VOLUME I: RESEARCH

TRAINING SCHOOL STAFF ABOUT STUDENT MENTAL HEALTH

By

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Thesis Overview

Volume I comprises of a literature review and an empirical paper. The literature review explores the effectiveness of brief workshops with school staff about student mental health. Seventeen published empirical studies were identified for the review. A risk of bias assessment was completed for each study and 14 were deemed of sufficient quality to be included in the review. Results showed that training can improve staff outcomes of knowledge and appraisals with effects lasting for up to 12 months. The evidence about staff skills, behaviours and attitudes was more limited and suggests that training has less impact upon these outcomes. The literature review has been prepared for submission to *BMC Psychiatry* (see Appendix 1).

The empirical paper reports a non-randomised control trial in which 268 secondary school staff from five schools in the West Midlands, UK received a 2.5 hour workshop about student mental health. Staff completed a questionnaire before and after training and at three months follow up. This measured staff ability to identify student depression, confidence to support students with mental health difficulties and the frequency with which they had accessed mental health information from a website in the previous month. A random sample of 1094 students from these schools completed questionnaires before and three months after training to measure the frequency with which they had received mental health information from staff in the previous month. Results showed that staff ability to identify depression from a written vignette and confidence to support students with mental health difficulties increased significantly from pre to post training in both groups. No behavioural change was reported by staff or students following the training. The empirical paper has been prepared for submission to the *BMC Psychiatry*.

Four, full length clinical practice reports and a summary of an orally presented case are included in Volume II. CPR's 1 and 2 were completed whilst on placement at an acute medium secure forensic service. CPR 1 presents a CBT and a Psychodynamic formulation of a 23 year- old female client experiencing Depression, whilst CPR 2 describes a service evaluation related to the planned introduction of advanced statements to the service. CPR 3 describes the use of a single case experimental design to evaluate the intervention in the case of Jake; a ten year- old boy with a learning disability experiencing anxiety and behavioural "outbursts". CPR 4 is a case study that describes assessment, formulation and intervention with an 11 year-old boy presenting with conduct difficulties. For the orally presented CPR 5 a summary paragraph outlines the case study of a 65 year- old man with severe Alzheimers presenting with significant challenging behaviour.

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VOLUME I: RESEARCH

LITERATURE REVIEW

How effective is brief training of school staff about student mental health?

A REVIEW OF THE EVIDENCE

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ABSTRACT

Background

It is increasingly acknowledged that school staff can play an important role in school mental health promotion and prevention efforts. Brief "in-service" training with staff about student mental health may have several positive impacts upon staff and could potentially improve support for students. No reviews have been conducted to establish the effectiveness of this type of training. This review aims to determine 1) the effectiveness of brief in-service training with school staff about student mental health and 2) the durability of any effects.

Method

Systematic searches of six databases were conducted for articles published from 1995 to 2012 for evaluations of brief training with school staff about student mental health.

Results

14 articles were included in the review. Studies examined training impact upon staff knowledge, self-appraisals, skills, behaviour and attitudes. Training effectiveness varied by outcome. Reliable and consistent findings show that training can improve knowledge and appraisals with effects lasting for up to 12 months. More limited evidence for staff skills, behaviours and attitudes suggests that training has less impact upon these outcomes.

Conclusions

Brief training can effectively improve some staff outcomes. The variability of impact across outcomes may relate to characteristics of the study design, the school environment or the outcomes themselves. More sustained efforts may be needed to improve outcomes of attitudes and behaviour and ensure that effects do not atrophy over time. Future training may be enhanced by involving staff in its design, using non-psychiatric language to talk about mental health and targeting specific groups of staff. Preparing staff to communicate with distressed youth and act as reliable sources of information may present achievable training goals. Managing staff expectations about training is important. Future studies should evaluate a greater variety of outcomes and topics.

INTRODUCTION

Childhood mental health

The importance of good childhood mental health is increasingly recognised. Studies show that whilst children with good mental health skills have greater resilience and do better at school (Weare, 2010), poor early mental health is associated with poorer quality of life (Rothi, Leavey & Best, 2008) and an increased risk of substance abuse, criminal activity, unemployment, discrimination and suicide in later life (Fergusson, Horwood & Ridder, 2005; Richards & Abbott, 2009). Since the 1970's, there has been a substantial deterioration in the mental health of children and young people in high income countries (Hagell, 2012) and in 2007, the UK was ranked bottom of a survey of children's wellbeing, compared to North America and 18 European countries (UNICEF, 2007).

Over half of all life-long mental health difficulties are reported to have begun by 14 years of age (Kessler et al., 2005). Whilst a number of empirically established psychological interventions is now available (Patel, Flisher, Hetrick & McGorry, 2007), children and young people are often reluctant to seek help for mental health difficulties (Rickwood, Deane & Wilson, 2007) and a sizeable proportion does not get the help they need until adulthood (Hunter, 2010; Patel et al., 2007). The recently launched UK mental health strategy "No Health Without Mental Health" (Royal College of Psychiatrists, 2010), acknowledges the importance of both protecting good early mental health and responding quickly and appropriately where children have difficulties. This strategy has established national targets and prioritised funding for mental health promotion efforts. A succession of international government policies has argued that the mental health of young people is "everybody's

business" (NHS Health Advisory Service, 1995; Every Child Matters, DfES, 2003; New Horizons, DOH, 2009, US Public Health Service, 2000) and that all adults employed in child-facing roles should have the ability to promote good mental health, recognise the early warning signs of ill-health and provide support and appropriate referral where necessary.

School mental health promotion

It is now generally acknowledged that schools present significant opportunities for delivering mental health promotion, prevention and support efforts to students (Patel et al., 2007); offering easily accessible locations where most children typically spend a great deal of their time (Seif el Din, 2006). The last 20 years have seen a substantial growth in research and good practice regarding mental health in schools (Weare, 2010). The findings of this work increasingly suggest that the most effective efforts are those which adopt a "whole school approach" to mental health (Weare, 2010); considering school policy, ethos and environment, partnerships with outside agencies and the professional development of staff and not just delivering classroom focused activities (Kidger, Gunnell, Biddle, Campbell & Donovan, 2009).

Despite this encouraging evidence, evaluating whole schools approaches has provided researchers with a significant "methodological challenge" (Weare, 2010). This has been due to the complexity of many of the programmes, the heterogeneity of programme designs and the overcrowded curriculums and administration pressures within schools (Power, Clearly & Fitzpatrick, 2008). As such, it currently remains unclear how and why whole school approaches are effective and which elements maximise quality and result in the desired outcomes (Rowling, 2009). Studies of some of the most effective and well established

programmes suggest that the engagement of staff in good quality professional development (Catalano et al., 2002; Weare & Gray, 2002; Zins, Weissberg, Wang & Walberg, 2004) and a focus on staff mental health related values, beliefs and attitudes (Hazell, 2006; Lewis, Marsh, Redfern, & Bakacs, 2006) are key to ensuring programme effectiveness and require further exploration through research.

Staff role in student mental health

School staff may be the "linchpins" in school-based efforts (Paternite & Johnston, 2005). Potentially, their role could include the delivery of classroom-based programmes to students and the reinforcement of the content of these programmes to generate positive and sustained effects (Midford, 2005). In addition, research suggests that staff often unknowingly provide role models for students on mental heath related attitudes and behaviours (McVey, Tweed & Ferrari, 2005). In cases where students actively seek help, they may approach staff for mental health information, crisis support or signposting to other services. In these instances, the perceptions and knowledge of staff will be crucial in helping to determine whether these children access mental health services and receive the help they require (Stiffman et al., 2001). Where young people are not help-seeking, staff's regular contact with students and their families, often over several years, positions them well to detect any changes or developing difficulties. In some cases, school staff may be the only professionals with whom students have contact (Seif el Din, 2006). It therefore seems important, that staff have the appropriate knowledge, attitudes and skills which aid recognition, prevention and management (i.e. have good "mental health literacy"; Jorm, 2000) to prevent mental health difficulties from being overlooked (or unhelpfully responded to) and the benefits of student focused interventions being lost over time.

School staff mental health literacy

Research indicates that the general mental health knowledge of school staff is variable (Crawford−Shelley & Caltabiano, 2009) and that some teachers unintentionally give potentially harmful advice (O'Dea & Abraham, 2001) and reinforce negative media stereotypes (McVey, Gusella, Tweed & Ferrari, 2005). A recent survey found that 44% of teachers did not immediately challenge a student's use of stigmatising language (e.g. "psycho"), with 22% not believing it to be inappropriate (Time to Change, 2012). Teachers report feeling 'incompetent' to recognise possible indictors of difficulties (Rothi, Despina, Leavy & Best, 2008) with evidence suggesting that they often overlook emotional symptoms and students with internalising problems (Loades & Mastroyannopoulou, 2010). Whilst some can identify students "in need", they rarely use systematic evidence-based indicators and base judgments on personal experiences (Rothi et al., 2008).

The attitudes of school staff towards their mental health role vary (Rothi et al., 2008). Whilst some are positive about becoming involved, others perceive it to be a burden, irrelevant to education and beyond their job role (Connelly et al., 2008; Rothi, Leavey & Best, 2008). Many struggle to manage the complexity of the role and the expectations placed upon them by government policy, feel unsupported by mental health services and are confused about where to refer (Collins & Holmshaw, 2008). Staff are often conflicted about involving specialist help for fear of labelling students (Graham, Phelps, Maddison & Fitzgerald, 2011).

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Training in student mental health

UK government policies have called for school staff to receive training in areas such as child development, communication and engagement (NSF, DOH, 2004). Despite this, research suggests that very little in-service (staff development) training currently takes place in schools (Freedenthal & Breslin, 2010, Spratt, Shucksmith, Philip & Watson, 2006). Teachers report that the current pre-qualification (pre-service) training does not adequately prepare them for a mental health role (Koller & Bartle, 2006, Rothi et al., 2008) and that this lack of training is one of the greatest barriers to managing mental health in schools today (Walter, Gouze, & Lim, 2006).

Training provides a universally recognised and cost-effective method of disseminating psychological skills and knowledge which is easily transported into the existing structures of school life and staff development (Jones, 2008). Studies show that staff want formal training by mental health professionals (Ibeziako, Olayinka & Toululope, 2008) which increases awareness, aids recognition, provides information on local services (Rothi et al., 2008) and is considerate of their non mental health specialist status. However, they also consistently highlight the limited time that staff have available in which to accommodate multiple training needs (Graham et al., 2011). Brief, short-term workshops may therefore present a practical and feasible model of training delivery.

Review rationale

Schools are increasingly turning to their professional partners for help in meeting their needs (Aggleton, Dennison & Warwick, 2010). As such, professionals in child and adolescent mental health services are likely to be called upon to deliver staff training for mental health

related issues (Rothi et al., 2008). Professionals working within schools to increase the mental health literacy of staff therefore need to understand the likely effectiveness of brief short term training and the durability of any effects. Establishing training impact and utility could justify the provision of future training and help to inform planning and delivery. Examining the effect of staff training which is delivered separately, and not as part of a wider whole-school intervention, will make its impact clearer. To our knowledge, this is the first systematic review of the effectiveness of brief staff training on the subject of student mental health.

METHOD

Search strategy

An initial search strategy was developed using the PICOS technique together with guidelines produced by the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) (Moher, Liberati, Tetzlaff, Altman, The PRISMA Group, 2009). The resulting search strategy employed a combination of keyword and thesaurus search terms. The search was trialled for efficacy in Psych-INFO (1806-Present) until it was found to be returning appropriate results. It was then adapted for two further health-related databases: CINAHL (1981-Present) and MEDLINE (1950-Present) and three education databases: The British Education Index (1995-2012), The Australian Education Index (1995-2012) and ERIC (1995-2012). In the adaption process, the keywords employed remained the same for all databases whilst subject headings were matched according to the unique indexing of each database. Reference lists of published studies were searched for any additional papers not returned from electronic searches. Full text articles were obtained where abstracts indicated that the article might meet the review's inclusion criteria. The final search strategies, with adaptations made for each database, are detailed in Appendix 2.

The inclusion and exclusion criteria are shown below in Table 1.

Table 1. Inclusion and exclusion criteria

Inclusion criteria	Exclusion criteria
Published papers evaluating training of school staff on student mental health	-Papers published prior to 1995 (1) -Not published in English -Papers not reporting intervention evaluations of this type (n=3612). Commonly these papers were not outcome studies but explored staff role, knowledge, attitudes, behaviours and skills, or were discursive papers on risk factors prevalence. Outcome studies were often of student programs, programs for staff on behavioural management (not mental health), or information campaigns, consultation or partnership working interventions.
Quantitative methodology	Qualitative methodology
Outcome studies using a pre-post design	Evaluations with no baseline data reported
Trainees were "school-based" staff (could include staff employed by social services, health or education) Sampling reflects a "universal" approach to training; i.e includes a range of staff e.g. teaching, recreational, support, administration. Samples may include personnel with specialist mental health roles (2) "In- service" school staff	Trainees were child workers but were not school-based or were from specialist schools only Sampling restricted to staff only with a specialist mental health role (e.g. counsellor, psychologist) "Pre-service" (trainee) staff
Training delivered as stand- alone intervention	Training delivered within a wider school or community campaign/alongside another intervention. (3)
Classroom based training Duration of 14 hours or less; delivered in single or multiple sessions. (4)	Internet training, on the job training, training as part of a wider qualification Duration of training equal to or more than 14 hours

(1) 1995 was selected as the year in which a key government paper "Together We Stand" (NHS Advisory Service, 1995) significantly increased the role of schools in health promotion and called for increased staff training on student mental health. Findings prior to this may be limited in their external validity. (2) A universal approach was selected as this is in line with recommendations of government policy (Together we Stand). (3) Excluded in order to consider specific effects of training. (4) This ceiling was set in line with Jorm et al. (2010).

Paper sift

Of the 3686 papers identified, 74 were considered potentially relevant from the titles and abstracts and retrieved. Upon removing duplicates and further sifting according to the inclusion and exclusion criteria, 60 were excluded and 14 met inclusion criteria (Figure 1 below). Examination of references yielded a further three papers, giving a total of 17 for review.

