

Journal of Public Mental

Evaluating the Peer Education Project in Secondary Schools

Journal:	Journal of Public Mental Health
Manuscript ID	JPMH-07-2018-0048.R1
Manuscript Type:	Original Research Paper
Keywords:	Peer education, Peer support, Mental health, Intervention, Secondary school, Health promotion

SCHOLARONE™ Manuscripts out the state of t Title: Evaluating the Peer Education Project in Secondary Schools

Abstract:

Purpose: This study aims to determine the efficacy of the Peer Education Project (PEP), a school-based, peer-led intervention designed to support secondary school students to develop the skills and knowledge they need to safeguard their mental health and that of their peers. Methodology: Six schools from across England and the Channel Islands took part in an evaluation of the PEP across the 2016/2017 academic year. 45 trained peer educators from the sixth form and 455 year 7 students completed pre- and post-questionnaires assessing their emotional and behavioural difficulties, perceived school climate, and knowledge, skills and confidence related to mental health. **Findings:** Results indicate that participation in the PEP is associated with significant improvement in key skills among both peer educators and student trainees, and in understanding of key terms and readiness to support others among trainees. Most students would recommend participation in the programme to other students. Originality/value: While peer education has been found to be effective in some areas of health promotion, research on the effectiveness of peer-led mental health education programmes in schools is limited. This study contributes evidence around the efficacy of a new peer education programme that can be implemented in secondary schools.

Keywords:

Peer education

Peer support

Mental health

Intervention

Secondary school

Health promotion

Introduction

Schools are increasingly recognised as key to addressing the high prevalence of mental health difficulties among young people (Department of Health & Department for Education, 2017), particularly through whole-school, preventative approaches that aim to build resiliency and promote wellbeing among all students (Department of Health & NHS England, 2015; Kelly, Jorm & Wright, 2007). Mental health education programmes have been trialled in schools to improve mental health awareness and literacy and reduce stigma (e.g. Patalay et al., 2017; Chisholm et al. 2016; Milin et al., 2016). These programmes are mostly led by teachers or professionals, but research suggests that peer-led programmes may better engage young people and improve outcomes (Patalay et al., 2017).

Peer-led health education can be defined as "the teaching or sharing of health information, values, and behaviours by members of similar age or status" (Sciacca, 1987, cited in Milburn, 1995, p. 407). Research has shown it to be effective for young people in other areas of health promotion (Abdi & Simbar, 2013; Stephenson et al. 2008; Harden, Oakley, & Weston, 1999), though some evidence questions its effectiveness (Tolli, 2012). Studies across programmes and populations tend to show positive outcomes such as increased self-efficacy, self-management, quality of life and well-being in addition to improved access to services and cost-saving benefits (Cupples et al., 2011; Webel et al., 2010). Evidence suggests being a peer educator (the individual delivering education to their peers) may increase self-esteem and improve social skills (Webel et al., 2010). However, there is limited research on peer-led initiatives around mental health in schools (Patalay et al., 2017). This evaluation was designed to test the effectiveness of peer education for universal, preventative mental health information through the Peer Education Project (PEP).

PEP is a school-based, peer-led programme developed by the Mental Health Foundation (MHF) aimed at supporting young people develop the skills and knowledge needed to safeguard their mental health, and that of their peers (Mental Health Foundation, 2017).

Overview of the Peer Education Project

PEP was developed <u>in</u> coproduction sessions with students from target years (Years 7 and 12) and <u>based on</u> a literature review of mental health education for school aged children to form a five-session PEP syllabus, covering Mental Health Awareness; Myths, Facts and Stigma; Staying Well; Getting Help; Helping Others. The syllabus was tested in a mixed methods feasibility study and qualitative feedback was used to refine the syllabus.

