

BRIEF COMMUNICATION



# Functional visual symptoms in children and young people: mental health profiles and case review

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Functional presentations—sometimes called perplexing presentations, or medically unexplained symptoms—include a wide range of physical symptoms which are not fully explained by clinical findings [1]. In children and young people (CYP) with functional symptoms there may be problems in the family or at school, pre-existing physical illness or psychological disorders such as anxiety, low-mood or behavioural difficulties [2, 3].

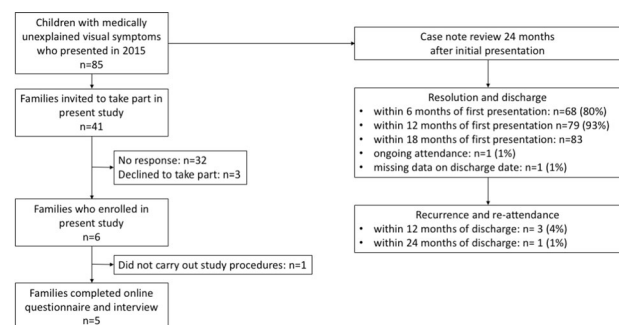
Yet, little is known about psychiatric co-morbidity in CYP presenting with functional visual symptoms (FVS), a presentation common to eye clinics [4]. In CYP, FVS is generally considered to resolve spontaneously, and treatment typically includes reassurance. Children with other functional symptoms (e.g. medically unexplained headache or seizures) may benefit from psychological interventions, but it not currently clear whether CYP with FVS may also benefit [1]. We identified 85 CYP aged 5–16 years (54 females; median age 9 years) with FVS presenting to Moorfields Eye Hospital during the calendar year of 2015. In 2016/2017, following NHS-HRA approval (16/LO/0837), we reviewed the case notes. We invited all families for a face-to-face interview and assessment of the CYP’s mental health. 6 families consented to take part (Fig. 1). Five families completed the online Development and Wellbeing Assessment (DAWBA [5]) questionnaire (age 7–13 years, 3 girls, Table 1), a validated computerised clinical assessment for mental health problems in children. Four also attended a semi-structured clinical interview with a child and adolescent psychiatrist (IH) and clinical psychologist (AC).

FVS had included intermittent blurred vision, double vision and difficulties with reading. In four children, the symptoms had resolved; one still had intermittent blurred vision. The DAWBA did not identify any current emotional, behavioural, social or educational difficulties. Two reported other functional symptoms (e.g. abdominal pain, nausea or headaches). Interviews indicated that in all cases there was a potential identifiable initial trigger of FVS, including difficulties at school and bereavements, on a background of parents describing their child as having a sensitive personality.

The participation rate was lower than anticipated (5/41, 12.2%). However, case note review showed that 84 of the originally

identified 85 CYP (99%) had been discharged after their first episode of FVS or were under follow-up for treatable eye conditions such as strabismus (Fig. 1), with a median number of consultations of 2 (interquartile range, 1–3), and median follow-up of 35 days (IQR 0–118). Four CYP (5%) had re-attended with another episode of FVS, after a median interval of 265 days (IQR 203–332) after discharge. In all four, the subsequent episode resolved with re-assurance. One 14-year old girl was still under follow-up for ongoing subjective reduction in vision, 30 months after initial presentation.

In summary, none of the children who underwent detailed mental health assessment met criteria for a psychiatric disorder, and in all of them, the FVS had resolved. The spontaneous remission and absence of psychiatric problems may have contributed to the apparent reluctance of families to participate in this study. Our finding of a high rate of discharge from clinics and low rate of re-attendances may confirm that in most children, FVS are at the milder end of the spectrum of functional symptoms, and that the re-assurance ophthalmologists provide is sufficient.



**Fig. 1 Participant flowchart.** On the left, participation in study procedures. On the right, resolution, discharge and re-attendance rates of original cohort.

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**Table 1.** Demographic characteristics, visual symptoms, outcomes and psychological findings of the five study participants.

| Age at study participation, gender | Vision loss symptoms at presentation | Symptoms resolved or persistent at time of current assessment  | Mental health symptoms  | Any other medically unexplained physical symptoms | Clinical impression   |
|------------------------------------|--------------------------------------|--|---|---|---|
| 13 years, girl                     | Intermittent blurred vision          | Persistent—some continued blurred vision but family reported that this caused no undue concern or impairment | No current emotional, behavioural, social or educational difficulties | None  | Change of school and family bereavement predated vision loss symptoms. Child reported a desire to achieve                   |
| 10 years, girl                     | Blurred and double vision            | Resolved   | No current emotional, behavioural, social or educational difficulties | Tummy aches, nausea when nervous                  | Parent reported that child had a sensitive personality and was easily worried   |
| 9 years, boy                       | Blurring and darkening of vision     | Resolved   | No current emotional, behavioural, social or educational difficulties | Tummy aches, headaches                            | Had previously been bullied at school; parent described child as 'emotional' and sometimes lacking in confidence            |
| 7 years, boy                       | Reduced vision on reading            | Resolved   | No current emotional, behavioural, social or educational difficulties | None  | Parents explained that there had been a classroom discussion about 'going blind' prior to the onset of vision loss symptoms |
| 10 years, girl                     | Blurred vision                       | Resolved   | No current emotional, behavioural, social or educational difficulties | None  | Did not complete clinical interview   |

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## AUTHOR CONTRIBUTIONS

All authors contributed to the study conception and design. Material preparation, data collection and analysis were performed by A Coughtrey and M Daniel. The first draft of the manuscript was written by A Dahlmann-Noor and all authors commented on the manuscript and developed the final version.

## COMPETING INTERESTS

The authors declare no competing interests.

## ADDITIONAL INFORMATION

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