Cynulliad Cenedlaethol Cymru | National Assembly for Wales
Y Pwyllgor Plant, Pobl Ifanc ac Addysg | Children, Young People and Education Committee
Ymchwiliad i Gwella Iechyd Emosiynol ac Iechyd Meddwl Plant a Phobl Ifanc | Inquiry into The Emotional and Mental Health of Children and Young People
EMH 64
Ymateb gan: Professor Ann John
Response from: Professor Ann John

Response to letter from the Chair of the National Assembly for Wales's Children, Young People and Education Committee dated 4th December 2017.

Regarding the oral evidence from the Together for Children and Young People Programme. Professor Dame Sue Bailey, Chair of the T4CYPP Expert Reference Group, suggesting that a further study should be commissioned to monitor prescribing trends in 2019.

As the Committee is aware I led a series of studies commissioned by the Welsh Government in response to concerns raised by the predecessor committee – on the prescribing of anti-depressant, anxiolytic, ADHD and antipsychotic medication in Wales for children and young people (2003-2013). This was followed by a Welsh Health Circular (WHC) to GPs, CAMHS clinicians and pharmacists highlighting the requirements of NICE guidance and the BNF for children in relation to prescribing practice, as well as, a Welsh Medicines Resource Bulletin and case study on Depression in young people in 2016 and two journal articles (1, 2).

The studies were conducted using primary care electronic health records of diagnoses and prescribing for young people up to the age of 18, 2003-2013, held anonymously in the privacy protecting Secure Anonymised Information Linkage (SAIL) Databank at Swansea University Medical School.

Summary of previous study findings

We found that rates of antipsychotic prescriptions increased modestly over the study period with significant increases only seen in 15-17 year olds. Prescriptions for typical antipsychotics decreased alongside a nearly two-fold increase for atypical antipsychotics. Incident prescriptions were significantly higher in boys and in deprived areas.

Rates of diagnosis of ADHD remained relatively stable over the study period while rates of prescribing with stimulants and atomoxetine were generally increasing .Incidence of prescribing more than doubled in 15-18 year olds. There was some evidence that the increase in prescribing was as a result of young people being maintained on medication for longer periods.

The incidence of antidepressant prescribing over the study period increased significantly, mainly in older adolescents. The majority of new antidepressant prescriptions were for citalopram although there was

evidence that prescribing of fluoxetine, in line with current guidance, was increasing. Recorded depression diagnoses showed a steady decline while depression symptoms more than doubled. Just over half of new antidepressant prescriptions were associated with depression (diagnosis or symptoms). Other antidepressant prescribing, largely unlicensed, was associated with diagnoses such as anxiety and pain.

We found that over the course of the study years the rate of young people newly presenting with anxiety symptoms more than tripled. General prescribing of hypnotics or anxiolytics (for all children and young adults) did not change much over time however there was a significant increase in the 15 to 18-year-old group. Another striking finding for this group was that prescribing of hypnotics or anxiolytics was over 50 per cent greater for girls than boys. The finding of increased use of hypnotics and anxiolytics in the 15 to 18-year-old group is out of keeping with current prescribing guidelines.

Case for repeating the studies

There is a strong case for monitoring diagnostic and prescribing trends for mental health issues in young people regularly to both assess and review current trends and practice informing future guidance. Identifying those most likely to receive a diagnosis or medication allows for targeted interventions and support to individuals, families, carers and professionals. At the time of the previous studies we identified age, sex and deprivation differences across the different studies. While the previous study findings were disseminated widely through initiatives, such as the WHC, and the publications raised much media interest it would be useful to evidence any impact on prescribing behaviour and whether other approaches are required .

At the time of the previous studies we had anonymised access to records from 40% of General Practices in Wales. This has now increased to 74% so updated findings would be based on a larger population and more robust. SAIL currently has data up to 2016 so starting the projects at the end of 2018 will allow for four years additional data to the previous studies which given the numbers of young people included will highlight any changes. Given the issues identified in each of the previous studies an update of all would be useful but an order of priority would be: antipsychotic, antidepressant, anxiolytic and ADHD. It would also be useful to review diagnostic trends and whether the use of symptom or diagnosis codes impact on prescribing.