Figure 1: Flow diagram of paper sift
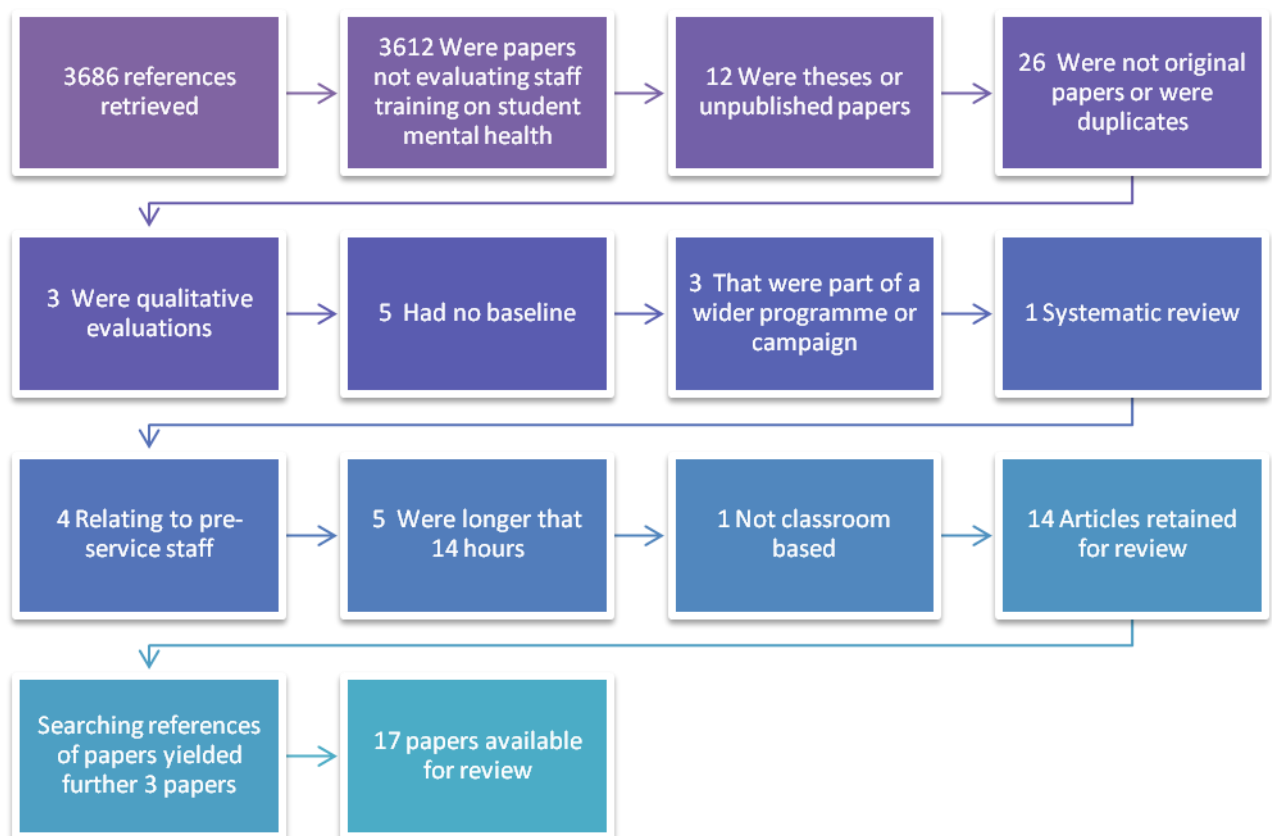
Risk of bias

"Risk of bias" in systematic review may be defined as the extent to which results of research studies should be believed (Higgins & Green, 2009). Guidance on the assessment of bias

(Treasure, 2004) and criteria for publishing experimental and quasi-experimental research (Marks, 2010, Ramos-Alverez & Moreno-Fernadez, 2008) were consulted to determine the most appropriate method for assessing risk of bias. The Critical Appraisal Skills Programme for Cohort Studies (CASP) (Public Health Resource Unit, 2006) and the Transparent Reporting of Evaluations with Non-Randomized Designs "TREND" (Des Jarlais, Lyes & Crepaz, TREND group, 2004) were considered to offer the most relevant frameworks and aspects of each were integrated to form a 12-item checklist (See Appendix 3). The TREND framework and four of its items (sample size, use of control, analysis methods and acknowledgement of study limitations) provided the structure of the checklist. Eight CASP items were then added to help address bias in the areas of: selection, measurement and classification; identification and control of confounding variables; completeness of follow up; precision and reliability of results; and consistency with previous research. Each item was accorded a score (3 = low risk of bias, 2 = medium risk and 1= high risk due to criteria being unmet or unreported) with each paper receiving a total score from 12-36. This framework enabled clear identification of the strengths and weaknesses of each study.

To enable a discussion of the results in relation to their risk of bias, studies were categorised according to their total bias scores. Three groups were defined: those scoring under 20, those scoring 20 to 30 and those scoring 30+. For ease of reference these are referred to as "weak", "moderate" and "strong" respectively in the discussion section.

RESULTS

Study bias

A total of 17 studies met the inclusion criteria for review (see Appendix 4 for full references). Total bias scores for these studies ranged from 14 to 34 (See Table 2). Four studies scored as "strong" (i.e. low risk of bias), 10 were deemed to carry a 'moderate' risk of bias and three were rated as having a 'high' risk of bias. Details of moderate and low bias studies are shown in Tables 3 and 4. The three studies with high risk of bias (Hillman et al., 2001; O'Donnell et al., 2007; Reutzel et al., 2008), representing a high risk on at least half of the 12- items of the checklist were excluded from further discussion in this review (See Appendix 5).

Study demographics

Of the 14 studies remaining in the review, eight were conducted in the USA, two in Australia, three in the UK and one in India. Sample sizes ranged from 16- 365 staff (five papers with fewer than 100, five papers with 100-200, and four papers with 200+). Seven studies had mixed staff groups with the remaining studies including teaching staff only. Four consisted of primary school staff only, seven secondary staff only and three both. Five studies were randomized control trials (one study compared two active treatment conditions, four employed a waitlist control). The remaining seven were uncontrolled evaluations. Follow-up data was collected by five studies.

The most common topics for training were suicide and ADHD (both considered by five studies). One study evaluated training on how to respond to a student in mental health crisis (known as "Mental Health First Aid"). Two studies trained staff on adolescent depression and

one covered deliberate self-harm in students. The outcomes measured included actual and perceived knowledge, self-appraisals, intended behaviours and actual behaviours, skills and attitudes. The outcome measurs varied according to outcome. Knowledge was captured with objective testing (i.e. 'ADHD is caused by too much sugar'). Perceived knowledge, self-appraisals, intended and actual behaviours and attitudes were measured using self- report. Respectively, examples of these are as follows: e.g. "please rate your knowledge of warning signs", "How confident do you feel to help a suicidal person?", "How likely would it be for you to go with a suicidal person to get help?", "In the previous month, how often have you spoken with a student about mental health difficulties?", "Children who self-harm make me feel angry". Skills were measured using observation and comparisons with diagnostic criteria. Six studies measured one outcome and eight considered three or more.

Table 2:   To show risk of bias assessment scores

Risk of bias criteria	Barbaresi (1998)	Clark (2010)	Cross (2011)	Hillman (2001)	Jones (2008)	Jorm (2010)	Mackesky (1996)	Moor (2000)
Title, abstract & introduction								
1. Is there a clearly focused question with information on target population & outcomes? Does background information provide clear rationale and lead to a clear hypothesis?	3	3	3	3	3	2	2	3
Design								
2. Is there a large enough sample size?	1	3	2	1	2	3	2	1
3. Is there a control group?	1	1	3	1	3	3	1	1
4. Is there a follow up long enough to capture intended effects with low loss to follow up?	1	1	3	1	1	3	1	1
Method								
5. Recruitment bias: *Do the sampling/recruitment methods minimise bias?*	2	2	2	1	2	2	2	1
6. Classification bias *Was the exposure to training accurately measured to minimise bias?*	2	2	3	1	3	2	2	3
7. Measurement bias Were objective outcomes used in addition to subjective outcomes?	3	1	3	2	3	3	3	3
8. Measurement bias: *Are the psychometric properties of the measures established (Cronbach's alpha > 0.70)*	1	3	3	1	3	3	3	2
Analysis								
9. Are the analysis methods clearly described and coherent with the research aims?	3	3	3	1	3	3	3	3
Results								
10. How precise are the results? (confidence intervals)	1	1	1	1	1	3	2	2
Discussion								
11. Are the limitations of research and potential bias acknowledged & discussed?	3	3	3	3	3	3	2	2
12. Are the results consistent with other evidence?	3	3	3	1	3	3	2	2
Total	**24**	**26**	**32**	**14**	**30**	**31**	**25**	**24**

Risk of bias criteria	Moor (2007)	O'Donnell (2007)	Reutzel (2008)	Robinson (2008)	Sayal 2006	Syed (2010	Tompkin (2010)	White (2007)	Wyman (2008)
Title, Abstract & Intro									
1. Is there a clearly focused question with information on target population & outcomes? Does background information provide clear rationale and lead to a clear hypothesis?	3	1	2	3	3	3	3	3	3
Design									
2. Is there a large enough sample size?	2	3	1	2	2	1	1	1	3
3. Is there a control group?	3	1	1	1	1	1	2	2	3
4. Is there a follow up long enough to capture intended effects with low loss to follow up?	1	1	1	2	1	3	2	1	3
Method									
5. Recruitment bias: Do the sampling/recruitment methods minimise bias?	2	1	2	2	2	1	2	1	2
6. Classification bias Was the exposure to training accurately measured to minimise bias?	2	1	1	1	2	2	1	1	2
7. Measurement bias Were objective outcomes used in addition to subjective outcomes?	3	3	3	3	3	3	3	3	3
8. Measurement bias: Are the psychometric properties of the measures established (e.g. Cronbach's alpha > 0.70)	2	1	1	2	3	1	3	1	3
Analysis									
9. Are the analysis methods clearly described and coherent with the research aims?	3	1	2	3	3	3	3	3	3
Results									
10. How precise are the results? (confidence intervals)	3	1	1	3	3	3	3	3	3
Discussion									
11. Are the limitations of research and potential bias acknowledged & discussed?	2	2	2	3	3	1	3	2	3
12. Are the results consistent with previous evidence?	3	1	2	3	3	1	3	3	3
Total	**29**	**17**	**19**	**28**	**29**	**23**	**29**	**24**	**34**

Bias Assessment based on The Transparent Reporting of Evaluations with Non-randomised Designs (Jarlais et al, 2004) & Critical Appraisal Skills

Programme for Cohort Studies (CASP) (Public Health Resource Unit, 2006). 2=yes, 1=partially, 0=no/unreported

Table 3: Summary of studies rated as 'strong' (low risk of bias, scores of 30 +)

Study *Country*	Sample Size (N=Pre+Post) Staff Type	Design Data Points Follow up (FU)	Intervention Topic Duration Facilitator (s)	Outcome (s)	Measures No. of items Response options Previously published	Results
Cross, Seaburn, Gibbs, Schmeelk-ConeWhite & Caine. (2011) USA	N=170 6 schools 1 District Secondary school staff (teachers, MH professionals & bus divers) & parents	RCT Compared two treatment conditions Pre, post & 3 month FU	Intervening with suicidal students. Based on Question Persuade Refer Training (QPR); Quinnett, 1995). Standard 1 hour lecture compared to lecture *plus* 25 minutes small group role play practise. 2x qualified QPR trainers	1. Actual knowledge (of suicide related facts) 2. Self-perceived knowledge 3.Self - perceived efficacy to intervene 4. Observed Gatekeeper Skills 5.Gatekeeper Behaviour	1. 14 items Multiple choice & T/F (Cross et al, 2007; Wyman et al, 2008) 2. 5 items 5- point Likert Scale. "Poor-Excellent" 3. 5 items 5 point scale (Cross et al, 2010; Matthieu et al, 2008) 4.Observational Rating Scale of Gatekeeper Skills, (ORS-GS) (Cross et al, 2010) 5. Self- reported number of referrals in previous 3 months	*No diff between staff/parents any analysis so all results by condition* 1. Both conditions increased pre-post & at FU (p<0.001). No Time x Condition. MH professionals scored high at baseline & no increase (so excluded from other analysis) 2 & 3 Both conditions improved pre-post & maintained at FU (p<0.001). No Time x Condition 4. Both conditions improved over time (p<0.001). Modified condition scored significantly higher than standard at post-test and FU (p<0.05). (Time & Time x condition). FU scores lower than post-test but still significant. 5. No difference between two conditions at FU

Study *Country*	Sample Size (N=Pre+Post) Staff Type	Design Data Points Follow up (FU)	Intervention Topic Duration Facilitator (s)	Outcome (s)	Measures No. of items Response options Previously published	Results
Jones & Chronis-Tuscano (2008) USA	N= 129 Elementary Teachers 6 schools	RCT (training vs. waitlist control) Pre, post-test after 1 month No FU	ADHD 1 x 2.5 hour workshop Doctoral student in Clinical Psychology.	1. Actual knowledge of ADHD assessment, diagnosis and treatment	1. 25-item T/F Adapted from (Jerome et al, 1994, Sciutto et al, 2000)	1. Trained teachers increased knowledge pre-post to greater extent than control (p<0.01) (Time x condition)
Jorm, Kitchener, Sawyer, Scales & Cvetovski *(2010)* Australia	N=327 High School Teachers 14 schools	Cluster RCT Training vs. waitlist control Pre, post & 6 month FU	How to support students with mental health difficulties. Modified version of Youth Mental Health First Aid (MHFA). 2 x 7 hour sessions 2 x Facilitators per school (1x DofE, 1 x CAMHS). Trained by authors	1.Actual knowledge 2. Confidence in helping students 3. Identification skills 4.Intentions to provide support to a depressed student	1a) 21 items 2. 1 item "How confident do you feel to help a student with MHD? 6 point scale "Not at all-Extremely 3. Presented with case vignette of student with depressive symptoms" 'What if anything, is be wrong with X? Scored correct if depression was included in response. 4.7 items describing various behaviours Staff asked to rate likelihood that they would do each "Never-Always"	1a) Knowledge increase greater in intervention group than control at post test (p<.001) and FU (p<.001) 2. Confidence increased training vs. control at post test (p<0.005) & FU (p<0.008) 3.Scores high at baseline and not increased at post-test 4. Trained teachers more likely than control to report intentions to discuss any concerns with another teacher (p<0.013) or with a counsellor (p<0.023) at post-test than at baseline. Not maintained