PEP first trains peer educators to deliver the syllabus. Peer educators were selected based on project specified suitability criteria from the school's sixth form. Their training was delivered over two days by the PEP staff team drawn from the Mental Health Foundation and partner organisations. Peer educators delivered the education sessions in pairs and received a handbook outlining the key content of the project, information about how to deliver an effective lesson, and lesson plans for the five sessions. The first part of the training was trainer-led, introducing students to the key concepts of the project; and the second part of the training was student led, as trainee peer educators prepared for and delivered practice lessons from the syllabus to fellow trainees. Working in pairs, the peer educators were then supported by school staff to deliver the five sessions to Year 7.

In the five 40-minute lessons, the Year 7 students received workbooks to accompany the project with structured worksheets to support lesson plans, as well as additional information about mental health.

Aim

The aim of the evaluation was to assess the impact of PEP on peer educators and student trainees on: student emotional and behavioural difficulties; perception of school climate; confidence to talk about mental health; knowledge of available information and resources; readiness to support others; knowledge of key terms related to mental health; and confidence in key skills related to management of mental health.

The study also aimed to assess students' experiences of the programme: its relevance, usefulness, and acceptability.

Methods

The evaluation used a pre-post design. Students completed pre-questionnaires prior to participating in PEP: for peer educators, before they received training from MHF; for student trainees, before the first peer-led session. All completed post-questionnaires following the final session-delivered. The majority of students completed paper questionnaires; Per educators from two schools (n=25) completed questionnaires online; all remaining students completed paper questionnaires.

Ethics

The evaluation was approved by the UCL research ethics board (Project 6087/004). Informed consent was obtained from all participants aged 16 or over, and from parents or guardians for all individual participants under 16.

Measures

Emotional and behavioural difficulties

Emotional and behavioural difficulties were assessed using the Me & My School Questionnaire (M&MS; Deighton et al., 2013). The measure has good content and construct validity and internal reliability, is consistent with other commonly used child-reported mental health

measures and can differentiate clinical and community samples (Patalay et al., 2014; Deighton et al., 2013). 16 items are rated on a three-point scale from 0 (never) to 2 (always) and totalled into behavioural and emotional difficulties subscales. Scores of 6 points and above indicate problems on the emotional difficulties subscale; scores of 10 points and above indicate problems on the behavioural difficulties subscale

School climate

The School Climate Survey (SCS) assesses the perceived quality of relationships and support within schools. Seven items are rated on a three-point scale from 0 (never) to 2 (always). The measure has strong internal consistency (Wolpert et al., 2011).

Bespoke items

Questionnaires included 17 additional items from a previous evaluation of a mental health pilot in schools (Mental Health Foundation, 2018). Items were grouped to create total scores for five subscales based on their content: key skills; key terms; confidence to talk about mental health; knowledge of information and resources; readiness to support others.

Items related to key terms and key skills were rated 0 (no) or 1 (yes), or 'Don't Know'. Total scores were the sum of 'yes' answers for each subscale, ranging from 0 to 4 for key terms and key skills respectively.

The remaining items were rated on a five-point scale from 4 (strongly agree) to 0 (strongly disagree), or 'Don't Know' (recoded to missing). Total possible scores for confidence to talk about mental health ranged from 0-8; for knowledge of information and resources, from 0-12; and for readiness to support others, from 0 to 16.

Average inter-item correlations were calculated to assess reliability, and ranged from 0.23 to 0.42, within the acceptable range of 0.20 to 0.40 (Briggs & Cheek, 1986).

For consistency across measures, there was no pro-rating for missing items.

Measures containing three point scales were used where their use was either supported by published data (M&MS and SCS) or where they were seen as appropriate to capture knowledge and skills in the bespoke items.

Feedback

In post-questionnaires, peer educators and student trainees were asked about the relevance of topics covered in sessions, and whether they would recommend them to other students. Student trainees were also asked if they would use their learning and if they found it helpful to be taught by peer educators.

Analytic Strategy

Student responses on pre- and post-questionnaires were matched based on the month of their birthday, and the first three letters of their mother's first name. Only those students who returned questionnaires at both time points were included in analyses ('paired cases').