Led by myself, the team at Swansea University have recently received £800,000 funding from the mental health charity MQ to create an Adolescent Mental Health Data Platform (similar to the Dementia Platform UK) which has the potential to place Wales at the centre of research in this area using electronic health data (routinely collected in everyday care and

other types of data from across nations). This platform places us in a good position to conduct a recommissioned update of these studies.

Self-harm

Self-harm in young people is a major public health issue: as an indicator of distress in young people; the levels of concern and anxiety it evokes in parents, carers and professionals (health, social, education and others); and because of the levels of unscheduled emergency department attendances and hospital admissions, in fact it is one of the leading causes of hospital admissions in this age group. Hospital treated self-harm is the tip of the iceberg and the majority of young people do not seek help from health services.
In community surveys one in ten young people in school years 11 and 12 report that they have self-harmed at some point in their lives with girls three and a half times more likely to engage in self – harm than boys. This translates to three young people in every classroom.

Self-harm is considered to be any act of intentional self-injury or self poisoning regardless of suicidal intent or motivation. This is because such intentions and motivations can change with time or be ambivalent. Suicide attempts comprise a relatively small proportion of self-harm acts. There is an on-going debate regarding the extent to which self-harm with or without suicidal intent represent distinct concepts or versions of the same behaviour. While a previous history of self-harm is the strongest predictor of suicide and suicide is the second most common cause of death worldwide in young people it is important to note that suicide is still extremely rare. In one of the few studies to follow young people who self –harm to adulthood (3) very few continued to self-harm.

However self-harm is a clear indicator of distress and some young people who self-harm go on to have adverse adult outcomes with an increased risk of substance abuse, mental disorder and future self-harm. This is why when a young person self-harms no matter what setting it is identified in- home, school, health it is important they receive a comprehensive psycho-social assessment to identify causes and that steps are taken to address these. Social media has a role to play (4) and young people should be asked about online activity and bullying. It would be useful for the Committee to refer to Talk to Me 2 the Welsh Government Strategy for suicide and self harm prevention in Wales.

Self-harm in young people studies

We have recently conducted a study looking at presentation by young people to health services which we are due to submit for publication. There is an increase in Emergency Department attendances and hospital admissions for self-harm. Admissions are particularly increased in 10-14 year olds. However this is a complicated picture since it may reflect increased awareness and improved help-seeking behaviour by young people which is to be

encouraged and hospital management in line with guidance which state those under 16 years should be admitted for a comprehensive psycho-social assessment.

I am currently leading on the young people's mental health data linkage part of a Health Quality Improvement Partnership funded project Child Health Outcomes Review. This is due to report in April and self-harm was one of the conditions of interest.

Self-harm in young people workshop- 29th September 2017

A workshop on self-harm in young people was held last year led by myself and Dave Williams, Divisional Director Family and Therapy Aneurin Bevan Health Board and Chair Children in Wales. This was attended by a broad range of stakeholders from health, education and the third sector. We reviewed the evidence for interventions (PDF of slides also attached) and some of the data from the above study in Wales.

Self-harm in schools was highlighted as an area where both staff and pupils would benefit from further support. Educational staff should be trained and supported in their ability to identify young people at risk with clear pathways to access specialist help if required. There is increasing evidence about the potential effectiveness of school based self-harm prevention programmes including the use of gatekeeper training, peer support and the Youth Aware of Mental Health Programme running concurrently i.e. placing interventions across the whole school setting (5).

As a result of this workshop we are currently developing a booklet for professionals, teachers, volunteers, youth services 'Handling issues of Self-Harm and thoughts of Suicide in Young People' and also one for young people with sources of help.