Study *Country*	Sample Size (N=Pre+Post) Staff Type	Design Data Points Follow up (FU)	Intervention Topic Duration Facilitator (s)	Outcome (s)	Measures No. of items Response options Previously published	Results
Jorm et al (2010) continued…						at FU. Intentions to speak to student increased significantly at FU (p<0.032)
				5. Actual helping behaviours	5. 4 items describing help provided to students. Staff asked to indicate frequency in previous month on a 4 point scale Never-Frequently"	5. No increase in the amount of help staff reported providing.
				6. Use of school strategies	6. 5 items describing school strategies to support students. Asked to rate frequency of use on 4 point scale "Never – Frequently"	6) No increase in use of school strategies
				7. Amount of help and information reported by students from staff regarding mental health	7. 2 item questionnaire. Item 1 asked students to indicate the frequency in previous month with which they had talked with staff about emotional or mental health difficulties and if so, is staff had listened, calmed them, spoken about emotions or recommended help. Item 2: If students had received mental health information and if so the source of this information (website, brochure etc.)	7. No increase in student reported staff behaviours following training Students of trained teachers more likely to report receiving information about mental health than control post-test(p<0.001)

Study *Country*	Sample Size (N=Pre+Post) Staff Type	Design Data Points Follow up (FU)	Intervention Topic Duration Facilitator (s)	Outcome (s)	Measures No. of items Response options Previously published	Results
Jorm et al (2010) continued…				8. Personal & Perceived stigma towards students with depression	8. 14 items Staff asked to rate agreement with items on X point scale Strongly Agree- Strongly Disagree	8. Time x condition effect on 4 items : Trained staff: 1.Less likely than controls to see depression as personal weakness at post-test (OR=3.07, p=.024) & FU (OR=2.47, p=0.077) 2.Less reluctant to disclose depression to others at post-test (OR=3.79, p=0.012) & FU (OR=3.42, p=0.029) 3. More likely to believe others see depression as weakness at posttest (OR=1.10, p=0.848) & FU (OR=3.01, p=0.031). More likely to see other people as reluctant to disclose (OR=2.57, p=0.041) & FU (OR=1.32, p=0.555)
				9. Attitudes towards school strategies	9. Teachers asked to rate likelihood they would agree with strategies. 5 point scale "Always to Never"	9. Trained teachers more likely than untrained to agree with the following: review curriculum, review school policy, improve relationships within the school (p<0.05)
				10. Attitudes towards depression interventions	10. 36 categories of intervention for depression presented. Each of which had been rated by clinicians as helpful/harmful. Score = the number of "helpful" interventions endorsed	10. Beliefs became more consistent with MH professionals at posttest (mean diff=0.79, p<0.006) & maintained at FU (mean diff= 0.73, p<0.013)

Study *Country*	Sample Size (N=Pre+Post) Staff Type	Design Data Points Follow up (FU)	Intervention Topic Duration Facilitator (s)	Outcome (s)	Measures No. of items Response options Previously published	Results
Wyman, Brown, Inman, Cross, Schmeelk- Cone, Guo & Pena (2008) USA	N= 249 Teachers, managers & support staff 32 secondary schools 1 school district	RCT (training vs. waitlist control) Pre- post-test at 12 months.	"Gatekeeper Training" Based on Question, Persuade, Refer (QPR) (Quinett, 1995) 1 x 1.5 hour workshop 2 facilitators per group (1 school counselor plus 1 of 8 staff from district prevention centre)	1. Actual knowledge of suicide risk factors, warning signs & QPR behaviours 2. Appraisals: a) Preparedness b) Self-efficacy c) Knowledge d) Service Acces e) Reluctance 3a). Self-reported behaviours (suicide identification & QPR)	1. 14 item multiple choice assessing training content (8 items on QPR, 6 items on risk factors) 2.7 point scales a) 8 items. b) 16 items c) 9 items d) 4 items e) 9 items 3. a) Primary outcome: 1 item "*How many times in the last 6 months have you asked a student whether they are considering suicide?*" 5 point Scale "None - +4" b) Frequency of 6 QPR behaviours in previous 6 months. 5 point scale "Never-Always".	Results of ITT & AT analysis very similar. (ES = diff in means after adjusting for linear effect of baseline, divided by total sd). 1. Moderate positive training effect on knowledge (ITT= p<0.001). 2. Large effects: preparedness, self efficacy, self perceived knowledge and access to services (all ITT=p<0.001) e)Decrease reluctance AT(p<0.01) 3a). No overall training effect. Scores increased significantly only for the 14% of staff already asking at pre-test (ITT p=0.02). b) No significant increase

Table 4: Summary of studies rated as 'moderate' (medium risk of bias, scores 20-30)

Study Country	Sample (N=Pre+Post) Staff Type	Design Data Points Follow up (FU)	Intervention Topic Duration Facilitator (s)	Outcome (s)	Measures No. of items Response Options Previously published	Results
Barbaresi, W.J. & Olsen, R. (1998) USA	N= 44 Elementary teachers 1 school	Single Group (uncontrolled) Pre - post test. No FU	ADHD 1 x 2.5 hour workshop Delivered by study author	1. Actual Knowledge	1. 27- item T/F response format questionnaire Adapted from measure used in Jerome et al (1994).	1.Increase in total scores (p<0.001). 2. Largest effects on beliefs ADHD caused by poor parenting or food additives (both p<0.0001).
Clark, Matthieu, Ross & Knox (2010) USA	N= 365 Primary & secondary level Community & school based staff from education, mental & public health & social services No. of schools not reported. 1 district	Single Group (uncontrolled) Pre-post–test. No FU	Samaritans of New York Suicide Awareness & Prevention Programme 1x 3 hour workshop	1. Self- reported knowledge 2. Self –perceived efficacy to intervene	1. 5 items 2. 5 items 5 point scale "Very low-very high) Adapted from measure in Cross et al, (2007), Matthieu et al, (2006), Wyman et al (2008)	1 & 2 Scores on all 5 items increased following training (p<0.0001). 2. Self-efficacy increased (p<0.05).
MacKesky-Amiti, Fendrich, M., Libby, S, Goldenberg, D & Grossman, J.	N=205 Secondary school staff (Teachers, social workers, nurse and	Single Group (uncontrolled) Pre-Post-test. No FU	Suicide "Post-vention" (How to respond after a student has suicided)	1. Actual knowledge	1. Preparing for Crisis knowledge test (PFC-KT) 25 item pairings: True/False	1. Increase in total scores pre-post (p<0.0001). 8 paired items increased (p<0.001)

Study *Country*	Sample (N=Pre+Post) Staff Type	Design Data Points Follow up (FU)	Intervention Topic Duration Facilitator (s)	Outcome (s)	Measures No. of items Response Options Previously published	Results
(1996) *USA*	counselors) 24 schools 6 Districts		1x 4 hour workshop Delivered by New Jersey Adolescent Suicide Prevention Project		Reliability tested in this study (a= .58)	3 increased (p<0.005). Items on contagion, memoralisation, school response, role differentiation and systems showed change. 1 paired item decreased: grief reactions post suicide differ from those after accidental death. Remaining items (on collaboration, and high risk groups) showed no change.
Moor, Sharrock, Scott, McQueen, Wrate, Cowan & Blair (2000) Scotland, UK	N= 16 Secondary school guidance & subjects teachers 1 school	Single Group (uncontrolled) Pre-post-test. No FU	Identification of depression in adolescents 1 x 2 hour workshop 2 x facilitator (Special needs teacher and Senior Registrar)	1. Appraisals 2. Ability to identify	1. 10- item Author designed Questionnaire 2. Staff asked to identify pupils	1. Positive change on 4 items: a) Confidence in knowledge of depressive symptoms (p<0.01) c) Decreased belief depression part of normal adolescence(p<0.05) d) Decreased belief teachers unqualified to recognise(p<0.05) 2. Sensitivity of teachers increased

Study Country	Sample (N=Pre+Post) Staff Type	Design Data Points Follow up (FU)	Intervention Topic Duration Facilitator (s)	Outcome (s)	Measures No. of items Response Options Previously published	Results
Moor et al. (2000) continued……					possibly/probably depressed in the previous 12 months from a list of cohort independently assessed as depressed.	(recognized 58% depressed students pre- training and 75% post-training) (p<0.05).
Moor. Maguire, McQueen, Wells, Elton, Wrate & Blair (2007) Scotland, UK	N=151 Secondary school staff with pastoral responsibilities (Teachers, guidance, subject & registration staff and LSP's)	RCT (training vs. control) Pre-post-test. No FU	Identification of depression in adolescents 1 x 2 hour workshop Delivered by authors	1. Appraisals & attitudes	1.10 items (see Moor 2000)	1. Positive change on 6 items: Greater confidence in knowledge (p<0.001), ability to recognise (p<0.001) and assess for depression (p<0.0001) and decide on help (p<0.001). Reduced beliefs depression part of normal adolescence (p<0.05), teachers unqualified to recognise (p<0.001). No change to beliefs depression rare in adolescence, easy to treat, schools unsuitable for

Study	Sample	Design	Intervention	Outcome (s)	Measures	Results
Country	(N=Pre+Post) Staff Type	Data Points Follow up (FU)	Topic Duration Facilitator (s)		No. of items Response Options Previously published	
				2. Ability to identify depression	2. Staff ability to identify depressed pupils from 2262 independently screened for case-ness.	detecting depression or can cope with depressed pupils. 2) Recognition: a) Numbers of students identified decreased over time in experimental group but increased in control (p<0.0001) Trained teachers less likely than control to make new reports of depression (p=0.05) b) Accuracy reduced in experimental groups over time (52% baseline -45% post test). Accuracy increased in control (41% baseline- 43% post training). Exp vs. control (p=0.19).

Study Country	Sample (N=Pre+Post) Staff Type	Design Data Points Follow up (FU)	Intervention Topic Duration Facilitator (s)	Outcome (s)	Measures No. of items Response Options Previously published	Results
Robinson, Gook, Pan Yuen, McGorry & Yung (2008) Australia	N= 169 Secondary staff (teachers, nurses & psychologists) with welfare responsibilities 8 schools 1 region	Single Group (uncontrolled) Pre-post-test and FU at 6 months	Managing Deliberate Self Harm Choice of 1 or 2 day package (7 or 14 hours)	1.Knowledge 2.Confidence to help 3. Self- efficacy to help 4. Attitudes	1. Knowledge of Deliberate Self-Harm Questionnaire (KDS). 10 items (Crawford et al, 2003) 2 & 3. 4 items 1-5 scale "Not at all" to "Extremely" Adapted from Jorm, (2002). 4a. Attitudes Towards Children who Self-Harm Questionnaire 17 items T/F (Crawford, et al, 2003).	1. Significant increase pre-post (p<0.001). Not maintained at FU. 2. Significant increase in confidence to help which was maintained at FU (both time points p<0.001) 3. Improved perceptions of skill in managing which was maintained at FU (both time points p<0.001) 4a. No significant improvement pre – post or at FU

Study	Sample	Design	Intervention	Outcome (s)	Measures	Results
Country	(N=Pre+Post)	Data Points	Topic		No. of items	
			Duration		Response Options	
	Staff Type	Follow up	Facilitator (s)		Previously	
		(FU)			published	
Robinson et al. (2008) continued…..					4b. Attitudes to Suicide Prevention Scale (Herron et al, 2001) 14 items 5 point Scale "Strongly disagree-Strongly agree"	4b.Positive change on 2 items: 1.Increase in beliefs that working with suicidal students is rewarding (p<0.006) 2.Decrease in those un comfortable assessing for suicide risk (p<0.001)
Sayal, Hornsey, Warren, MacDiarmid & Taylor. (2006) UK	N= 96 Primary school teachers 6 schools	Single Group (Uncontrolled) Pre-post-test. No FU	Recognition of children at risk of ADHD 1 x 45 minute workshop 2 x facilitators (CAMHS Psychiatrist + research worker)	1. Ability to identify ADHD	1. Ability to identify pupils from classes (n=2762 aged 4-11) possibly/probably had ADHD according to DSM-IV ADHD criteria.	1a) Proportion of students regarded as having "probable" ADHD increased from 3.2% -4.1% (p<0.05). b) Accuracy of recognition increased (p<0.05)
Syed, & Hussein (2010) India	N=49 Primary and Secondary School Classroom Teachers 3 schools	Single Group (uncontrolled) Pre-post-test & FU at 6 months	ADHD signs and symptoms 10 hours (5 x 2 hour sessions delivered daily for a week) Author facilitators	1. Actual knowledge	1. 20 item questionnaire T/F Adapted from Jerome et al (1994)	1. Mean scores increased pre-post test and sustained at FU (both time points p<.005)

Study **Country**	Sample (N=Pre+Post) **Staff Type**	Design Data Points Follow up (FU)	Intervention Topic Duration Facilitator (s)	Outcome (s)	Measures No. of items Response Options Previously published	Results
Tompkins, Witt & Abraibesh (2010) **USA**	N=102 Primary and secondary school personnel 1 school district	Non-equivalent control group Design (Control were community based volunteers) Pre-post-test and 3 month FU	QPR Gatekeeper training. 1 x 1 hour workshop 1 x QPR certified trainer	1. Actual Knowledge 2. Appraisals: 2a. Knowledge b) Self-efficacy c) Likelihood to intervene	1. 15- items multiple choice (Adapted from Wyman, 2008). 2. 5 scales (Adapted from Wyman (2008) 2a. 6 items, 5 point scale Very low-Very-high b) 3 items (comfort, competence & confidence to help suicidal person 5 point scale "Not at all-Fully" c)7 items 4 items on 5 point scale 3items on 3 point scale "Not very likely"- "very likely"	1. Significant gains in trained group vs. control pre –post (p<0.001). Not maintained at FU 2a. Gains in trained group vs. control pre-post (p<0.001) Not maintained FU b) Significant gains in trained group vs. control pre-post (p< 0.001) & maintained (p<0.001) at FU. c). Increase on total scale scores pre-post trained group vs. control (p<0.001) Maintained at FU (p<0.001)

Study *Country* Staff Type	Sample (N=Pre+Post) Staff Type	Design Data Points Follow up (FU)	Intervention Topic Duration Facilitator (s)	Outcome (s)	Measures No. of items Response Options Previously published	Results
Tompkins et al. (2010) continued……..				d) Attitudes to suicide & prevention	d) 3 items 5 point scale "Strongly Agree-Strongly Disagree"	d) Increase in beliefs suicide is preventable pre-post control vs. training (p<.05) maintained at FU (p<0.01). No increase in beliefs suicide is a major issue or should be addressed
White, Sukhodolsky, Rains, Foster, McGuire & Scahill (2011) USA	N=63 Elementary Teachers 5 schools	Non-randomly assigned to intervention or control. Control group (n=11) from separate single school Pre and post-test at 6 weeks. No FU.	Tourettes, OCD & ADHD 1 x 2 hour workshop Designed & delivered by authors	1. Knowledge	1. Author designed 27-item questionnaire. Multiple choice	1. Trained group scores increase pre-post test (p<.001) whilst waitlist control scores declined (p< 0.05). Significant difference between post-test scores of training groups (p<0.001).