To assess change in subscale scores from pre to post intervention, we used non-parametric Wilcoxon Signed Rank tests, as data showed a high degree of skewness. A Bonferroni adjusted p-value of p < 0.006 was applied to all pre-post significance tests. To assess the practical implications of observed differences, a variation on Cohen's d effect size was calculated for pre-post difference in average scores (Becker, 1988). Interpretations of these effect sizes followed the general rule of thumb for Cohen's d (Cohen, 1988).

Further subgroup analysis was conducted on the M&MS measure (the only measure for which clinical thresholds are available) for those young people scoring above threshold for emotional or behavioural difficulties pre-intervention, to assess the proportion who reported scores below threshold post-intervention, reflecting "recovery" or "clinically meaningful change" as

assessed in similar analysis of routinely collected child mental health data (Wolpert et al., 2016). Due to small sample sizes, peer educator and student trainee data was combined for this analysis.

Seven schools implementing PEP in the 2016/2017 academic year agreed to take part in the

Sample

cases').

evaluation. Six schools were based in London and South-East England and one in the Channel Islands. Four of the participating schools were single-gender (one all-male, three all-female). 950 students (84 peer educators, 866 student trainees) returned a questionnaire at either pre- or post-intervention (including 11 peer educators and 143 student trainees from one school that only completed post- questionnaires). 54% (n = 45) of peer educators and 53% (n = 455) of student trainees returning questionnaires returned both pre- and post-questionnaires ('paired

Of students with paired data, 42% (192/455) of student trainees and 13% (6/45) of peer educators were of black and minority ethnic origins, compared to 29% of students in state-funded secondary schools in England (Department for Education, 2017a).

Compared to national statistics, the paired sample contained a smaller proportion of students with special educational needs (SEN) (5%, 24/500 of peer educators and student trainers reported a learning difficulty, compared to 14% with SEN nationally; Department for Education, 2017b). The paired and unpaired samples did not vary significantly in terms of learning difficulties.

Results

Online responses were not discernibly different from pen and paper responses.

Pre-post analysis

Results of pre-post significance testing are presented in Table 1. When comparing mean preand post-scores for each subscale, peer educators reported significant improvements of a medium effect size on the 'key skills' scale (p < 0.001, d = 0.55). There was no significant difference in peer educators' scores at the two time points on any other scale.

Trainees reported significant improvements of a moderate to large effect size on 'key terms' (p < 0.001, d = 0.79), and significant improvements of a small effect size on 'key skills' (p < 0.001, d = 0.30) and 'readiness to support others' (p < 0.001, d = 0.23). Significant improvements on the emotional difficulties subscale of the M&MS were also reported, however, the effect size was negligible (p = 0.005, d = 0.09). A significant worsening of school climate, with a small effect size, was also reported (p < 0.001, d = 0.21). There were no significant differences reported by student trainees on any other scale.

[TABLE 1 HERE]

Subgroup analysis

Table 2 shows results of subgroup analyses. Of those students with complete M&MS emotional or behavioural difficulties subscales pre- and post- intervention, at the first time point 18% (77/426) were above threshold for emotional difficulties, and 9% (40/443) were above threshold for behavioural difficulties (peer educator and student trainee data was combined here due to small sample sizes).

Among students who were above threshold pre-intervention, 38% (29/77) of those with emotional difficulties, and 40% (16/40) of those with behavioural difficulties were scoring in the "normal" range post-intervention.

[TABLE 2 HERE]

Feedback

Table 3 shows students' responses to feedback questions. 27% of peer educators in the paired sample felt the training content was 'very relevant' and 56% felt it was 'somewhat relevant'. 18% of student trainees felt the Peer Education lessons were 'very relevant' and 61% felt they were 'somewhat relevant'.

Of students in the paired sample 69% of peer educators and 46% of student trainees would 'definitely' the programme to peers. 27% of peer educators and 42% of student trainees would 'maybe' recommend peers participate. Only 2% of peer educators and 9% of student trainees would not recommend this.

