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We Need to Talk About Prevention

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We Need to Talk about Prevention.....

Editorial linked to Rinvall et al (2020)

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Since the turn of the century the study of psychotic experiences in the general population has become a major paradigm in mental health research. We now know that psychotic experiences are a relatively prevalent phenomenon, particularly in children and adolescents (1). They do not occur randomly and are clustered with other psychopathology (2,-4), poor functioning (5,6) and suicidal thoughts and behaviours (4,7). .A systematic review (3) has shown that psychotic experiences in childhood and adolescence are associated with a four-fold increased risk of later psychotic disorder but that evidence for longitudinal associations with non-psychotic disorder is sparse. Recent work has shown that psychotic experiences by themselves appear to have low predictive values and low sensitivity for later psychotic disorder (8) and that a more nuanced approach is needed to harness the predictive power of psychotic experiences.

In this issue of the *Journal*, Rimvall and colleagues (9) exploit the power of the Danish national registries to answer some important questions about the prognostic value of childhood psychotic experiences for mental health disorder and treatment in adolescence. In particular, they are interested in examining the unique predictive power of psychotic experiences compared with researcher-diagnosed psychopathology for subsequent diagnoses and treatment.

Using the Danish personal identification numbers, the researchers carried out record linkage between a national cohort of 11 year old children and two national registers: the Danish National Patient Register and the Prescription Database, to give information on outcomes up to age 17. In this way, Rimvall and colleagues (9) showed that children who reported psychotic experiences at age 11 had a 3-fold increased risk of a subsequent mental health disorder which required attendance at a child and adolescent psychiatry service and a 2.7-fold increased risk of receiving psychotropic medication. This risk was broadly similar to the risk of later psychiatric diagnosis among children who had met criteria at age 11 for a researcher-diagnosed mental disorder assessed using the Development and Well Well-Being Assessment (DAWBA) (10). This shows that children with *either* a DAWBA diagnosis or psychotic experiences at age 11 had an approximately 3-fold increased risk of diagnosis and treatment by child and adolescent mental health services within the subsequent 5-6 years., whereas children who had *both* DAWBA diagnosis and psychotic experiences at age 11 had an almost 8-fold risk of later mental disorder diagnosis and an almost 10-fold increased risk of psychopharmacological

treatment within 5-6 years. These substantial effect sizes for poor adolescent outcomes call into question our “wait and see” approach to childhood mental health problems.

Rimvall and colleagues (9) also found that children with a parental history of mental disorder had a 2-fold increased risk of later mental disorder while children with a family history of parental mental disorder *and* who also reported psychotic experiences had a four-fold increased risk of mental disorder and a six fold increased risk of psychopharmacology treatment. These findings elegantly demonstrate that reporting psychotic experiences in childhood has a synergistic effect on risks posed by either existing psychopathology or parental mental health history.

From the data provided in the paper we estimated that about one in 3 young people who had *both* signs of psychopathology *and* PEs at age 11 developed a treatable mental disorder within the next five years. Therefore it appears that Rimvall and colleagues (9) have identified a peri-pubertal “ultra-high risk” group for subsequent psychiatric outcomes. These risks are manifest in diagnosed disorder, contact with child and adolescent health services and psychopharmacological treatment. It now behoves us to consider how to translate these findings back to clinical practice and in order to do that we must address two further questions. Firstly, how do we identify young people at-risk? Secondly, how can we intervene in young people at risk to prevent later disorder?

The first step is to develop a screening tool to detect children at high risk of later psychopathology which can be easily and efficiently used in school settings. The DAWBA, although an excellent instrument is too protracted to be used in such a setting (the parent interviews alone requiring roughly 50 minutes to complete). The Strengths and Difficulties Questionnaire (SDQ) (11) is a short, well-validated screening tool for children and adolescents at-risk for psychopathology but does not contain any questions on psychotic experiences. The last two decades of evidence have indicated that psychotic experiences have earned their place in the assessment of psychopathology alongside internalising and externalising problems and can no longer be ignored, (12, 13, 14). As indicated by the findings in this issue of the Journal (9), a screening tool based on current psychopathology alone or psychotic experiences alone will fail to identify the majority of those who go on to have a subsequent disorder. Combining information about current psychopathology psychometrics with psychotic experiences will improve the identification of young people at risk of later mental disorder. In addition to psychopathology, such a screening tool could also include information on risk factors for psychopathology, such as adversity and family history of mental disorder.

The ultimate aim of identification of young people at risk is to intervene to prevent mental disorder outcomes and we can do this by targeting known risk factors and by enhancing known protective factors (15) Some clues about protective factors for psychotic experiences have emerged from the recent literature,. Bullying cessation (16) and improving self-concept (17) are both associated with significant reductions in incidence

of psychotic experiences and will confer benefits more broadly in terms of improving well-being. It is known that trauma and childhood adversity increase the risk of mental health problems including psychotic experiences (18,19). Social support from peers has been shown to have a protective effect on psychotic experiences among poly-victimized youth (particularly girls) (20).