Data synthesis

The included studies examined the impact of staff training upon six outcomes: staff actual knowledge, perceived knowledge, skills, appraisals, behaviour and attitudes. The aim of this review is to determine both the effectiveness of training to improve each outcome and the durability of any changes. To this end, both the quantity and quality of available evidence are considered. Study findings are presented in "data sets", in the order of most developed evidence. All increases reported are statistically significant unless otherwise stated. It is hoped that this will highlight outcomes that may be more responsive to brief training and identify any gaps in the existing evidence base.

Knowledge.

Knowledge is the most frequently evaluated outcome. Studies have examined two types of knowledge: "actual" knowledge and "perceived" knowledge.

Actual knowledge.

Summary.

With ten studies reporting on this outcome, actual knowledge has the largest available data set. As four of these studies are strong and six moderate, and as all studies employed objective testing to measure improvements, the quality of this data is also good. Overall, findings show that training does generate improvements to actual knowledge.

Effectiveness.

Within this set, the most robust findings are for suicide training; where four of four studies conducted (two strong and two moderate) found significant improvements following training. Three of these evaluated "Gatekeeper Training"; a specific, USA based, model designed to

improve identification and referral of suicidal individuals. The first of these showed a "moderate" positive training effect at 12 month post-test (Wyman et al., 2008); with trained staff showing significantly greater gains in knowledge of suicide risk factors and warning signs than a waitlist control group. The second, (Cross et al., 2011), found that both staff who completed a standard version of gatekeeper training, and those who completed a version modified to include 30 minutes of behavioural rehearsal, increased their knowledge of suicide related facts from pre- to post training. In the third (Tompkins, Witt & Abraibesh, 2010), knowledge of warning signs, risk factors, how to question about suicidal intent and refer for help improved more in trained staff pre- to post training than a non-equivalent control group. An uncontrolled study, (Mackesy-Amiti, Fendrich, Goldenberg & Grossman, 1996), delivered suicide "post-vention" training (i.e. about how school staff should respond *after* a student has committed suicide), and found that only some aspects of understanding improved significantly after training (e.g. the best way to inform other students). Knowledge on community collaboration, grief processes and high-risk groups showed no change.

Evidence from one strong and three moderate studies have evaluated training on ADHD and have also found increases to actual knowledge. Of these four, two controlled studies (Jones & Chronis-Tuscanol, 2008; White et al., 2011) both found significantly greater improvements from pre- to post-test in the trained group than the control. Two uncontrolled studies (Syed & Hussein, 2010; Barbaresi & Olsen, 1998), also found improvements; this time in mean scores from pre- to post training.

Only two studies measured actual knowledge where training was on something other than suicide or ADHD. One strong study found that staff trained in Mental Health First Aid

(MHFA) showed greater knowledge gains about common youth mental health difficulties than a waitlist control group (Jorm, Kitchener, Sawyer, Scales, & Cvetkovski, 2010). An uncontrolled, moderate study found that staff actual knowledge of deliberate self harm improved significantly following a workshop on this topic (Robinson, Gook, Yeun, McGorry & Yung, 2008).

Effect durability.

In four of the six studies that contained a follow up element, improvements were found to be sustained; at three months (Cross et al., 2011), six months (Syed & Hussein, 2010; Jorm et al., 2010) and 12 months (Wyman et al., 2008). One study (Robinson et al., 2008) found that knowledge scores *improved* between post-training and follow up. The authors suggest that training may have prompted staff to further their learning via discussion or research. Only one study found that gains were not maintained three months after training Tompkins et al. (2010) and scores had reduced although were still above baseline levels.

Perceived knowledge

Summary.

With six studies considering staff perceptions of their knowledge, this outcome has been relatively well examined. Similar to actual knowledge, findings have been consistent and positive and indicate that training can improve staff perceptions of their knowledge.

Effectiveness.

Two strong and two moderate studies have measured perceived knowledge following gatekeeper training. In the former group, Cross et al. (2011) found that both a standard and

modified version of gatekeeper training resulted in staff rating their own knowledge more favourably than they had at baseline; although the effect was no greater in the modified version. In Wyman et al. (2008), trained staff gave significantly more positive appraisals than controls of their knowledge at post-training. In moderate studies, Tompkins et al. (2010) found that trained staff perceptions were significantly more positive following training than a non-equivalent control. An uncontrolled evaluation (Clark, Matthieu, Ross, & Knox, 2010) also found that following completion of the Samaritans suicide awareness training programme, staff self-ratings of their knowledge about suicide, warning signs, how to get help, how to ask about suicide and local resources were significantly more positive than at baseline.

Two moderate studies have considered staff knowledge appraisals after training on student depression. Conducted by the same author, the larger and more robust randomised control trial (Moor et al., 2007) replicated the positive findings of the initial, uncontrolled pilot study (Moor et al., 2000) with both showing that training increased the number of staff reporting confidence in their knowledge of symptoms and what to ask students.

Effect durability.

Two studies collected follow up data on this outcome; with one strong study finding effects to be sustained at three months (Cross et al., 2011) and one moderate study showing effects had reduced, although they remained higher than baseline levels (Tompkins et al., 2010). The study by Tomkins et al. (2010) notably generated follow up data for both actual and perceived knowledge which contradicts other findings in the data sets. These differences may be linked to the fact that the initial sample size was small (n=102) and just 39 staff completed follow up

data. As 21 of these were in the control, any effects would have been difficult to detect statistically. Less weighting should therefore be attached to these findings.

Self -appraisals

Summary.

Eight studies have examined training impact upon on staff self-appraisals; three of which are rated as strong and five moderate. Self-appraisals describe staff feelings towards themselves and their role in mental health; and included ratings of skill, efficacy, confidence, preparedness and reluctance. Collectively, studies have produced consistent and positive results with all demonstrating significant improvement.

Effectiveness.

Four studies have evaluated appraisals before and after suicide training; two of which are rated as strong and two moderate. Cross et al. (2011) found that both a standard and modified version of gatekeeper training significantly increased feelings of self-efficacy to perform gatekeeper activities pre- to post training. Wyman et al. (2008) found that improvements in self-efficacy, preparedness to perform gatekeeper activities, reluctance and perceptions of service access were the largest effects of the training; with trained staff reporting more positive appraisals than control at post-training. In moderate studies, Tompkins et al. (2010), found that trained staff improved significantly more than controls on all of three items of "comfort, competence and confidence" to deal with suicidal students. An uncontrolled study by Clarke et al. (2010) found that staff ratings of their self- efficacy to intervene with "at risk" students (e.g. ask someone if they are thinking about suicide) increased on all five items of a five item scale.

One strong and three studies have been conducted of training on topics other than suicide. One strong study found significant positive increases pre- to post training (trained vs. control); in confidence to support students with mental health difficulties following MHFA training (Jorm et al., 2010). Two moderate studies of depression training (Moor et al., 2000; 2007), found increased confidence to recognise and assess for depression, knowing what to ask and how to decide on the necessary help. One moderate and uncontrolled study (Robinson et al., 2008), found improvements to all of four items measuring staff confidence and appraisals of skills to help students who self harm or with mental health difficulties.

Effect durability.

All of four studies which collected follow up data, found that improvements to appraisals remained; at three months (Cross et al., 2011; Tompkins et al., 2010), six months (Jorm et al., 2010; Robinson et al., 2008) and one year (Wyman et al., 2008).

Skills

Summary.

The effectiveness of training to improve staff's mental health related skills comprises of two strong and three moderate studies. As such, the evidence in this domain is considerably lower in quantity and quality than the previous three outcomes. Across the five studies, two types of skill are considered: a) ability to identify difficulties and b) ability to communicate with distressed students. Overall, the results have been mixed, with two studies showing significant improvements to skills whilst three do not.

Effectiveness.

a) Three studies examine staff ability to identify depression. A strong study by Jorm et al., (2010), found that identification from a written vignette was high at baseline (with 81% correct recognition). This rose to 92.9% at post-training; a non significant increase. Moor et al. (2007), found that despite encouraging pilot study results (2000), teacher recognition of students who had already been independently assessed as depressed, did not improve. One study measured identification of ADHD (Sayal, Hornsey, Warren, MacDiarmid & Taylor, 2006). This uncontrolled study found that training *was* effective in increasing both the frequency and accuracy with which teachers recognised students meeting DSM-V criteria.

b) One study measured staff's ability to communicate with distressed youth (Cross et al., 2011). Here, a standard model of gatekeeper training was compared to one in which staff also participated in a 30 minute role play with actors. Staff were assessed before and after training on their ability to communicate (listen and clarify), ask directly about suicide, encourage help-seeking and make an appropriate referrals. Results showed that whilst the total skills scores of staff in both conditions significantly improved from pre- to post-training, those who had undertaken the role play practise, improved to a significantly greater degree than those who had not.

Effect durability .

As none of the studies collected follow up data on identification skills, the durability of effects is it is not possible to determine. The improvements to staff communication skills (Cross et al., 2011) had deteriorated when measured at three month follow up.

Intended behaviours

Summary .

With just two studies reporting on this outcome, data on the extent to which training impacts upon intentions to behave is limited. Results have been equivocal but indicate that intentions to behave can be improved.

Effectiveness.

One strong study (Jorm et al., 2010) found that intentions to discuss concerns about a student's mental health with another teacher or counsellor increased significantly more in the trained group than in the control group. Staff intentions to talk to the student themselves, their families, peers or administration staff, did not increase. A moderate study (Tompkins et al., 2010), found that after training, staff were significantly more likely to report that they would "intervene" with a suicidal student than at baseline and in comparison to the control group as measured on seven items.

Effect durability.

Jorm et al. (2010) found that training gains had shown some atrophy by six months. Although intentions were still higher than at baseline, this difference was only trended at six months and no longer statistically significant. Interestingly, increases in staff intentions to speak to the students themselves, (which had not been significant immediately post-training) became significant at follow up. The study by Tompkins et al. (2010) showed that effects remained durable three months after training.

Actual behaviours

Summary.

Consisting of just three studies, the data set for actual behaviours is small. Nevertheless, as all three studies are rated as strong, the results are at low risk of bias and merit attention. All data on this outcome were collected either at follow up or delayed post-training, to allow time for behavioural change to occur. Consistently, studies have found very little change to reported behaviours.

Effectiveness.

Cross et al. (2011) found that the number of referrals made by staff in both of two training conditions had not increased three-months after training. In a second study second, post-training data collected one year after training showed that staff had not increased their use of six specific gatekeeper behaviours taught in training, such as 'notifying appropriate referral sources"(Wyman et al., 2008). In the latter study, the frequency with which staff had asked a student about suicide in the previous six months was the primary outcome and not only had the frequency of this behaviour not increased, but analysis indicated that seven staff would need training to result in one staff member asking one more student if they had considered suicide.

Only the third study on behaviours yielded positive results (Jorm et al., 2010). Here, when surveyed at six month follow up, the students of teachers trained in MHFA were found to be significantly more likely than those of untrained teachers to have received information on mental health from teachers in the previous month. Unfortunately, this was the only one of several behaviour items to show improvements. No significant increases were found to how often teachers had accessed mental health related sources of information, addressed any

concerns about a student with the student, their teachers or in staff meetings, or to how often students reported being spoken to by staff.

Attitudes

Summary.

Comprising of four moderate and one strong study, evidence on staff attitudes is limited in quantity and of lower quality than other outcomes. Studies have measured attitudes towards; a) people with mental health difficulties and b) mental health interventions (i.e. "treatment" or school strategies). Results have shown that training has had a limited impact upon both types of attitudes.

Effectiveness.

a) One strong and three moderate studies have measured attitudes to people with mental health difficulties. The most reliable of these (Jorm et al., 2010) measured "personal" and "perceived" stigma towards students with depression. On a 14- item questionnaire, Time x condition effects were found on four items at post-training; indicating that training reduced beliefs that depression was a weakness, reduced reluctance to disclose depression to others, increased awareness that *other people* may see depression as a weakness and increased awareness that *other people* may be reluctant to disclose depression. No significant improvements occurred to beliefs (personal or perceived), that difficulties are "not real illnesses" or that those with difficulties could "snap out of it" or were dangerous, un-predictable or "best avoided". This lack of change was not due to ceiling effects.

Three studies of moderate bias (Robinson et al., 2008) found no change on attitudes to children who self-harm (on a 17-item scale; Robinson et al., 2008), beliefs that depression is rare or easily treated (two of two items; Moor et al., 2007), or beliefs that suicide is a major issue or in need of addressing (two of three items; Tompkins et al., 2010). This latter study did however show that an increase in staff beliefs that suicide is preventable.

b) One strong and three moderate studies measured attitudes to mental health interventions. The strong study (Jorm et al., 2010) found that staff trained in MHFA reported greater support for several school strategies to help students with mental health difficulties than did controls. These strategies included reviewing the curriculum, classroom practices and school policy. Support for setting up family or community liaison did not change. Results also showed that training bought staff beliefs about the helpfulness of depression treatments in line with those of mental health professionals.

