

# **Depictions of strabismus in children's animated films**

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## **BACKGROUND**

Strabismus is known to negatively affect patients' self-confidence and ability to interact with society. Strabismus is commonly depicted in animated films marketed to children, potentially influencing the perception of strabismus by young impressionable audiences.

## **METHODS**

We reviewed all animated films released by Walt Disney Animation Studios from 1989 to 2022 and all films released by Pixar, DreamWorks, and Studio Ghibli before 2023 and identified all characters with strabismus. Five raters each independently performed a character trait analysis of all characters with strabismus, and a sample proportion test was used for statistical comparison of these traits.

## **RESULTS**

One hundred twenty five movies met inclusion criteria. We identified 46 characters with strabismus, with at least 1 character identified in 33 of the 125 films. These characters were more likely to be portrayed as unintelligent (30%) than intelligent (2%), villains (15%) than heroes (4%), and followers (41%) than leaders (7%). Twenty-six (58%) were either mute or did not speak, 24% were portrayed as frightening, 35% had other physical deformities, and 35% were clumsy. Inter-rater reliability testing demonstrated substantial agreement (Kappa 0.61–0.80) or moderate agreement ( $\kappa$  0.41–0.60) among raters for most of the character traits.

## **CONCLUSIONS**

Characters with strabismus are common in animated films, where they are significantly more likely to be portrayed negatively than positively. These films are marketed to children, and their negative depictions of strabismus likely exacerbate the social stigma faced by children with strabismus.