1.John, A., Marchant, A., Fone, D., Mcgregor, J., Dennis, M., Tan, J. & Lloyd, K. 2016. Recent Trends In Primary-Care Antidepressant Prescribing To Children And Young People: An E-Cohort Study. *Psychological Medicine*, 1-13.
2. John, A., Marchant, A., Mcgregor, J., Tan, J., Hutchings, H., Kovess, V., Choppin, S.,Macleod, J., Dennis, M. & Lloyd, K. 2015. Recent Trends In The Incidence Of Anxiety And Prescription Of Anxiolytics And Hypnotics In Children And Young People: An E-Cohort Study. *Journal Of Affective Disorders,* 183, 134-141.
3. Moran P, Coffey C, Romaniuk H, Olsson C, Borschmann R, Carlin Jb, Et Al. The Natural History Of Self-Harm From Adolescence To Young Adulthood: A Population-Based Cohort Study. Lancet2012;379:236-43.
4. Marchant A, Hawton K, Stewart A, Montgomery P, Singaravelu V, Lloyd K, Purdy N, Daine K, John A (2017). A Systematic Review Of The Relationship Between Internet Use, Self-Harm And Suicidal Behaviour In Young People: The Good, The Bad And The Unknown. *Plos One* 12(8), E0181722.

Doi: 10.1371/Journal.Pone.0181722
5. Wasserman, D., Hoven, C. W., Wasserman, C., Wall, M., Eisenberg, R., Hadlaczky, G., Kelleher, I., Sarchiapone, M., Apter, A. & Balazs, J. 2015. School-Based Suicide Prevention Programmes: The Seyle Cluster-Randomised, Controlled Trial. *The Lancet,* 385, 1536-1544.

Current evidence for prevention and management of self-harm in children and young people

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INTERVENTIONS

1. **SCHOOL-BASED INTERVENTIONS**

2. **PSYCHOSOCIAL INTERVENTIONS**

a) Dialectical behavioural therapy for adolescents (DBT-A)
b) Family-based interventions
c) Mentalisation-based therapy
d) Multisystemic therapy
e) CBT-based psychotherapy
f) Group-based psychotherapy

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SCHOOL-BASED INTERVENTIONS

- Four RCTs evaluating three school-based programmes :

1. **Saving and Empowering Young Lives in Europe (SEYLE) study**
2. **Signs of Suicide (SOS) prevention programme**
3. **Good Behaviour Game (GBG)**

- High quality evidence of effectiveness
- Universal interventions targeting adolescent school children

SEYLE study

- Participants: 11,110 adolescent pupils recruited from 168 schools in 10 EU countries
- Cluster RCT - Schools randomly assigned to 1 of 3 interventions or a control group:

(1) Question, Persuade, and Refer **(QPR)** - gatekeeper training for teachers and other school personnel to recognise the warning signs of suicidal behaviour

(2) Youth Aware of Mental Health Programme **(YAM)** – included role-play sessions, educational booklets and posters, interactive mental health lectures

(3) Screening by Professionals programme **(ProfScreen)** – referral services for at-risk students

Results:

After 12 months:

- YAM was associated with a significant reduction of incident suicide attempts (OR 0·45, 95% CI 0·24–0·85; p=0·014) and severe suicidal ideation (0·50, 0·27–0·92; p=0·025), compared with the control group.
- 14 pupils (0·70%) reported incident suicide attempts at the 12-month follow-up in the YAM versus 34 (1·51%) in the control group, and 15 pupils (0·75%) reported incident severe suicidal ideation in the YAM group versus 31 (1·37%) in the control group.
- No case of suicide during study period

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SOS programme

- 2 RCTs (USA)
- Participants: 2100 students in 5 high schools & 4133 students in 9 high schools respectively
- SOS – 2 components:

1. Educational component: curriculum aimed at raising awareness of suicide and its related issues
2. Self-screening component: brief screening for depression and other risk factors associated with suicidal behaviour

Results:

After 3 months:

- Significantly lower rates of suicide attempts and greater knowledge and more adaptive attitudes about depression and suicide were observed among students in the intervention group.
- The youths in the treatment group were approximately 40% less likely to report a suicide attempt in the past 3 months compared with youths in the control group (OR = e-.47 = 0.63).