In one moderate study, Robinson et al., (2008) found that two items (from a 14- item scale) on attitudes to suicide prevention improved significantly after training on deliberate self-harm. Changes reflected greater comfort assessing suicide risk and increased beliefs that working with suicide was rewarding. Four items on the scale showed no change (e.g. that suicide prevention was the responsibility of school staff). Several items demonstrated ceiling effects. Two final moderate studies (Moor et al., 2000; 2007), found that training did not reduce staff beliefs that school was an unsuitable place for depression recognition.

Effect durability.

Three studies collected follow up data. These found improvements were maintained at three months (Tompkins et al., 2010) and six months (Robinson et al., 2008; Jorm et al., 2010). The loss to follow up in the study by Tompkins et al. (2010), once again means that these results should be treated cautiously as they may be biased towards those with a greater interest or motivation in the topic area.

DISCUSSION

This review aimed to synthesise data from previous evaluations of brief mental health training with school staff in order to determine the effectiveness of training. The following section summarises the study findings and discusses possible methodological and contextual explanations for them. The consistency of the findings with wider research and their implications for both clinical work and research work are then considered. Limitations to the review process itself are presented before final conclusions are drawn.

Results summary

The largest and most reliable data sets were found for outcomes of staff mental health knowledge (both real and perceived) and self-appraisals. Quite consistently, findings of strong and moderate quality indicate that brief training can generate significant improvements to all three outcomes which are sustained for up to a year.

Considerably fewer evaluations have measured intended and reported behaviour and skills. There is evidence that some staff intentions, i.e. to speak to students, talk to other staff and intervene with suicidal students, increased after training. Unfortunately, this comes from only two studies and shows that intentions atrophy over time. Little improvement to staff's ability to identify student mental health difficulties has been found and almost no behavioural change has been reported by staff following training. The most encouraging findings regarding skills or behaviour have been that training improved staff communication with distressed youth and that it increased the amount of information that students reported receiving from staff.

Very little data were found regarding the effects of brief training on attitudes to mental health difficulties or mental health strategies and this evidence was mostly of moderate quality. Despite measuring 51 attitude items in total, studies found few positive changes. Improvements included reduced perceptions that depression is a weakness, increased beliefs that suicide is preventable and greater support for school strategies regarding student depression of six studies which collected follow up data all found that the effects which did occur were sustained for up to six months.

Comparisons with wider research

In essence, these results show that knowledge, self-appraisals and intended behaviours showed more change from training than skills, attitudes and or behaviours. This pattern of change across outcomes, including the notable lack of effect in some areas, is consistent with findings from studies of public health, organisational training and with school mental health promotion generally. International reviews, for example, have shown that knowledge outcomes generally improve following public education programmes about depression and suicide (Dumesnil & Verger, 2009). Recent anti-stigma media campaigns have shown significant and sustained shifts in knowledge, but not to attitudes or behaviour (Evans-Lacko, London, Little, Henderson and Thornicroft, 2010). Stigma research has found that despite decades of public information campaigns, attitudes to people with mental health difficulties have not improved generally (Schomerus et al., 2012). Within school mental health promotion specifically, nearly two decades of work across the globe have shown 'slow progress'; with sustainable effects difficult to achieve (Rowling, 2009). The challenge of translating training gains into actual behavioural change is well acknowledged (Kirwan, 2009).

Study strengths

These studies represent efforts to conduct systematic research in an environment known to present a 'methodological challenge" and in a relatively unexplored research field (Weare, 2010). Despite this, most studies had clearly focused research questions justified by a scientific rationale. Where possible, studies discussed results in light of the available evidence. Five of the seven studies which randomised participants did so at the school level; reducing the potential for condition bias in which staff influence each other (Brown, Wyman, Brinales & Gibbons, 2002). All studies measured at least one objective outcome using previously published measures where available. In five of the six studies with a follow up, loss to follow up was under the 40% threshold deemed acceptable for cohort studies (Kristman, Manno & Cote, 2004). Perhaps most importantly, the majority of studies acknowledged and discussed the impact of their design weaknesses. Most suggested they were necessitated by the school environment and were a worthwhile trade-off for access to staff and pupils that considerably increased the external validity of the results and exportability of the intervention.

Study weaknesses

Nevertheless, it is important to acknowledge common areas of weakness across the reviewed studies and consider how these may have increased the risk that training effects have been under or over-estimated. Two common design errors increase the risk of over-estimating results. Firstly, eight of the reviewed studies did not employ a control group. It is therefore impossible to assert that staff in these groups would not have improved anyway overtime and that the gains observed were not due to re-test effects unconnected with the training. Secondly, all but one study relied on volunteer participants. Such sampling methods are likely

to have resulted in an over-representation of schools and staff with students with greater mental health needs, who are more aware of student needs, have more pro-active attitudes or a personal interest in mental health. These staff may be more likely to respond better to training and their responses may not accurately reflect those of all school staff. This selection bias may have been exacerbated by attrition over time in which staff with a greater interest and motivation, can also those mostly likely to complete measures. In the reviewed studies attrition was varied (from 0-78 %) however, differences between completers and non-completers were sometimes not examined or controlled for.

Three design errors were common across the reviewed studies which may have led to an underestimation of training effects. Firstly, as ten of the studies did not achieve the 100-200 staff per condition estimated by Jorm et al. (2010) as necessary to detect a small-medium effect, they may have been underpowered and unable to detect effects which did occur.

Secondly the limited changes found by the studies on outcomes of behaviour and identification in particular may have been a result of measurement errors. Notably, behaviour and identification measures were based upon self-report from staff or students. The accuracy of behaviour measures was therefore dependent upon accurate recall by staff and students (over periods of up to six months), of actions which may be easily overlooked or forgotten by staff and students (i.e. having a conversation about feelings). Staff reports of behaviours and the extent to which they reported recognising depression, may also have been influenced by stigma or fear of stigma. Moor et al. (2007), for example, found that many teachers reported a reluctance to 'label' students with "a mental health problem'. Potentially then, self-reports may reflect not only staffs ability, but their willingness to identify depression in students. In

addition, levels of staff identification may have partly reflected their beliefs about the relevance of mental health to their role. Notably, the only finding that identification did improve was where training was on ADHD (Sayal et al., 2006). It is possible that this was as staff perceived ADHD as an educational, rather than health, issue and therefore more relevant to themselves.

Finally, it may be that studies were not long enough to capture the effects of training. Only six studies conducted a follow up and five of these were six months or less. The finding by Jorm et al., (2010), that improvements to staff intentions *increased after* post-test; suggests that some training effects may be delayed.

Systemic factors

In addition to the methodological factors, there may be several other explanations for the review findings, and in particular the lack of change found on some outcomes. One possible explanation is simply that some changes (i.e. to knowledge) are easier for people to make than others as they require considerably less effort, motivation and practice. Certainly, several of the reviewed studies reported that even after training, many staff continued to report finding asking directly about suicide very difficult. They suggested that expectations for all staff to be capable of skills and behaviour are unrealistic, and that a more effective approach may be to target skills and behaviour training for specific groups of staff.

A second explanation, is that brief workshops are not substantial enough in terms of time, space and feedback to be sufficient for staff to learn and develop the targeted skills and behaviours. Brief, "one shot deal" workshops have indeed been criticised for not supporting

staff to implement changes (Jones, & Chronis-Tuscano, 2008). A third possibility, is that barriers exist within the 'school climate', (e.g. negative attitudes towards staff involvement in student mental health), which prevent and undermine changes (Weare , 2010). In order to tackle these and re-enforce any training gains, multi-tiered and longer-term interventions may therefore be required. Finally, school staff report that the extent to which they can support the mental health of their students is often limited by characteristics of the school structure, including large class sizes, lack of resources, full curriculums and strict educational targets (Nelson and While, 2002). The demands currently placed upon school staff are widely acknowledged to be considerable (Goff, 2003). The lack of improvement in some outcomes may therefore be as the training targets are unfeasible with staff are unable to transfer them into practice even where they may wish to.

Clinical implications and future training

Improving knowledge is a fundamental objective of public health approaches. That brief training can do this with relative speed and ease indicates its value to both the health and education sectors. Brief training appears to offer an intervention which could plug the gaps in current training provision and in the mental health literacy of school staff to meet the requirements of government policies, and in a format which suits staff. The effects of the intervention on staff self-appraisals could also be of considerable clinical value; not only making staff feel better (potentially reducing stress and burnout), but significantly increasing the likelihood that staff will use the skills and behaviours they have learnt when they return to the school context (Salas & Cannon Bowers, 2001).

Whilst the results of the review suggest that brief training may not be sufficient to tackle all outcomes; its value may be in generating a readiness amongst staff to support students and

perhaps lay the foundations for longer-term or targeted training or more holistic school efforts where funding is available.

Future training

The results of the review indicate that mental health professionals intending to provide brief staff training should hold realistic expectations of the intervention. Being clear and explicit with school staff about the aims and limitations of brief workshops would help to ensure that they understand the boundaries of the training and the roles that it will, and won't, adequately prepare them for. Mental health professionals wishing to target skills, may wish to focus on communication with distressed youth and preparing staff to act as reliable sources of mental health information, as these have so far developed the most encouraging evidence base in terms of staff skill. To increase the likelihood that training aims are conducive with the school climate and that staff are able to use the skills and behaviours taught within the confines of their role and environment, training should be collaboratively designed with school staff. Depending on the schools specific characteristics and established pastoral systems, mental health professionals may wish to consider a targeted training approach based on staff screening. The use of non-medicalising language may reduce the extent to which stigma impacts upon training effectiveness.

Future research

More robust, controlled and randomized trials are required, which in particular examine the impact of training upon staff skills, behaviour and attitudes and to evaluate training on topics other than suicide and ADHD; such as eating disorders, anxiety and depression. For all

outcomes, the longitudinal focus of studies requires extension beyond 12 months to examine the long-term durability of effects.

For outcomes that appear to be more ephemeral, methods of preventing erosion over time need to be developed and exploration is needed of the effects of different workshop adaptations, such as making training longer, providing feedback, booster sessions, modular packages and staggered delivery. Studies should evaluate mandatory training, engage reticent schools and staff and gather data from staff who demonstrate no change. It is the voices of those who opt-out, don't gain or gain less from training which could most aid understanding of the current barriers to change. To ensure that attrition and loss to follow up do not result in studies lacking the sufficient power to detect any effects, researchers should aim to over recruit and to develop creative ways of reducing drop out.

The measurement of training impact requires careful consideration. Training effects may be subtle, delayed, difficult to measure and vulnerable to response bias. Objective measures including referral rates, observed staff/student interactions and mental health, staff job satisfaction and turnover may offer possibilities which, whilst challenging to capture, would significantly reduce the bias of self-report. More established and validated measures are needed to ensure constructs are accurately captured. Studies should consider evaluating skills other than the identification of clinical level difficulties, and more are needed to evaluate the extent to which training impacts on student outcomes, (for example student mental health, or duration of untreated difficulties). A greater understanding is needed of the barriers between intention and actual behaviour and how the complex systems and structures of schools facilitate or prevent improvement. Ways of better tailoring training to the educational

environment are needed. If training is to be targeted at specific groups based on screening, then the staff characteristics predictive of greater change need to be established.

Limitations of the review

This review contains several weaknesses. Firstly, data extraction and reporting bias would have been reduced by the use of a second person. Secondly, the language used to describe mental health difficulties varies across countries and between education and health. Future searches would be improved by considering these differences when selecting search terms. Finally, perhaps reflective of the infancy of the evidence, the data synthesis involved merging of findings from quite diverse and complex studies which varied considerably in terms of aims, outcomes, background and measures. To compare these studies, some simplification was required. This generated a sense at times of "not doing justice" to any particular study.

Conclusions

Current evidence suggests that the effectiveness of brief staff training varies by outcome. There is sufficient, good quality evidence to suggest that knowledge and appraisals are likely to be improved by brief staff training, but that a more sustained and systematic invention may be required to generate actual and sustained improvements to skills, behaviour and attitudes. A multitude of factors, related to individual staff, their schools, the outcomes measured and the design of the research studies, may have all contributed to the variability of training impact across staff outcomes to date. Much more research is required to explore these before confident conclusions about the effectiveness of brief staff training on student mental health and the durability of its effects can be drawn.

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EMPIRICAL PAPER

A non-randomised cohort study of a workshop with school staff about student mental health

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ABSTRACT

Background

The identification of depression in children and young people presents a considerable public health challenge. Evidence suggests that school staff can play an important role where students are experiencing or developing mental health difficulties. Brief training with school staff may improve their ability to identify and support students with depression but little research has been conducted to evaluate this.

Method

A non-randomised controlled evaluation was carried out between April and December 2011 in which ten workshops were delivered to 268 secondary school staff across five schools in the West Midlands, UK. The two and a half hour workshops taught staff about how depression may appear in a student and how to provide support to a student in distress. Participating staff were provided with a local website containing information about common mental health difficulties and local resources. Staff outcomes were evaluated with questionnaires before and after training and at three months follow-up. Students completed a one item questionnaire before training and at three month follow-up.

Results

Analysis showed a significant group (intervention vs. waitlist control) by time (pre-post training) interaction, such that staff ability to identify depression from a written vignette and confidence to support students with mental health difficulties increased significantly from pre-post training in both groups, but the rates of change were significantly higher in the intervention group. Effects were maintained at three month follow up. However, staff did not

report an increase in the frequency with which they accessed information on mental health and the amount of information which students reported receiving from staff had not increased significantly three months after training.

Conclusions

The training workshop increased staff confidence and ability to identify depression but did not change staff behaviour. Effective training may be that which is responsive to staff needs and acknowledges factors which may influence both willingness and ability to change. Incorporating practise use of the website, providing staff with individual feedback and greater follow up efforts to ensure website dissemination, may have generated behavioural change. The effectiveness of future research and training may be enhanced by the involvement of school staff in design and delivery.

INTRODUCTION

Depression in children and young people

Tackling youth depression presents a particular global public health priority (Ozabac, 2009). Depression is expected to become the second most important cause of disability by 2020 (WHO, 2003). At least three per cent of 12–18-year-olds are likely to experience depression (NICE, 2005) and adolescent rates may be increasing (Patel, Fisher, Hetrick & McGorry, 2007). Depression has been linked to suicide both in childhood and later life (Loades & Mastroyannopoulou, 2010), with symptoms often characterising the prodromes of more complex mental health problems, such as psychosis (Yung & McGorry, 2007).