When asked if they would use what they learned in the next 3 months, 22% of student trainees responded 'yes, definitely' and 62% responded 'maybe/yes a bit'. 14% did not think they would use what they learned.

60% of student trainees felt it was helpful to learn from peer educators instead of their usual teacher and 30% felt it did not make a difference. 6% felt it was not helpful.

[TABLE 3 HERE]

Discussion

This paper reports on an independent evaluation of a novel mental health promotion intervention, delivered by students in a school setting. Most students reported positive feedback on the training and would recommend it to. Most student trainees found it useful to learn from a peer educator compared to a normal teacher and found the programme content relevant to some extent.

Results showed significant changes in student-reported key skills for both peer educators and student trainees, and in understanding of key terms and readiness to support others for student

trainees. This suggests the programme content may be meeting a learning need in these areas, perhaps reflecting its focus on increasing awareness around mental health and wellbeing and promoting protective behaviours. The high initial proportion of students with scores indicating a strong level of confidence to talk about mental health and knowledge of information and resources may have contributed to the lack of significant change over time in these areas.

In terms of emotional and behavioural difficulties, the evidence did not suggest significant and practically meaningful change. This is not surprising: PEP is not intended to be a therapeutic intervention, and the school sample had low initial difficulties. More tentatively, the intervention might also lead to an *increase* in reporting, potentially 'cancelling out' reduced difficulties among some students. Of the small proportion of students who were above clinical threshold pre-intervention, around 40% reported clinically meaningful improvement (moved below threshold; Wolpert et al., 2016), consistent with a recent systematic review of mental health promotion interventions (O'Connor et al., 2017).

The programme produced some of its highest knowledge benefits on the topics of stigma and discrimination. This is a promising finding, contributing to the emerging evidence base suggesting that mental health literacy and universal promotion and awareness programmes in schools seem to be more effective than anti-stigma education (Mental Health Foundation, 2018). Normalising mental health and increasing general literacy might make a bigger difference than targeting stigma.

Limitations

The main limitation of our research is that it is not possible to make inferences of causality due to the non-randomised pre-post study design. Only around half of students who participated in the evaluation completed questionnaires before and after participating in the project, meaning reported differences may not be representative of all students who took part in the programme

or the evaluation. Implementation of the Pprogramme implementation varied across schools – this was deemed essential to enable the feasibility, given variable schedules and limited capacity of the schools. Students reported low levels of emotional and behavioural difficulties, and endorsed high levels of knowledge, confidence, and skills in several areas prior to participating in project sessions, so ceiling and floor effects may have limited the amount of change detected.

Implications

The findings of this evaluation suggest that PEP is a promising intervention. A more extensive roll-out and evaluation of the project, with a more demographically diverse group of participating schools, would improve the evidence of effectiveness. This is supported by previous research on universal school mental health promotion programmes which showed that they can be effective, especially when they are not brief and are implemented continuously for more than a year (Wells J et al., 2003).

This evaluation adds to the evidence that peer-delivery may be an effective vehicle for public mental health messages. The findings also suggest that introductory lessons on mental health and wellbeing improve knowledge and attitudes amongst Year 7 pupils and contribute to reducing stigma among pre-adolescents. Mental health education, whether peer-delivered or not, could therefore form a useful component of a preventative approach to mental health in schools.

