significant levels of stress while discharge and visual perception concerns generated significant levels of anxiety. Appearance concerns were negatively correlated with social factors and support, which suggests that the stress generated by concerns about appearance is associated with social interactions in a way that living with discharge and visual perception concerns are not. It seems that while discharge and visual perception issues generate anxiety, these factors can be hidden from public scrutiny and are less likely to cause stress in social situations. Most participants in this study (77%) were comfortable with the way they appeared to others but being stared at or being photographed were stressful situations for many prosthetic eye wearers.

Older participants in a previous reported study suffered significantly anxiety and appearance anxiety than younger participants which is consistent with many other studies that have found that while older people are often dissatisfied with their bodies, their outward appearance is less concerning and their sense of identity and self-esteem is more established than it is for younger adults. Older participants felt more accepted by society and social group, as did married participants who also suffered less appearance anxiety suggesting, together with other

studies that social support is important for prosthetic eye wearers' psychological wellbeing. The importance of social support is also reflected in the finding that participants who had problems with employment, leisure and social functioning were at higher risk of being depressed, anxious and stressed as well as suffering appearance anxiety and not feeling accepted by society. Again, these findings were consistent with the findings of other studies. Duration since eye loss was another important factor influencing the psychological well being of participants as found by Pine et al who reported that almost all concerns with appearance, discharge, and appearance at time of eye loss significantly reduce after at least two years. This implies that psychological help may be more urgent at time of eye loss but this study has demonstrated that a significant need exists for many experienced prosthetic eye wearers as well.

Prosthetic eye wearers overall do not appear to suffer anxiety more or less than the general population. For example in the UK, the general population means for anxiety is 3.76 (SD 5.9) and stress 9.46 (SD 0.4). These means may be compared with the means of participants in a study 4.7 (SD 6.33). However, as found in other studies a disproportionately high number of participants reported high or extremely high levels of depression, anxiety or stress. This issue is important as 37% of study participants (more than 2 of every 5 anophthalmic patients) were suffering elevated or extreme levels of depression, anxiety or stress. The data shows that socially isolated younger prosthetic eye wearers who have recently lost their eye and who worry about their appearance are more likely to be depressed than other anophthalmic patients. These patients are even more likely to be depressed if they do not have a partner to share their concerns with and have employment, recreational, and/or social functioning problems. Clinicians should recognize patients with these characteristics as potential depressives and provide them with psychological support as part of their overall treatment. While social settings are important predictors for depression; anxiety and stress appear to derive more from concerns about appearance and practical issues

associated with living with a prosthetic eye such as reduced depth perception and visual range, and coping with mucoid discharge from the eye socket. Prosthetic eye wearers who have problems with employment, leisure and social functioning are at higher risk of being depressed, anxious and stressed as well as suffering appearance anxiety and not feeling accepted by society. Older patients and those who feel accepted by society appear to suffer less anxiety and stress. This study has demonstrated a link between social settings and depression, and between concerns about depth perception, visual range, appearance and mucoid discharge with anxiety and stress. Two of every five anophthalmic patients are likely to be suffering elevated or extreme levels of depression, anxiety or stress and it is recommended that psychologists be part of an integrated team approach to address their needs.

The significant association between depression and anxiety symptoms in this population is similar to results in general populations. Since prosthetic eye wearers had a higher incidence of depression symptoms, the logical consequence is also the higher incidence of anxiety symptoms in this study. There are not only a noticeable number of patients that are underdiagnosed regarding depression but also a high number of patients with undetected anxiety symptoms, which again confirms the need for professional long-term psychological care. Gender was associated with higher anxiety symptoms similarly to what has been reported for the general population, with females having more anxiety than males. Therefore, special attention should be given to the mental health status of females wearing prosthetic eyes. In addition, there was also a significant association between lower appearance-related social function and anxiety. This is in accordance with the findings of previous studies and suggests that the restoration of facial appearance through good oculastic care has a significant influence on social interactions and acceptance, resulting in better quality of life and better general mental health.

2. Conclusion

Anxiety and depression disorders seem to be underdiagnosed in the prosthetic eye-wearing population. Gender was associated with higher anxiety symptoms similarly to what has been reported for the general population, with females having more anxiety than males. In addition, there was also a significant association between lower appearance-related social function and anxiety. This is in accordance with the findings of previous studies and suggests that the restoration of facial appearance through good ocularistic care has a significant influence on social interactions and acceptance, resulting in better quality of life and better general mental health. A standardized psychometric screening regarding these depression and anxiety disorders should be implemented in the routine of clinical care.

functioning. *J Ophthalmol Vis Sci.* 2017; 2(1): 1016.

3. References

1. A. Pine NS, Pine KR. Depression, Anxiety and Stress Indicators for Prosthetic Eye Wearers. *Clinical Ophthalmology.* 2020; 14: 1715–1723.
2. B. Heindl LM, Trester M, Guo Y, Zwiener F, Sadat N, Pine NS, Pine KR, Traweger A, Rokohl AC. Anxiety and Depression in Patients Wearing Prosthetic Eyes. *Graefes Arch Clin Exp Ophthalmol.* 2021; 259:495–503.
3. F. Remes O, Brayne C, Linde R, Lafortune L. A Systematic Review of Reviews on the Prevalence of Anxiety Disorders in Adult Populations. *Brain Behav* 2016 Jun 5;6(7): e00497.
4. C. Pine KR, Sloan BH, Jacobs RJ. *Clinical Ocular Prosthetics.* New York, NY: Springer. 2015.
5. D. Pine K, Sloan B, Stewart J, Jacobs RJ. Concerns of anophthalmic patients wearing artificial eyes. *Clin Exp Ophthalmol.* 2011; 39:47–52.
6. E. Pine NS, De Terte I, Pine KR. The impact of eye loss and prosthetic eye wear on recreational, occupational and social areas of