The importance of early detection

In the USA, *inadequate recognition* by adults of common childhood difficulties has long been identified as a key barrier to effective mental health services for children ("No Child Left Behind"; US public health Service, 2000). The UK, mental health strategy 'No Health Without Mental Health' (NHWMH, Royal College of Psychiatrists, 2010) has tasked various government departments with ensuring that not only is early mental health protected and developed, but that any difficulties are identified and responded to quickly and appropriately. Children and young people are known to be amongst those least likely to seek help for mental health difficulties (Rickwood, Deane & Wilson, 2007) and report concerns that accessing support will lead to stigma (Kidger, Donovan, Biddle, Campbell & Gunnell, 2009). Therefore it is important that those who work with young people have an adequate understanding of depression, can accurately identify symptoms and respond in a helpful and sensitive manner.

The role of school staff in student mental health

Since 1995, government guidance in the UK has increasingly brought student mental health into the remit of school staff (Sedgewick & Blackwell, 2007). Several policies have now defined the staff role to include initial assessment and identification of mental health difficulties, offering advice and support to those with mild or minor problems and referral onto specialist services as necessary (DoH, 2004; DoH, 2005; DfES, 2004; 2007). Arguably, school staff may be the most involved adults in the lives of children and can reach many generations (Seif el Din, 2006). Their daily proximity to students means that they are likely to be the first professionals to notice any changes in a young person's presentation (Waller, Bresson, & Waller, 2006). They are ideally positioned to provide information, encourage discussion and help-seeking, make referrals and co-ordinate ongoing interdisciplinary planning, advocacy and monitoring (Walter, Gouze, & Lim, 2006). The ability of staff to recognise depression, to communicate a response sensitively and effectively and to offer support will all have considerable implications for the future mental health of students with actual or developing difficulties (Midford, 2005).

School staff Mental health literacy

"Mental health literacy" is a term which describes a person's knowledge and beliefs about mental health difficulties and implies an attitude which facilitates recognition and appropriate help-seeking (Jorm, 2000). Studies show that school staff have variable and often poor levels of mental health literacy (Kurumanti et al., 2004) and some hold stigmatising attitudes to people with mental health difficulties (Aghukwa, 2009). A UK national on-line survey recently found that 40% of young people with direct experience of mental health problems

reported receiving some negative reactions from teachers (DoH; Time to Change, 2012).

School staff report that they are uncomfortable discussing mental health (Kidger, Gunnell, Biddle, Campbell, & Donovan, 2009), and feel inadequately prepared to recognise mental health difficulties (Nelson & While, 2002; Rothi, Leavey & Best, 2008) or provide support (Cohall et al., 2007). They are confused and unfamilar with the terminology of mental health professionals and do not understand its relationship to the language used in schools (e.g. 'Emotional behavioural difficulties'; Rothi et al., 2008).   Some staff disagree that mental health is part of their role and believe that it disrupts teaching; whilst others report that it adds to their classroom and management burden, reduces job satisfaction and negatively impacts their own psychologcial wellbeing (Rothi, Despina, Leavey, & Best, 2008). Many staff lack confidence in their abilities to carry out the role;

"I've trained to be a history teacher; I don't feel I'm familiar enough with this and I'm not doing it justice"   Kidger et al., (2009, pp 9).

Staff training about student mental health

International school-based programmes and research have highlighted the need for a greater focus on staff training in school promotion and prevention efforts (Rowling, 2009). Recent UK guidelines state that school staff should be offered training to identify early signs of deteriorating mental health (NICE, 2008; 2009). Despite this, three-quarters of UK secondary schools do not currently provide training for staff on student mental health (Ofsted, 2005) and there is no formalised government code of practise to help staff identify mental health difficulties in students (Rothi et al., 2008). A lack of training is highlighted by staff as the

major barrier to providing effective support to students (Connelly et al., 2008). Staff want training from mental health professionals (Collins and Holmshaw, 2008) which is brief and relevant to their professional status and the school environment (Kidger et al., 2009). Training should provide information on the common difficulties experienced by students (Connelly et al., 2008), develop staff skills to identify issues and provide support and increase knowledge of local services (Cohall et al., 2007).

Brief training offers a universally recognised, "transportable" and potentially cost-effective format for disseminating skills and knowledge which, unlike longer-term programmes, fits easily into the existing structures of school life and staff development (Jones & Chronis-Tuscano, 2008).

Previous research on staff training

Evaluations of brief workshops are scarce within the literature. To date, most emanate from either the USA or Australia and focus on issues of suicide or ADHD. The little data available indicated that training effectiveness varies by outcome, with significant and durable improvements found to staff knowledge and self-appraisals (e.g. confidence and preparedness), but limited impact upon staff skills, behaviours and attitudes (Cross et al. 2011; Wyman et al., 2008). As accurate identification and pro-active behaviours by school staff are fundamental components of the UK mental health strategy for young people (NHWMH, 2010; DoH; 2009), it is important that research in the UK continues to explore ways to improve these outcomes.

A particularly well-established and evaluated model of brief training in mental health is the Australian-based "Mental Health First Aid" (MHFA). MHFA is defined as *'the help provided to a person developing a mental health problem or in a mental health crisis until appropriate professional treatment is received or until the crisis resolves'*. (Jorm, Wright & Morgan, 2007, pp. 6). Training in MHFA teaches trainees to follow an action plan of risk assessment, non-judgemental listening, reassurance, information provision and the encouragement of help-seeking and self-help strategies (Kitchener & Jorm, 2008). A number of evaluation studies, including two randomised controlled trials, have shown MHFA to generate improvements in mental health knowledge, attitudes, confidence and self- reported behaviour in several populations (Hossain, Gorman & Eley, 2009; Jorm, Kitchener, O'Kearney & Dear, 2004, Kitchener & Jorm, 2002; 2004; Pierce, Liaw & Dobell, 2010; Sartore et al., 2008). When adapted for secondary school teachers, MHFA effectively improved several teacher outcomes with effects sustained at six months follow up. Improvements included increased mental health knowledge and confidence to help students with difficulties. Whilst training did not generate increases in several self-reported behaviours, it did increase the amount of mental health information that students reported receiving from teachers. (Joim, Kitchener, Sawyer, Scales & Cvetkovski 2010).

Only three studies have included training on depression specifically. In a large and robust randomised controlled trial (RCT), Jorm, et al. (2010) found that staff identification of depression from a written vignette was not improved by training. An RCT conducted by Moor et al. (2007), failed to recreate the promising results of the former pilot study (Moor et al., 2000), finding that although a two hour workshop did improve staff confidence to recognise and assess for depression, neither the frequency or accuracy of identification actually

improved. Moor suggested that the unpopularity of the psychiatric terminology used in training was responsible for the lack of change, with staff reporting fears of 'labelling' students.

Study Rationale

Despite calls in several arenas for staff to receive training to improve outcomes, and although the literature in the field of school mental health promotion is growing, little is actually known about which school interventions are effective (Kidger et al., 2009) or what it is that makes them so (Rowling, 2009). There are particular gaps in research regarding the impacts of training staff about student mental health, especially concerning student depression and in the UK. Many previous studies focus on school teachers rather than all school staff. As the mental health of children has been established by the government as 'Everybody's Business" (NHS Health Advisory Service, 1995), this is a considerable oversight.

This study aims to develop the findings of Jorm et al. (2010) and Moor et al. (2007) by evaluating a brief workshop about depression with school staff in the UK. The workshop formed an extension of the 2011 government funded NIHR project conducted by the Collaborations for Leadership in Applied Health Research Council (CHLARC). Training impact upon three staff and one student outcome are measured. The study hypotheses are that a) providing non-stigmatising information about student depression using non-medical language, will increase staff identification of depression in students, b) teaching a model-based protocol for communicating with distressed students will improve staff confidence to support students, and c). provision of a mental health website address will increase the

frequency with which staff access mental health information from a website and disseminate

information to students.

METHOD

Design

This paper reports a non-randomised cohort study, with data collected at baseline, immediate post-training and at three-month follow-up. Schools were the unit of allocation, with each participating school allocated to either an intervention or wait list control condition. Depending on the allocation, a school either received training immediately (between June and July 2011) or later in the year (October – December 2011). Despite initial efforts, random assignment of schools was not possible due to the limited flexibility that schools reported in the scheduling of their In-Service Training (INSET) programme (many INSET sessions are allocated to topics in the year previous to delivery). Therefore, schools were assigned to either the intervention or waitlist control conditions based on their availability to accommodate the training within the research timeframe and on the provision of an adequate number of staff who could be released to participate.

Schools in the wait-list group acted as non-matched controls against those in the intervention group. Participants were not assigned at an individual level due to the inherent risk of cross-contamination of information between staff and likelihood that any responses made my by the schools following training would impact upon all staff. It was not possible to control for the numbers of teachers per school or the specialist skills of teachers. These design limitations were deemed an acceptable trade off in exchange for access to staff and students.

Participants

Eligible schools were mainstream secondary schools located in the West Midlands area of the UK (Birmingham and Solihull, The Black Country, Coventry and Warwickshire and Worcestershire). Five schools participated, all comprehensives, two of which were mixed sex and three were single sex (two girls schools and one boys school).

Individual participants were all teaching and non-teaching staff employed at these schools.

The total staff sample participating in the research comprised of 268 staff; 72 (26.9%) of whom were males and 185 (69%) were females. The majority were White British (70.5%). Training was attended by heads of department, classroom teachers, support staff and other staff (e.g. dinner ladies, caretakers). Each group of staff was equally represented (so that approx 20-30% of trainees came from each group). Both staff specialist and non-specialist subject staff were present. There was an even distribution of experience amongst participants; both in the number of years working in schools generally and in their current school specifically. A full description of staff demographics can be found in Table 5.

Table 5: Demographic Characteristics of Staff Sample

Characteristics	Intervention Group N (% within group)	Control Group N (% within group)	Total N (% of total Participants
Teachers n	114	154	268
Gender (%)			
Male	34 (30.9%)	38 (25.9%)	72 (26.9%)
Female	76 (69.1%)	109 (74.1%)	185 (69%)
Missing Data	4	7	11 (4%)
Age (%)			
20-25	13 (11.6)	14 (9.3)	27 (10.1)
25-30	12 (10.7)	31 (20.5)	43 (16)
30-35	18 (16.1)	24 (15.9)	42 (15.7)
35-40	9 (8.0)	15 (9.9)	24 (9)
40-45	15 (13.4)	23 (15.2)	38 (14.2)
45-50	14 (12.5)	19 (12.6)	33 (12.3)
50-55	16 (14.3)	16 (10.6)	32 (11.9)
55-60	14 (12.5)	7 (4.6)	21 (7.8)
60-65	0 (0.0)	2 (1.3)	2 (0.7)
65+	1 (0.9)	0 (0.0)	1 (0.4)
Missing Data	2	3	5 (1.9)
Ethnicity n (%)			
White British	71 (37.6)	118 (78.1)	189 (70.5)
Black Other	0 (0.0)	2 (1.3)	2 (0.7)
Asian-Bangledeshi	5 (4.5)	1 (0.7)	6 (2.2)
Black African	1 (0.9)	2 (1.3)	3 (1.1)
Mixed White & Caribbean	2 (1.8)	2 (1.3)	4 (1.5)
Mixed Other	0 (0.0)	1 (0.7)	1 (0.4)
Asian-Pakistani	9 (8.1)	6 (4.0)	15 (5.6)
Black Caribbean	4 (3.6)	8 (5.3)	12 (4.5)
Asian Indian	13 (11.7)	7 (4.6)	20 (7.5)
Other	5 (4.5)	4 (2.6)	9 (3.4)
Missing Data	3	3	6 (2.2)
Main Role n (%)			
Head of department	15 (13.4)	34 (22.7)	49 (18.3)
Classroom Teacher	30 (26.8)	48 (32.0)	78 (29.1)
Administration	5 (4.5)	8 (5.3)	13 (4.9)
Support/Pastoral Care	36 (32.1)	32 (21.3)	68 (25.4)
Other	26 (23.2)	28 (18.7)	54 (20.1)
Missing Data	2	4	6 (2.2)
Time working in schools n (%)			
< 1year	7 (6.2)	6 (4.0)	13 (4.9)
1-2 years	10 (8.9)	16 (10.6)	26 (9.7)
3-5 years	23 (20.5)	30 (19.9)	53 (19.8)
6-10 years	29 (25.9)	48 (31.8)	77 (28.7)
11-15 years	24 (21.4)	20 (13.2)	44 (16.4)
16-20 years	9 (8.0)	14 (9.3)	23 (8.6)
+ 20 years	10 (8.9)	17 (11.3)	27 (10.1)
Missing Data	2	3	5 (1.9)

Within each school, a random sample of five form groups of students (approximately 150 students per school) were selected by the school. 575 students completed questionnaires at pre-test and 519 at post-test. The student sample covered students in years seven to eleven and therefore aged between 12 and 16. Individual students were not matched over time.

Recruitment

In early 2010, a total of 134 schools were identified from the National Healthy Schools Programme database. Head teachers were approached via a standardised email which outlined the project and invited interested schools to contact the researcher. No incentives were provided and the training was free of charge. Thirty schools replied (response rate 22%). Consultation and negotiation with key personnel occurred during 2010 in which schools were provided with detailed information about the training workshop and research (see Appendix 6 for all participant information sheets). Twenty- two schools subsequently opted out of the study. One reason for opt-out was that, despite interest, available INSET training timeslots could not be found, or adjusted to accommodate the two and a half hour workshop. Several schools were not able to make teaching staff available or requested that only pastoral staff attended. Out of the eight schools that agreed to participate, three dropped out prior to baseline data collection, leaving a final sample of five schools for the training and evaluation. A diagram to show recruitment, participant flow and the numbers of staff who completed questionnaires at each time point can be found in Appendix 7.

To make the project feasible, it was necessary to allow each school to choose their method of selecting staff for training. Three schools opted to run training on a voluntary basis whilst

two made it compulsory for all staff. Staff information sheets were emailed to staff by the schools two weeks prior to the baseline data collection. Schools with a voluntary selection process asked that staff sign up to the workshop. Those with mandatory selection incorporated the workshop into a pre-scheduled session that staff were required to attend. The information contained within the information sheets was again repeated verbally at the start of training and prior to completion of consent forms (See Appendix 8 for all consent forms).