Good Behaviour Game (GBG)

- USA RCT evaluating the impact of 2 interventions – GBG & Mastery Learning (ML)
- GBG: classroom-based behaviour intervention aimed at reducing aggressive, disruptive behaviour
- ML: teaching strategy aimed at improving academic achievement
- Participants: 2 cohorts of 1000 & 2000 first grade pupils from 19 schools

Results:

After 2 years:

- Reduced risk of SA (RR = 0.5, 95% CI 0.3-0.9; p = 0.041) & SI (RR = 0.4; 95% CI = 0.2-0.8; p = 0.008)in GBG youths compared to youths in standard setting (controls)
- No statistically significant impact on these outcomes was found for ML

DIALECTICAL BEHAVIOURAL THERAPY FOR ADOLESCENTS (DBT-A)

- DBT-A: multi-modal clinical programme for adolescents with severe personality difficulties & co-morbid MH problems
- Aim: to help patients better regulate their emotions & become better at managing their own thoughts and behaviours
- 3 RCTs evaluating 2 DBT-based programmes
- Medium to high quality evidence of effectiveness
- Indicated prevention strategy

1. Norwegian DBT-A trials (Mehlum et al. 2014/2016)
2. American DBT trial (Pistorello et al. 2012)

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DBT-A

Norwegian trials

- 2 RCTs
- DBT-A vs. enhanced usual care
- Participants: 77 adolescents aged 12-18 years with recent and repetitive SH behaviour
- Intervention delivered for 19 weeks

Results: After 1 year:

- Frequency of SH episodes reduced significantly by 55.9% (Pre-intervention = 9 vs. Post-intervention = 5.5; 95% CI = -80.0 to -2.6)
- Significant reduction in suicidal ideation and depressive symptoms at 9, 15 and 19weeks

American trial

- DBT vs. TAU
- Participants: 63 college students between the ages of 18 & 25 with recent hx of SH, SI & borderline personality disorders
- Participants required to be in treatment for at least 7 months

Results: After 18 months:

- DBT, compared to the control condition, showed significantly greater decreases in suicidality ($t(57) = 2.36$, $p = 0.022$, $d = 0.63$ (0.12–1.13)), and number of NSSI events (if participant had self-injured) (5.23 ± 8.47; $t(57) = -2.11$, $p = 0.04$).

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FAMILY-BASED INTERVENTIONS

- Two family-based programmes (RCTs)
- Medium quality evidence of effectiveness
- Indicated prevention strategy

1. Safe Alternatives for Teens and Youths (SAFETY) programme
2. Resourceful Adolescent Parent Program (RAP-P)

FAMILY-BASED INTERVENTIONS

SAFETY

- Based on CBT and DBT
- Aimed at strengthening protective supports within the family and other social systems & building skills in youths and parents that lead to safer behaviours and stress reactions
- SAFETY vs. enhanced TAU
- Participants: 42 eligible youths aged 11 to 18 years living in stable family situations

Results:

- SAFETY youths were significantly less likely to have had a suicide attempt at the 3-month follow up (Wilcoxon $X^2 1 = 5.81$, $p = 0.02$).

RAP-P

- Interactive psychoeducation programme for parents of adolescents
- Designed to build resilience and promote positive mental health in adolescents
- RAP-P vs. routine care
- Participants: 48 suicidal adolescents aged 12 to 17 years

Results:

After 6 months:

- The intervention was associated with greater reductions in adolescents' suicidal behaviour & psychiatric disability, compared to RC alone ($F1,86.28 = 9.84$, $p < 0.001$)

MENTALISATION-BASED THERAPY (MBT-A)

- MBT-A: enhances mentalisation – capacity to understand actions of both the self & of others as meaningful in terms of thoughts & feelings.
- One UK RCT
- Medium quality evidence of effectiveness
- MBT-A vs. TAU
- Indicated prevention strategy
- Participants: 80 participants aged 12-17 years with at least one episode of confirmed SH

Results:

After 12 months:

- Significantly fewer episodes of SH behaviour in intervention group (OR 0.26, 95% CI 0.09-0.78; k = 1; N = 71)
- Significant reduction in depression and borderline personality features

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MULTISYSTEMIC THERAPY (MST)

