

Impact of Amblyopia Treatment on Vision-Related Quality Of Life

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Editorial

Treatment of amblyopia during childhood can have both positive and negative impacts in later life. The treatment of amblyopia could influence Vision-related Quality of Life in adults and children, particularly social relationships and emotions [1-3]. For example, children with a history of occlusion were 35% to 37% more likely than children without visual defects to have suffered from verbal or physical bullying at school [4]. Many parents associate occlusion treatment with a decrease in children's self-confidence because of poor vision during occlusion [1,2,5] and report greater distress and more conflict at home [6-10].

Koklanis et al. [8] conducted a study in Australia on the psychosocial impact of amblyopia and its treatment from both the children's (aged 3 to 15 years) and parents' perspectives. The investigators performed a semi-structured interview with both children with amblyopia and their parents. In addition, parents were asked to complete a psychological inventory, the Behaviour Assessment System for Children. The study showed that dealing with stigma and the perceptions and responses of peers were found to be of central significance in amblyopia therapy and that stigma and the perceptions of peers had adverse consequences for some children's identity and psychosocial wellbeing.

In contrast, some studies have shown that parents of amblyopic children undergoing occlusion therapy do not report more stress or more psychosocial impacts in their children than parents of children who were not occluded. The level of parent's stress and child's psychosocial wellbeing in the occluded group did not notably change following the onset of occlusion treatment [1,11]. For example, in the United Kingdom, Choong et al. [11] investigated the psychosocial impact of occlusion therapy on children and their guardians using a questionnaire of perceived stress index (PSI) and the perceived psychosocial questionnaire (PPQ). Findings from this study showed that carers of children undergoing occlusion therapy did not experience statistically significant additional stress or perceive their child as showing poorer psychosocial wellbeing compared to carers in the non-occluded group. In the occluded group, the stress level of guardians and the child's psychosocial wellbeing did not significantly alter the subsequent onset of occlusion treatment. Likewise, this finding is consistent with the previous finding that parents' perspectives differ from those of children. This study found no evidence to indicate that occlusion therapy has negative psychosocial impact on carers and children alike. Koklanis et al. [8] suggested that this can occur if the "parents, siblings and peers also assisted in maintaining good self-esteem and a good attitude towards their treatment". In other words, it is the behaviour of people close to the child with amblyopia that can determine whether or not they suffer any psychological impacts due to social relations and that is often a

result of society and culture and the quality of interpersonal relationships.

The findings from Choong et al. [11] differ from Koklanis et al. [8] findings although there was no difference in the education level of parents and minimal differences in the society and culture. The reason for the different findings between the two studies could be that Choong et al. [11] assessed the children by their parents' perspectives while Koklanis et al. [8] assessed the children by both children's and their parent's perspectives. Another reason for the different findings between the two studies could be that the different age groups assessed. In the Koklanis et al. [8] study, the age of participating children ranged from 3 to 15 years (mostly school-aged), while in the Hrisos et al. [1] and Choong et al. [11] studies, the children's age was preschool (3 to 4 years).

Likewise, although the impact of amblyopia treatment on the child and family was always worse in the occlusion group compared with the atropine group [3,12], children with amblyopia and their parents accepted both occlusion and atropine penalisation modalities [13]. A number of studies found that penalisation therapy for amblyopia generates negative behavior in children and has emotional (distressed or an increase in conflict at home) and psychosocial effects on family's Quality of Life (QoL) such as social acceptance [2], interpersonal relationships and employability [14,15]. However, it has been suggested that use of atropine for penalisation rather than occlusion has less negative social outcomes and better acceptance by children with amblyopia [13].

In addition to occlusion treatment for amblyopia, optical correction for refractive error can affect QoL. In Mexico, school-aged children who wore spectacles reported significant impacts on social relations function even at modest levels of baseline refractive error [16,17]. In contrast, Webber et al. [2] reported that lower self-perception of social acceptance in amblyopes was not associated with spectacle wear suggesting again that differences may arise due to culture.

Woodruff et al. [18] reported that social deprivation was not associated with poor outcomes with amblyopia treatment. However, Leenheer, et al. [19] compared parental perceptions of adherence to occlusion treatment for amblyopia in low- and high-income families. They found that parents in low- and high-income families have different viewpoints concerning factors that influence adherence to occlusion. Their study conclude that parents from high-income families were more concerned with physician details and contact while parents from low-income families were concerned with allergic reactions, the cost of patches and children removing the patch.

Therefore, knowing that amblyopia treatment can potentially affect children's psychosocial wellbeing, health outcomes need to integrate both vision and psychosocial implications of amblyopia treatment. Efforts to reduce any negative psychosocial impacts of treatment

should be made even if the treatment aims to reverse amblyopia and restore visual acuity.

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