Participating schools were asked to randomly select five form groups of students to complete questionnaires (forms contained a cross section of year groups). Parent and student information sheets were posted to the homes of selected students approximately two weeks before student data collection. Parents were asked to return an opt-out slip should they not wish their child to participate (See Appendix 6). Students who had not been opted out were guided through information sheets by their form tutor on the day of data collection before assent forms were completed. The lead researcher was present for each baseline data collection point. Student data were collected in June-July 2011 and approximately three months after training. Debrief forms for all participants were distributed following participation (See Appendix 9 for all debrief forms). Ethical approval for the study was granted by the University of Birmingham (See Appendix 10).

Intervention

The training workshop comprised of one, two and a half hour session on student mental health. It was delivered on school site during INSET days or after school. The overall aims of the workshop were to:

1.   Improve understanding of common mental health difficulties (in particular depression) and how this may appear in a school context.

2.   Provide staff with a website address, developed by CHLARC, from which they could access accurate mental health information for themselves or to which they could direct students.

3.   Provide staff with an evidence-based framework for responding to students with mental health 'crisis'.

4.   Generate greater confidence in staff to work with student mental health.

5.   Promote awareness of student mental health, understanding of relevance to education and physical health and a non-pathologising view of difficulties.

The workshop comprised of six sections (see Appendix 11). Workshops were designed and delivered by mental health professionals from CHLARC, based on the available, related evidence on mental health promotion, staff training and effective in-service interventions (Jorm et al., 2008; Pinfold et al., 2003). Workshops followed a standardised structure, including a Power-Point presentation, didactic teaching, interactive group exercises and discussion, and film clips. At the end of the workshop, staff were introduced to the website, 'youthspace.me', and this was left for schools to disseminate to staff.

Each workshop was delivered by one of five mental health professionals from CHLARC (either an NHS- based Psychologist or Child Psychiatrist) who had received brief training from the project manager of CHLARC to standardise delivery. A total of ten workshops was delivered (three at intervention schools and seven at the wait-list control schools). The average number of staff in each workshop was 24 (range 16-70), although sickness of

facilitators resulted in one group of 70 staff being trained altogether in one of the intervention schools.

Bias reduction

Several attempts were made to minimise study bias. Recruitment encompassed a wide geographical area and incorporate a diverse sample of schools, staff and students. The researcher was not employed by CHLARC and had no involvement in the workshop design. A CHLARC research assistant was present at each workshop to ensure consistent data collection and record fidelity to the workshop lesson plan. Whilst no attempts were made to blind trainers or research assistants systematically, they were not informed of the allocation of the groups being taught.

Study Outcomes

The four primary outcomes were:

1. Staff ability to identify depression;

2. Staff confidence to support students with difficulties;

3. Staff reports of the frequency with which they had accessed mental health information from a website in the previous four weeks;

4. Whether students had received mental health information from staff in the previous four weeks.

Staff Questionnaire

Staff completed a three page questionnaire immediately before and after training and at three month follow- up. This questionnaire was constructed using items taken from a questionnaire

published by Jorm et al. (2010). The questionnaire comprised of three sections (See Appendix 12) and each section was presented in the same order for all participants.

1. Demographics

Participants were asked to provide information on their ethnicity, age, gender, job role, length of time working in schools and any year group or subject speciality.

2. Depression vignette

A brief depression vignette taken from Jorm et al. (2010) was used to assess recognition of depression. This vignette has been previously used to measure the recognition of adolescent depression in populations of staff (Jorm et al., 2010) and young people (Jorm, Wright & Morgan, 2007). Respondents were asked to read the following vignette.

 "The following scenario is about a hypothetical student called Jake. Jake is a 15 year-old male who has been feeling unusually sad and miserable for the last few weeks. He is tired all the time and has trouble sleeping at night. Jake doesn't feel like eating and has lost weight. He can't keep his mind on his studies and his marks have dropped. Jake often puts off making any decisions and even day-to-day tasks seem too much for him. His parents and friends are very concerned about him"

One item asked staff what they felt was wrong with Jake. Space was provided for staff to record their responses. Responses that mentioned "depression" were scored as correct (scored as 1). Any response which did not mention depression were scored as incorrect and given a 0.

3. Student related Issues

i) Self- reported accessing of mental health information from a website.

One item was taken from a measure previously published by Jorm et al., (2010). No psychometric properties are reported for this item. This asked respondents to indicate on a four point scale ("Never", "Once", "Occasionally", "Frequently"), how often in the last four weeks they had accessed any internet- based information. Responses were scored from 1- 4, with higher scores indicating a higher frequency of the behaviour.

ii) Confidence to support students with mental health difficulties.

One item asked staff to indicate on a five-point scale ("Not at all", "A little bit", "Moderately", "Quite a bit", "Extremely"), how confident they felt to help students with mental health difficulties. Responses were scored from 1-5 with higher scores indicating greater confidence. This item has been previously used to measure confidence in helping a young person with depression in both staff (Jorm et al., 2010) and young people (Jorm, Wright & Morgan, 2007), but no psychometric properties are reported in either paper.

Student Questionnaire

A single item was taken from a student questionnaire previously published by Jorm et al. (2010), to measure the impact of training upon the amount of mental health information students received from staff (see Appendix 13). This item asked students to indicate by ticking a box whether they had received any information on mental health from staff in the previous four weeks ("Yes" or "No"). Where students endorsed the "No" box, a score of 0 was given. Yes responses were given a score of 1.

Sample Size

Previous research (Jorm et al., 2010) indicated small-medium effect sizes across outcome measures. Based on this, an a priori power analysis with power set at 80% and a significance level of $p<0.05$, indicated that 100-200 participants per group were required to detect small-medium effects and to ensure a wide range of ages, genders and teaching experiences.

Data Analysis

All analysis were performed using SPSS (version 20) for windows. 268 staff completed baseline questionnaires (154 (57.5%) in control, 114 (42.5%) in intervention group). Only staff participants who completed pre- and post training data are included in the analysis. Where data were missing for an individual item, this was not included. Overall, 173 staff completed the depression identification task at both baseline and post-test (104 control, 69 intervention), 192 completed the confidence item at baseline and post-test (102 control, 90 intervention) and 218 staff completed the behavioural item at baseline and post-test (120 control, 98 intervention). A total of 575 students completed questionnaires before training (383 control, 192 intervention) and 519 students at post-training (331 control, 188 intervention). Between group comparisons were not made for student data.

Follow-up data were analysed for the intervention group on confidence and depression identification. 69 staff completed the depression task at both pre- and post test and 45 staff did so at post-test and follow up, therefore the loss to follow up on this measure was 35%. For the confidence item, 90 staff in the intervention group provided data at both pre- and post test and

62 pairs did so at post-test and follow up, resulting in a loss to follow up of 31%. Differences

between completers and non-completers were not analysed.

RESULTS

Descriptive information

Staff outcomes were 1. the correct identification of depression from a vignette, 2. staff ratings of confidence to support students with mental health difficulties, and 3. the frequency with which staff had accessed mental health information from a website in the previous four weeks. Means scores, standard deviations and the number of staff who completed data on each outcome measure are reported below in Table 6.

Table 6: Descriptive data for staff

Time	Outcome		Intervention Group	Control Group	All Groups
Time Point 1	Diagnosis	Mean	0.648936	0.692857	0.675214
		N	94	140	234
		SD	0.479862	0.462966	0.469299
	Accessing Information	Mean	3.081818	4.013333	3.619231
		N	110	150	260
		SD	1.609216	1.253112	1.485196
	Confidence	Mean	2.376238	2.153846	2.251082
		N	101	130	231
		SD	1.130057	1.007426	1.066154
Time Point 2	Diagnosis	Mean	0.855263	0.735849	0.785714
		N	76	106	182
		SD	0.354173	0.442975	0.411458
	Accessing Information	Mean		1.614173	
		N		127	
		SD		0.908926	
	Confidence	Mean	3.092784	2.288136	2.651163
		N	97	118	215
		SD	1.021462	1.054917	1.112455
Time Point 3	Diagnosis	Mean	0.765625	0.845238	0.810811
		N	64	84	148
		SD	0.426956	0.363850	0.392989
	Accessing Information	Mean	1.493333		
		N	75		
		SD	0.828110		
	Confidence	Mean	2.850746	3.137615	3.028409
		N	67	109	176
		SD	1.018819	0.937569	0.976460

NB: Data on accessing information was not collected immediately after training as there had been no opportunity for staff to change behaviours at this point.

At baseline 65% of the intervention group and 69% of the control group correctly identified depression from the vignette. The difference between mean baseline scores of the two groups was not statistically different. At post- test, 86% of the intervention group and 74% of the control group correctly identified depression. There was no significant difference between the mean scores of the two groups at post-test.

The baseline mean rating of confidence was 2.2 in the control group and 2.4 in the intervention group (i.e. both "a little bit- moderately" confident); the difference between the two groups was not statistically significant. At post-test, the confidence rating of the intervention group had increased to 3.1 ("moderately"), whilst the mean confidence rating of the control group was 2.3 (i.e. still "a little bit"). The difference between the two mean ratings at post-test was statistically significant ($F=31.87$, $p>0.001$).

At baseline, the mean frequency with which the control group reported accessing mental health information from a website was 4 (i.e. "frequently"). The frequency with which staff in the intervention group reported that they accessed information from a website was 3.1 ("Occasionally"). Three months after training, the intervention group mean frequency had fallen to 1.5 ("Never"-"Once"). Three months after baseline, the control group's mean frequency had fallen to 1.6 ("Never"-"Once").

Students reported whether or not they had received information on mental health from staff in the previous four weeks. At baseline, 234 (41%) students reported that they had received information from staff about mental health in the previous four weeks whilst 341 (59%) had

not. Three months after training, only 155 students (30 %) reported having received information in the previous month, whilst 364 (70%) had not.

Equivalence of intervention and waitlist control groups at baseline

Pearson's chi squared showed that there was no significant difference between experimental and control group at baseline on gender (p=0.372), age (p=0.160), ethnicity (p=0.079) or length of time working in schools (p=0.588).

Staff demographics were compared to data from a government school workforce survey of local authority maintained schools in England (DfES, 2011). The survey included teachers, teaching assistants and other non- classroom based school support staff and showed that the majority of English school staff are female (73% of teachers, 65% of head teachers, 94% TA and 84% of support staff) and white (94% of teachers, 98% of heads and 92% of support staff and teaching assistants). The largest professional group within the cohort are teachers (50%), teaching assistants (25%), non classroom based support staff (15%), and auxiliary staff such as dinner ladies and ground staff (10%). These figures would therefore suggest that the sample in the current study was representative of UK wide staff in terms of professional group, ethnicity and gender.

The effect of the staff training program

Does the workshop improve staff recognition of depression?

This question was addressed using a General Linear Model (GLM) in which the within

subjects factor were depression recognition scores pre-and post intervention and the between

subjects factor was arm of study (control versus intervention).

A significant interaction effect ($F_{1,171}$=5.52; p = 0.02) indicated that the intervention group

showed significantly greater improvement in depression recognition between pre and post –

test than did the control group . This effect is presented in Figure 2.

Figure 2: Depression recognition scores pre-and post intervention in the control and
intervention groups with 95% confidence Intervals

Cross-validation of this effect was achieved by providing the intervention to the control group

on completion of the initial trial. The change in scores between pre-intervention and post-

intervention were assessed using a paired t-test. A trend towards significance was observed

for this change (t_{188}=-1.83; $p = 0.07$) with the pre-intervention accuracy of 0.736 (SD 0.443) improving to 0.845 (SD 0.364).

Is the effect of the intervention maintained over time?

In order to address this hypothesis, depression recognition scores of the intervention group were assessed three months after the completion of the intervention. The change in scores during this period was assessed using a paired t-test. A non-significant decrease in scores (t_{44}= 1.27; p= 0.21) was observed with the post-intervention accuracy of 0.86 (SD 0.367) decreasing to 0.765 (SD 0.435). After three months depression recognition was at 90% of the accuracy shown immediately after the intervention.

Does the workshop improve staff confidence?

This question was addressed using a mixed between and within subject ANOVA in which the within subjects factor were self-ratings of confidence pre-and post intervention and the between subjects factor was arm of study (control versus intervention).

A significant interaction effect ($F_{1,190}$=14.89; $p < 0.01$) indicated that the intervention group showed significantly greater improvement in confidence pre-post test than did the control group . This effect is presented in Figure 3.