The parent-child relationship has emerged as a key target for preventive intervention, particularly in those who have experienced adversity. We have recently shown that parent-child conflict mediates almost half of the relationship between childhood adversity and persisting externalising problems in a general population sample (21). Parental support (“My parents help with decision making”) and parental supervision (“My parents know how my free time is spent”) have been shown to mediate the relationship between adversity and psychotic experiences in adolescents (22) Qualitative work from our group has demonstrated that secure attachment relationships with an adult (parent or non-parent figures) are key to good outcomes in adulthood among young people with early adversity and psychotic experiences (23) Moving outside the family and school domains, higher levels of neighbourhood cohesion are associated with reduced risks of psychotic experiences among poly-victimized youth (24).

These findings give a blueprint to how to approach prevention in youth at-risk of psychopathology. Fostering self-esteem, improving parent-child relationships; promoting secure attachment relationships with trusted others; increasing social and neighbourhood

supports and reducing bullying will all play a part in improving outcomes for young people at-risk of mental disorder.

Screening for learning difficulties in schools and providing additional resource teaching hours is now commonly provided in many countries. Screening children for dental and visual problems and providing early intervention when needed is also accepted practice. Why can't we do the same for mental health difficulties? Alongside more general health promotion initiatives, we should move to a model of indicated and selective prevention in youth (15). Prevention has been proposed as one of the "grand challenges" for global mental health (25) and has been estimated to be highly cost-effective with savings of up to 83 dollars for every one dollar spent on health promotion and prevention (26). Because mental disorders begin in early life there is a large "knock-on" effect of preventing health and social service use in later years (27)

The title of this editorial refers to the novel, "We need to Talk about Kevin" (28), which tells the story of a troubled young man in whom warning signs of mental health problems are ignored until it is too late and tragedy ensues. We cannot continue to ignore the example set by other medical fields, such as cardiology, and oncology because the dividends of prevention are potentially much greater for mental health than for physical health (15, 28). The field of psychiatry should now shift its focus to a public mental health approach and face up to the "grand challenge" of prevention for the sake of our youth and future generations (29).

References

1. Kelleher, I., Connor, D., Clarke, M. C., Devlin, N., Harley, M., & Cannon, M. (2012). Prevalence of psychotic symptoms in childhood and adolescence: a systematic review and meta-analysis of population-based studies. *Psychological medicine*, 42(9), 1857-1863.
2. Kelleher, I., Keeley, H., Corcoran, P., Lynch, F., Fitzpatrick, C., Devlin, N., ... & Arseneault, L. (2012). Clinicopathological significance of psychotic experiences in non-psychotic young people: evidence from four population-based studies. *The British Journal of Psychiatry*, 201(1), 26-32.
3. Healy, C., Brannigan, R., Dooley, N., Coughlan, H., Clarke, M., Kelleher, I., & Cannon, M. (2019). Childhood and adolescent psychotic experiences and risk of mental disorder: a systematic review and meta-analysis. *Psychological medicine*, 1-11.
4. Bhavsar, V., Dorrington, S., Morgan, C., Hatch, S. L., McGuire, P., Fusar-Poli, P., ... & Hotopf, M. (2019). Psychotic experiences, psychiatric comorbidity and mental health need in the general population: a cross-sectional and cohort study in Southeast London. *Psychological medicine*, (In Press) doi: <https://doi.org/10.1017/S0033291719003106>

5. Healy C., Campbell, D., Coughlan, H., Clarke, M., Kelleher, I., & Cannon, M. (2018). Childhood psychotic experiences are associated with poorer global functioning throughout adolescence and into early adulthood. *Acta Psychiatrica Scandinavica*, 138(1), 26-34.
6. Trotta, A., Arseneault, L., Caspi, A., Moffitt, T. E., Danese, A., Pariante, C., & Fisher, H. L. (2019). Mental health and functional outcomes in young adulthood of children with psychotic symptoms: a longitudinal cohort study. *Schizophrenia bulletin*.
7. Yates, K., Lång, U., Cederlöf, M., Boland, F., Taylor, P., Cannon, M., ... & Kelleher, I. (2019). Association of psychotic experiences with subsequent risk of suicidal ideation, suicide attempts, and suicide deaths: a systematic review and meta-analysis of longitudinal population studies. *JAMA psychiatry*, 76(2), 180-189.
8. Sullivan, S. A., Kounali, D., Cannon, M., David, A. S., Fletcher, P. C., Holmans, P., ... & Owen, M. J. (2020). A Population-Based Cohort Study Examining the Incidence and Impact of Psychotic Experiences From Childhood to Adulthood, and Prediction of Psychotic Disorder. *American Journal of Psychiatry*, doi: 10.1176/appi.ajp.2019.19060654
9. Rinvall, M. K., van Os, J., Verhulst, F., Wolf, R. T., Larsen, J. T., Clemmensen, L., ... & Jeppesen, P. (2020) Mental health service use and psychopharmacological treatment following psychotic experiences in preadolescence. *American Journal of Psychiatry*. (In Press).