References

- Abdi, F., & Simbar, M. (2013). The peer education approach in adolescents narrative review article. *Iranian Journal of Public Health*, 42(1), pp. 1200-1206.
- Becker, B.J. (1988). Synthesizing standardized mean-change measures. *British Journal of Mathematical and Statistical Psychology*, 41(1), p. 257-278
- Briggs, S.R., & Cheek, J.M. (1986). The role of factor analysis in the evaluation of personality scales. *Journal of Personality*, 54, pp. 106-148.
- Chisholm, K., Patterson, P., Torgerson, C., Turner, E., Jenkinson, D., & Birchwood, M. (2016). Impact of contact on adolescents' mental health literacy and stigma: The SchoolSpace cluster randomised controlled trial. *British Medical Journal Open*, 6(2).
- Cohen, J. (1988). *Statistical Power Analysis for the Behavioural Sciences*, 2nd ed. Hillsdale, N.J.: Lawrence Erlbaum.
- Cupples, M.E., Stewart, M.C., Percy, A., Hepper, P., Murphy, C., & Halliday, H.L. (2011). A RCT of peer-mentoring for first-time mothers in socially disadvantaged areas (The MOMENTS Study). *Archives of Disease in Childhood*, 96(3), pp. 252-258.
- Deighton, J., Tymms, P., Vostanis, P., Belsky, J., Fonagy, P., Brown, A., Martin, M., Patalay, P., & Wolpert, M. (2013). The development of a school-based measure of child mental health. *Journal of Psychoeducational Assessment*, 31(3), pp. 247-257.
- Department for Education, (2017a). *Schools, pupils and their characteristics: January 2017. SFR 28/2017.* London, England.
- Department for Education (2017b). *Special educational needs in England: January 2017. SFR 37/2017.* London, England.
- Department of Health and Department for Education (2017). *Transforming Children and Young People's Mental Health Provision: a Green Paper: December 2017. CM 9523.* London, England.
- Department of Health and NHS England (2015). Future in Mind: promoting, protecting and improving our children and young people's mental health and wellbeing. NHS England Publication Gateway Ref No 02939. London, England.
- Harden, A., Oakley, A., & Weston, R. (1999). A review of the effectiveness and appropriateness of peer-delivered health promotion for young people. EPPI-Centre, Social Science Research Unit, Institute of Education, University of London. Available: http://eppi.ioe.ac.uk/cms/LinkClick.aspx?fileticket=bCmFZQRwu-o%3d&tabid=255&mid=1071 [Accessed 12th February 2018].
- Kelly, C., Jorm, A., & Wright, A. (2007). Improving mental health literacy as a strategy to facilitate early intervention for mental disorders. *The Medical Journal of Australia*, 187(7 Suppl), pp. 26-30.
- Mental Health Foundation. (2017) *Peer Education Project (PEP)*. Available: https://www.mentalhealth.org.uk/projects/peer-education-project-pep [Accessed 12th February 2018].

- Mental Health Foundation. (2018) *See Me: Evaluation of process and impact (Phase 2 year 1)*. Glasgow.
- Milburn, K. (1995). A critical review of peer education with young people with special reference to sexual health. *Health Education Research*, 10(4), pp. 407-420.
- Milin, R., Kutcher, S., Lewis, S.P., Walker, S., Wei, Y., Ferrill, N., Armstrong, M. (2016). Impact of a Mental Health Curriculum on Knowledge and Stigma Among High School Students: A Randomized Controlled Trial. *Journal of the American Academy of Child & Adolescent Psychiatry*, 55(5), pp. 383-391.
- NVivo qualitative data analysis Software. (2012). Version 10. QSR International Pty Ltd.
- O'Connor, C.A., Dyson, J., Cowdell, F., & Watson, R. (2017). Do universal school-based mental health promotion programmes improve the mental health and emotional wellbeing of young people? A literature review. *Journal of Clinical Nursing*, 27(3-4), pp. e412-426.
- Patalay, P., Annis, J., Sharpe, H., Newman, R., Main, D., Ragunathan, T., Parkes, M. and Clarke, K. (2017). A Pre-Post Evaluation of OpenMinds: a Sustainable, Peer-Led Mental Health Literacy Programme in Universities and Secondary Schools. Prevention Science, 18(8), pp.995-1005.
- Patalay, P., Deighton, J., Fonagy, P., Vostanis, P., & Wolpert, M. (2014). Clinical validity of the Me and My School questionnaire: A self-report measure for children and adolescents. *Child and Adolescent Psychiatry and Mental Health*, 8(1), pp. 1-7.
- Sciacca, J.P. (1987). Student peer health education: a powerful yet inexpensive helping strategy. *The Peer Facilitator Quarterly*, 5, pp. 4–6.
- Stephenson, J., Strange, V., Allen, E., Copas, A., Johnson, A., Bonell, C., Babiker, A., Oakley, A., the RIPPLE Study Team. (2008). The long-term effects of a peer-led sex education programme (RIPPLE): A cluster randomised trial in schools in England. PLoS Med 5(11), e224.
- Tolli, M.V. (2012). Effectiveness of peer education interventions for HIV prevention, adolescent pregnancy prevention and sexual health promotion for young people: a systematic review of European studies. *Health Education Research*, 27(5), pp. 904-913.
- Webel, A.R., Okonsky, J., Trompeta, J., & Holzemer, W. (2010). A systematic review of the effectiveness of peer-based interventions on health-related behaviours in adults. *American Journal of Public Health*, 100(2), pp. 247-253.
- Wells, J., Barlow, J., & Stewart-Brown, S. (2003). A systematic review of universal approaches to mental health promotion in schools. *Health Education*, 103(4), pp. 197-220.
- Wolpert, M., Deighton, J., Patalay, P., Martin, A., Fitzgerald-Yau, N., Demir, E. & Frederikson, N. (2011). Me and My School: Findings from the National Evaluation of Targeted Mental Health in Schools 2008-2011. Nottingham: Department for Education.

