

## Bullying and psychotic experiences: Type, reason, timing and gender

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- Bullying victimisation is a commonly experienced stressful life event in childhood and adolescence, associated with a number of mental health problems in childhood and adolescence, including psychotic experiences (Arseneault, 2018)
- Intention to harm may make an adverse experience more likely to lead to psychotic experiences (Moriyama et al., 2018)
- 22.4% of Irish primary school children and 11.8% of post-primary children report having been bullied (Foody, Samara, & O'Higgins Norman, 2017)



- A recent meta-analysis of types of trauma and psychotic experiences suggested that different types of traumatic experiences are differently associated with psychotic experiences (Croft, 2018)
- One study of a help-seeking population found different associations between different types of bullying and types of psychotic experiences, including relationships between verbal bullying and paranoia and physical bullying and grandiosity (Catone, 2017)
- Evidence showing different mediators between bullying and hallucinatory and delusional experiences suggests the existence of different but related pathways leading to the development of different PEs (Moffa et al., 2017)



- GUI child cohort asked children and parents about bullying at ages 9 and 13, including questions about the form the bullying took
- Psychotic experiences were assessed at age 13 by a subset of questions from the Adolescent Psychotic-Like Symptom Screener (Kelleher, Harley, Murtagh, & Cannon, 2011)
- Logistic regression was used to calculate ORs and 95% CIs for the relationship between each type and cause for bullying at each time-point for each reporter, and each type of psychotic experience
- Sorted secondary analyses were undertaken on the types of bullying to examine gender differences in the relationship
- Finally, the reasons for bullying were also investigated using logistic regression



- PEs were reported by 15.97% of those children who had reported bullying at age 9, and 27.33% of those who reported bullying at age 13
- PEs were reported by only 11.03% of those who had not reported bullying at age 9, and 11.55% of those who had not reported bullying at age 13
- This demonstrates a trend for proximity, with a higher risk of adolescent psychotic experiences in those who report bullying in adolescence (relative to childhood)
- Those reporting persistent bullying had an even greater risk of PEs, irrespective of whether bullying was reported by parents or children



- In childhood, only verbal bullying was associated with an increased risk of PEs. Previous research has demonstrated that verbal bullying is strongly related to paranoia (Catone et al., 2017)
- Bullying by exclusion was the only type of bullying specifically associated with delusional experiences
- While childhood bullying was associated with adolescent hallucinations this association was not a specific to a type of bullying, with the possible exception of physical bullying
- In adolescence, both bullying by exclusion and sexual comments were associated with an increased risk PEs



- Boys were more likely to experience physical bullying while girls were more likely to experience other forms of bullying in childhood
- Overall, there appeared to be a particularly strong relationship between bullying by exclusion and PEs but on closer inspection of the data this effect is stronger for boys than girls
- Experiencing physical bullying, written bullying and bullying by sexual comments were specifically associated with PEs in girls
- The severity or frequency of bullying may differ between boys and girls and this may account for some of these discrepancies
- Response from observers may also vary with type of bullying and gender



- Most reasons for bullying were associated with an increased risk of PEs, particularly ethnicity and jealously in childhood and disability in adolescence
- Mechanisms for the relationship between ethnic minority position and psychotic phenomena include social adversity, low ethnic density and a heightened sense of perceived ethnic discrimination
- Previous research has highlighted that children with neurodevelopmental disorders have an elevated risk of PEs



- We are unable to disentangle the directionality of this association as PEs were not measured in childhood, and previous research has found evidence for a bi-directional relationship between bullying and PEs (Kelleher et al., 2013)
- There are a number of common risk factors upstream of bullying which contribute both to risk of bullying and risk of psychosis, some of which were not accounted for
- The strongest results were found in the cross-sectional analysis between bullying and psychotic experiences reported at age 13. It is not possible to infer causality from this data



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