- MST: family-centred, home-based intervention that targets the multiple systems in which the youth and family are embedded
- Alternative to inpatient hospitalisation
- One RCT - MST vs. hospitalisation - Medium quality evidence of effectiveness
- Indicated prevention strategy
- Participants: 156 youths who were approved for emergency psychiatric hospitalization because of suicidal behaviour

Results:

After 1 year:

- MST was significantly more effective than emergency hospitalization at decreasing rates of attempted suicide (9 vs. 17; $p < 0.001$); also, the rate of symptom reduction over time was greater for youths receiving MST

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CBT-BASED PSYCHOTHERAPY

- Aimed at helping patients identify & critically evaluate the ways in which they interpret & evaluate disturbing experiences & events
- One RCT (USA) - Low quality evidence
- Integrated CBT (I-CBT) vs. E-TAU
- Indicated prevention strategy
- Participants: 40 adolescents aged 13 to 17 years with recent hx of SA, SI, alcohol or cannabis use disorder

Results:

After 18 months:

- Significantly fewer participants in I-CBT relative to E-TAU made a suicide attempt (I-CBT n = 1/19, E-TAU n = 6/17; X2 = 5.17; p = 0.023)
- Significantly fewer I-CBT participants were hospitalized on a psychiatric inpatient unit, received emergency department evaluations, and were arrested

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GROUP-BASED PSYCHOTHERAPY

- Integration of techniques from several therapies, including CBT,DBT-A, and specific group techniques
- Little support for effectiveness based on the results of 3 trials – very low quality
- UK trial showing some effectiveness
- Indicated prevention strategy
- Participants: 63 adolescents aged 12 to 16 years
- Results: fewer repeat SH episodes in intervention adolescents compared to RC adolescents (2/32 versus 10/31; OR 6.3; 95% CI 1.4 to 28.7)

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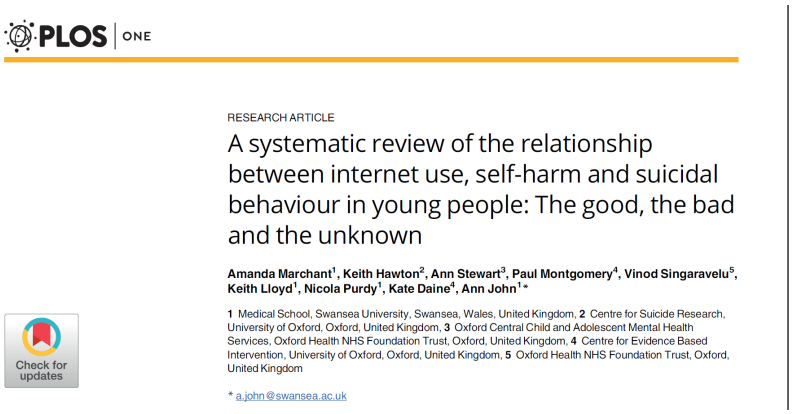
RISK ASSESSMENT & SCREENING TOOLS

- Evidence insufficient to determine the benefits of screening in primary care populations
- Minimal evidence limited to high-risk populations suggested poor performance of screening instruments in adolescents
- NICE guidelines: discourage the use of risk assessment tools & scales to predict future suicide or repetition of SH (NICE 2011)

FUTURE DIRECTIONS

- MEDIACONNEX (France) – multicentre trial of short message service (SMS) to reduce SA recurrence in adolescents
- TeenTEXT (UK) – text messaging intervention for adolescents who self-harm

Potential online interventions



PLOS ONE

RESEARCH ARTICLE

A systematic review of the relationship between internet use, self-harm and suicidal behaviour in young people: The good, the bad and the unknown

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Conclusion

- School-based & psychosocial interventions currently the mainstay for prevention & management of SH in children & young people
- School-based interventions & DBT-A provide good quality evidence
- Emerging good quality evidence - mentalisation-based therapy, multisystemic therapy & family-based interventions
- Further trials required to evaluate effectiveness of group-based psychotherapy, CBT & other potential interventions
- Screening tools – not recommended for predicting future suicide or SH in adolescents