(2016). Child-and parent- reported outcomes and experience from child and young



Table 1. Comparison of mean pre and post scores for peer educators and student trainees

Peer educators

Student trainees

	Peer educators			Student trainees				
	Pre Mean (SD)	Post Mean (SD)	P	Effect Size	Pre Mean (SD)	Post Mean (SD)	P	Effect Size
Key Terms	3.6	3.8	0.04	0.35	2.4	3.2	<0.001*	0.79
Key Skills	3.1	3.7	<0.001*	0.55	2.7	3.1	<0.001*	0.30
Confidence to Talk about Mental Health	6.3	6.7	0.08	0.26	5.7	6.0	0.03	0.11
Knowledge of Information and Resources	9.2	10.1	0.02	0.41	9.6	10.0	0.07	0.13
Readiness to Help Others	13.5	13.4	0.80	0.05	12.9	13.5	<0.001*	0.23
Emotional Difficulties	6.3	6	0.24	0.07	6	5.7	0.005*	0.09
Behavioural Difficulties	1.8	2	0.65	0.17	2.7	2.6	0.10	0.05
School Climate	9.3	9.1	0.50	0.08	9.3	8.8	<0.001*	0.21

^{*}indicates significance at Bonferroni adjusted level of p < .006

Table 2. Proportion of students scoring above threshold on Emotional and Behavioural difficulties subscales (Me & My School Questionnaire) pre-intervention and distribution post-intervention

	Valid N	N above	N Remained	N Moved
		threshold pre intervention (of total)		above infestion
Emotional difficulties	426	77 (18%)	48 (62%)	29 (38%)
Behavioural difficulties	443	40 (8%)	24 (60%)	16 (40%)

Table 3. Feedback on the programme – peer educator and student trainee responses

	.	N	%	%	%
			(1) Yes, very relevant	(1) Yes, a bit relevant /	(1) No, not relevant at
			(2,3) Yes, definitely	somewhat relevant	all
			(4) Yes, very	(2) Maybe	(2,3) No
			helpful	(3) Maybe/Yes a bit	(4) No, not helpful
	0,			(4) It did not make a difference	
Pe	eer educators				
1	Did you find the topics covered by the training relevant to you?	44	27%	56%	16%
2	Would you recommend that other Year 12 students take part in the Peer Education project in the future?	44 r	69%	27%	2%
St	udent trainees				
	Did you find the topics covered in the Peer Education lessons relevant to you?	441	18%	61%	18%
1	Did you find the topics covered in the Peer Education lessons relevant	441	18%	61%	18%
	Did you find the topics covered in the Peer Education lessons relevant to you? Would you recommend that other Year 7 students take part in the Peer	442			