10. Goodman R, Ford T, Richards H, Gatward R, Meltzer H. The Development and Well-Being Assessment: Description and initial validation of an integrated assessment of child and adolescent psychopathology. *J Child Psychol Psychiatry*, 2000; 41(5) 645-55.
11. Goodman, R. (2001). Psychometric properties of the strengths and difficulties questionnaire. *Journal of the American Academy of Child & Adolescent Psychiatry*, 40(11), 1337-1345.
12. Kelleher, I., & Cannon, M. (2016). Putting psychosis in its place. *American Journal of Psychiatry*, 173(10), 951-952. doi: <https://doi.org/10.1176/appi.ajp.2016.16070810>
13. Caspi, A., & Moffitt, T. E. (2018). All for one and one for all: Mental disorders in one dimension. *American Journal of Psychiatry*, 175(9), 831-844.
14. Healy, C., Gordon, A. A., Coughlan, H., Clarke, M., Kelleher, I., & Cannon, M. (2019). Do childhood psychotic experiences improve the prediction of adolescent psychopathology? A longitudinal population-based study. *Early intervention in psychiatry*, 13(5), 1245-1251.
15. Arango, C., Díaz-Caneja, C. M., McGorry, P. D., Rapoport, J., Sommer, I. E., Vorstman, J. A., ... & Carpenter, W. (2018). Preventive strategies for mental health. *The Lancet Psychiatry*, 5(7), 591-604.
16. Kelleher, I., Keeley, H., Corcoran, P., Ramsay, H., Wasserman, C., Carli, V., ... & Cannon, M. (2013). Childhood trauma and psychosis in a prospective cohort study: cause, effect, and directionality. *American journal of psychiatry*, 170(7), 734-741.

17. Healy, C., Coughlan, H., Williams, J., Clarke, M., Kelleher, I., & Cannon, M. (2019). Changes in self-concept and risk of psychotic experiences in adolescence: a longitudinal population-based cohort study. *Journal of Child Psychology and Psychiatry*, 60(11), 1164-1173.
18. Varese, F., Smeets, F., Drukker, M., Lieveise, R., Lataster, T., Viechtbauer, W., ... & Bentall, R. P. (2012). Childhood adversities increase the risk of psychosis: a meta-analysis of patient-control, prospective-and cross-sectional cohort studies. *Schizophrenia bulletin*, 38(4), 661-671.
19. Bellis, M. A., Hughes, K., Ford, K., Rodriguez, G. R., Sethi, D., & Passmore, J. (2019). Life Course Health Consequences and Associated Annual Costs of Adverse Childhood Experiences Across Europe and North America: A Systematic Review And Meta-Analysis. *The Lancet Public Health*, 4(10), E517-E528.
20. Crush E, Arseneault L, Fisher HL. (2018) Girls get by with a little help from their friends: gender differences in protective effects of social support for psychotic phenomena amongst poly-victimised adolescents. *Soc Psychiatry and Psychiatric Epidemiology*, 53: 1413-1417.
21. Dhondt, N., Healy, C., Clarke, M., & Cannon, M. (2019). Childhood adversity and adolescent psychopathology: evidence for mediation in a national longitudinal cohort study. *The British Journal of Psychiatry*, 215(3), 559-564.
22. McMahon, E., Corcoran, P., Keeley, H., Clarke, M., Coughlan, H., Wasserman, D., ... & Cannon, M. (2019). Risk and protective factors for psychotic experiences

in adolescence: a population-based study. *Psychological medicine*, (In Press)

doi: <https://doi.org/10.1017/S0033291719004136>

23. Coughlan, H., Healy, C., Ní Sheaghda, Á., Murray, G., Humphries, N., Clarke, M., & Cannon, M. (2019). Early risk and protective factors and young adult outcomes in a longitudinal sample of young people with a history of psychotic-like experiences. *Early intervention in psychiatry*. (online) doi: <https://doi.org/10.1111/eip.12855>
24. Crush, E., Arseneault, L., Jaffee, S. R., Danese, A., & Fisher, H. L. (2018). Protective factors for psychotic symptoms among poly-victimised children. *Schizophrenia bulletin*, 44(3), 691-700.
25. Collins PY, Patel V, Joestl SS, March D, Insel TR, Daar AS....Glass RI (2011) Grand challenges in global mental health. *Nature*, 4775 (7354) 27-30.
26. Knapp, M., McDaid, D., & Parsonage, M. (2011). Mental health promotion and mental illness prevention: The economic case. Department of Health, London, UK.
27. Moffitt TE Caspi A. (2019) Psychiatry's opportunity to prevent the rising burden of age-related disease. *JAMA Psychiatry*, 76(5): 461-462.
28. Shriver, L. (2003). *We need to talk about Kevin*. New York: Counterpoint.
29. Scott J, Varghese D, McGrath J (2010) AS the Twig is bent, the tree inclines. *Adult mental health consequences of childhood adversity*. *Arch Gen Psychiatry*, 67(2) 111-2