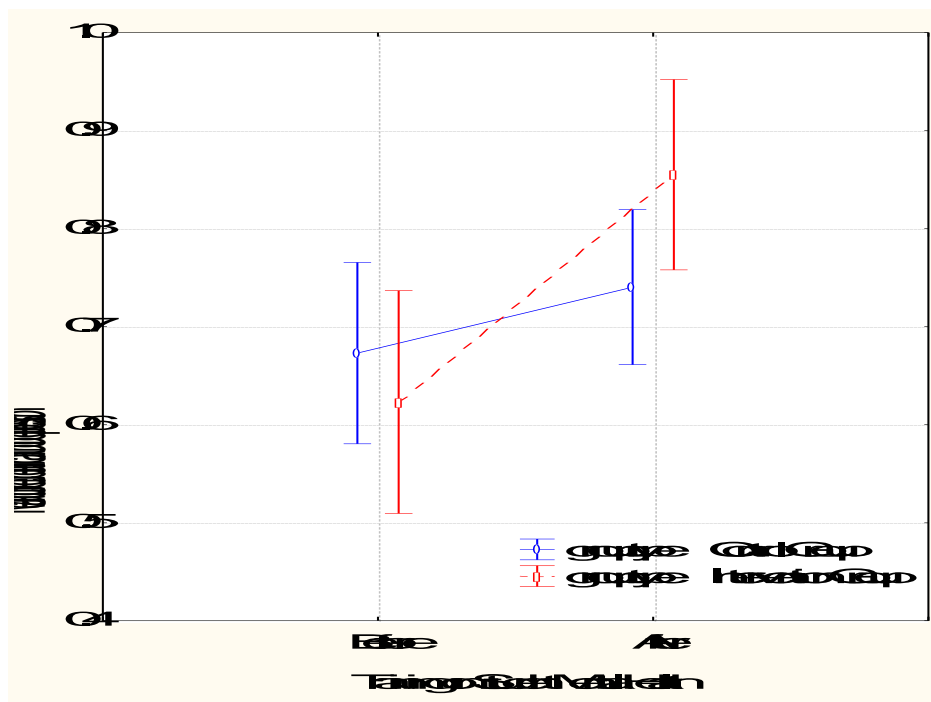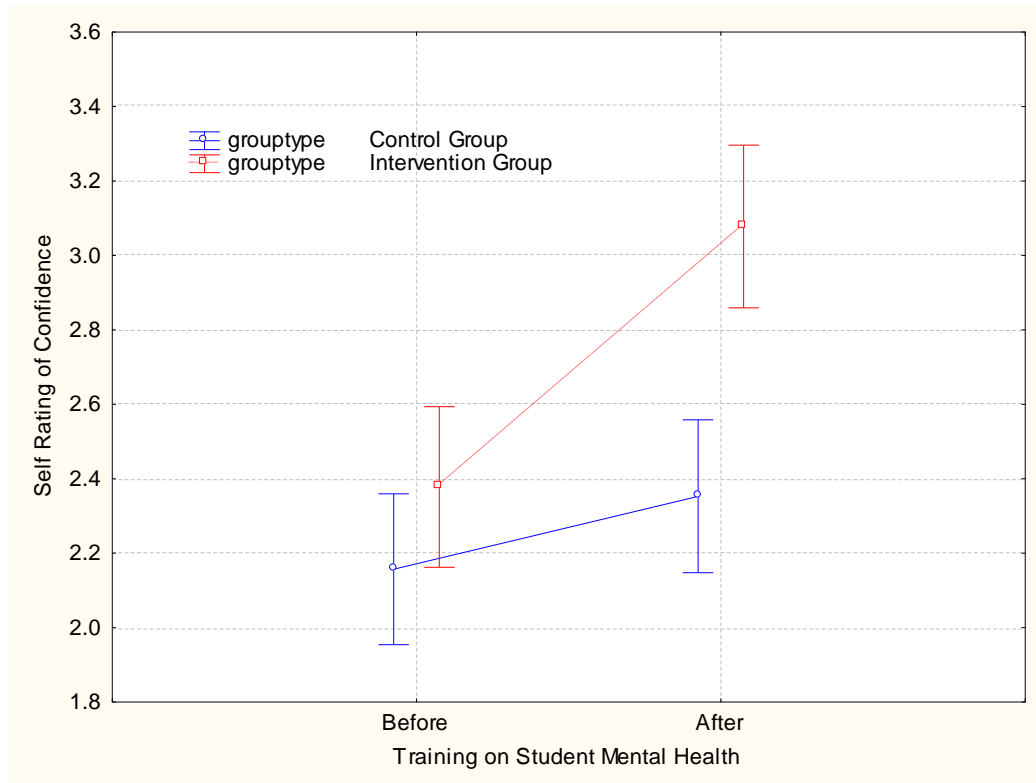**Figure 3**: Self- rated confidence scores pre- and post intervention in the control and intervention groups with 95% Confidence Intervals

Cross-validation of this effect was achieved by providing the intervention to the control group on completion of the initial trial. The change in scores between pre-intervention and post-intervention were assessed using a paired t-test. This showed a statistically significant increase in confidence ratings (t_{98}=-8.42; p <0.01) with the pre-intervention rating of 2.29 (SD 1.09) improving to 3.14 (SD 0.92).

Is the effect of the intervention maintained over time?

In order to address this hypothesis, self- rated confidence scores of the intervention group were assessed 3 months after the completion of the intervention. The change in scores during this period was assessed using a paired t-test. A trend towards a significant decrease in scores

(t_{61}= 1.75; p= 0.09) was observed with the post-intervention confidence of 3.08 (SD 1.04) decreasing to 2.87 (SD 1.03).

Staff Access to Mental Health Information

This question was addressed by asking staff to report the frequency with which they had accessed web-based information regarding mental health issues in the previous four weeks. For the control group, the dependent variable was the change in accessing mental health information during a there-month period of non-intervention. In the intervention group the dependent variable was the change in accessing mental health information during a three-month period having received the intervention. No significant difference in accessing mental health information was observed between the intervention and control participants (t_{189}=0.85; p = 0.40), with the control participants evidencing a mean decrease of 0.05 (SD 0.78) and the intervention participants showing a mean increase of 0.06 (SD 0.92).

Provision of Mental Health Information to Students

This question was addressed by asking students to rate whether or not they had received information regarding mental health issues from staff within a four week period both before and three months after the intervention with staff members. A significant decrease in the provision of mental health information to students (t_{1093}=-3.76; p<0.01) was observed after the intervention, with a pre-intervention rate of 0.41 (SD 0.49) decreasing to a post-intervention rate of 0.30 (SD 0.46).

DISCUSSION

Summary of results

The hypotheses of this study were that a) providing non-stigmatising information about student depression using non-medical language would increase staff identification of depression in students, b) that teaching a model-based protocol for communicating with distressed students would improve staff confidence to support students and c). that providing staff with a mental health website address would increase the frequency with which staff access mental health information from a website and disseminate mental heath information to students.

The main findings of this study support the first two hypotheses; staff that received the workshop did demonstrate significantly greater improvement in depression recognition and confidence than a non-matched control group between pre- and post- test. Improvements to both outcomes in the intervention group were sustained three months after training, although some non-significant atrophy in the effects occurred. When the control group received the training, they also reported a significant increase in confidence. Although the control group also improved in identifying depression after the training, this was not to a statistically significant degree. At post-test, the confidence scores of the intervention group were significantly higher than those of the control group but the two groups were not significantly different on depression identification.

Findings do not however support hypothesis c; presentation of a website containing mental health information did not increase the frequency with which staff reported accessing mental

health information from a website. In fact, the frequency of accessing information decreased in both groups pre to post test. Also, the workshop did not lead to increases in students reporting that they had received mental health information from staff.

Consistency with wider research

Findings that training improved confidence but not self-reported behaviours are consistent with previous evaluations of brief training for school staff about student mental health. Robust studies of suicide related training for example, have shown that whilst training generated significant improvements to several types of self-appraisals, it did not increase the frequency of referrals (Cross et al., 2011) or gatekeeper behaviours (Wyman et al., 2008) reported by staff at follow- up. Similarly, Jorm et al. (2010) found that MHFA training led to staff feeling more confident to support students with mental health difficulties, but did not increase the self-reported frequency of several staff 'helping' behaviours, one of which was accessing mental health information from a website.

The results of this study differ to those of previous studies in regards to staff's ability to indentify depression and to provide information to students. Specifically, this study has not replicated Jorm's finding that students reported receiving more mental health information from staff following training but, unlike Jorm et al. (2010) and Moor et al. (2007), this intervention was successful in improving staff's ability to identify student depression.

Critical Appraisal

The following section outlines some general strengths and weaknesses of the study design and suggests that several specific factors may have contributed significantly to the findings.

General strengths and weaknesses of the study.

The study is felt to have several strengths that increase the reliability of the results. The size of the sample improves the likelihood that any existing effects have been detected. The comparison of trainees to a waitlist control group (equivalent on demographic characteristics), means that the improvements can be more confidently attributed to the workshop and that time and practise effects have been controlled for. As the sample encompasses a wide demographic profile and includes those for whom training was mandatory, bias in the results towards specific types of staff may have been reduced. The demographic consistency of the sample with staff nationally increases the extent to which findings can be generalised. The use of brief, previously published measures means may have that results can be compared to previous studies and may have increased staff completion. As such, loss to follow-up was below the 40% recommended rate for cohort studies (Kristman, Manno & Cote, 2004).

It is considered a considerable strength that nine of the ten workshops were of similar size, content and presentation style, with fidelity checklists showing that more than 90% of the material was covered in each workshop. The presence of the researcher (who was independent of the design and delivery of the training), at each workshop and data collection point, may have improved the consistency of workshop delivery and reduced measurement bias. Conducting the evaluation "in-situ" increases the external validity of the findings and 'exportability' of the workshop (Owens & Murphy, 2004).

The study is felt to have several weaknesses. Firstly, the study would have been strengthened considerably had it been possible to match schools on characteristics. Although staff in the two condition groups were demographically similar to each other, characteristics of the

schools (i.e. size, type, student socio-demographic profile, Ofsted rating, computer facilities, attitudes of head-teachers towards mental health and student gender and mix), may have impacted upon staff responses to training and the extent of change seen over time. Matching schools would have allowed these differences to be controlled for.

Secondly, the study design did not prevent information sharing between control participants between pre- and post –test. This may have in particular generated learning (and increased scores) in the control group on the depression identification task which would not have occurred in the absence of the study. Certainly, several control staff were overheard discussing 'what was wrong with Jake". Such cross contamination may explain the significant increase in scores of the control group pre-post and made the benefits of the workshop less apparent.

Thirdly, a potential criticism of the study is that only one vignette was used in both the pre and post training evaluations. This may have resulted in potential confounds from practice effects and idiosyncratic interpretations of the meaning of the vignette. The use of other "decoy" vignettes may have prevented this.

It could be argued that the analysis strategy was limited as the variance attributable to education institution was not partialed from the analysis prior to looking for differences between those who received the training intervention and those who did not. As a result, it is possible that some of the between subject variation could have been accounted for by variations attributable to the particular school.

A final limitation of the study could be the outcome measures used. Although the measures were selected based on the most reliable existing evidence (and in the absence of current "gold standard" measures), others may have captured outcomes more reliably or accurately. For example, asking staff to identify depression from a vignette may not have captured accurately the task of identifying depression in an actual student and may therefore have limited external validity. A more accurate measurement of this skill could be that used by Sayal et al., (2006), which measured staff accuracy to identify students who had been independently assessed as meeting established DSM-V criteria. Alternatively, identification could be measured by counting the number of students referred to CAMHS or the number of cases missed by staff each year. Regarding the measurement of accessing information, the use of an outcome measure based on self report was limited as it rendered the results vulnerable to response bias and inaccurate recall by staff and students. A more accurate measurement may therefore have been to configure the class computer to record the number of times staff accessed the website.

Accessing Information.-

Contrary to the study hypothesis, introducing staff to a mental health website did not increase the extent to which they reported accessing mental health information from websites. Interestingly, the frequency of this behaviour was high in both groups at baseline ("Occasionally"- "Frequently") and actually decreased in both groups to very similar levels pre-post test ("Never"- "Once"). One possible explanation to account for this decline could be that the training took place prior to the summer holidays, whilst follow up occurred at the beginning of the new academic year. The implications of collecting data at these two (contextually very different) points in the academic calendar could be two-fold. Firstly, the

increased academic, organisational and classroom pressures upon staff that characterise the new school year (when time two data was collected) may have meant that staff were experiencing increased demands upon their time and had less opportunity to seek information about student mental health. At the same time, it may be that students were experiencing less academic pressure and consequently feeling less stressed in the new academic year than they had been during the examination periods of the summer term. Perhaps therefore, there were fewer symptoms of depression amongst students at this time for staff to notice. Such explanations merit further research exploration but are consistent with staff reports in this research and previous research (Nelson & While, 2002), that competing demands for staff time are greater in the autumn term and often restrict staff ability to support students regarding mental health issues.

Observations of the interventions indicate that several aspects of the workshop may have reduced its effectiveness to change behaviours. Firstly, the workshop had several objectives to cover in a relatively short time. As the website was not introduced to staff until the end of training, very little time often remained available to spend on this. In addition, simply presenting and describing the website may not have been sufficient for staff to remember the website, appreciate its potential utility or become familiar with its use. Although it was intended for schools to distribute the website to staff after the workshop, this was not followed up and may not have occurred.

Dissemination of information to students.

Also contrary to the study hypothesis was the finding that the amount of information students reported receiving from staff did not increase after the workshops. Two characteristics of the

design may help to explain this. Firstly, as form groups were randomly selected, there was no guarantee that the students, who completed questionnaire in schools where staff participation was voluntary, had any contact with staff who participated. This may have diluted the results.. Secondly, given that young people fear stigmatising responses from others regarding mental health (Kidger et al., 2009) and that student participants often completed questionnaires sitting in close proximity to one another, it may be that students were reluctant to report receiving information. Although a careful protocol was followed at each data point to explain both confidentiality and how the data would be used, there was often very limited time to check students understanding and answer any questions they had during data collection. It may be therefore that students were not adequately reassured.

Confidence and identification of depression.

The findings of this study show that staff confidence to support students and their ability to identify depression did improve significantly after the workshops. It is proposed that several components of the workshop made significant contributions to the improvements found.

Perhaps most importantly, the workshop responded to training needs identified by staff themselves in the literature (Kidger et al., 2009; Rothi et al., 2008) and was mindful of UK government targets established for school over recent years (DfES, 2004). Such an approach is in line with NICE guidance (2007), which states that public health activities aimed at changing behaviours should be based on a needs assessment of the population that takes account of their social and cultural context. In this study, that workshop content was underpinned by a formulation of the school staff population is felt to have enhanced both the recruitment of schools and the engagement of individual staff within sessions.

NICE guidance (2007) also recommends that interventions should identify and attempt to remove any potential barriers to the changes required. That workshops were successful in increasing identification of depression may therefore partly be due to it's consideration of several factors which may prevent the act of identification itself. Arguably, for staff to effectively identify depression, they must not only be able, but *willing*, to do so. Research suggests that some staff may not be willing; some perceiving mental health as irrelevant to education, some disliking psychiatric language and some holding concerns that identification may lead to 'labelling' a student (Rothi et al., 2008). Researchers have suggested that these factors actively stop staff from identifying depressed students (Moor et al., 2007) or becoming involved in student mental health generally (Graham, Phelps, Maddison, Fitzgerald, 2011). Feasibly, they may also prevent staff from engaging with training and research on mental health.

Although reducing negative perceptions and attitudes in staff were not the primary outcomes targeted by the workshops, attempts were made to challenge them, e.g. the section ''Mental health – is it really relevant to me?" before using non-medical language to define mental health and common mental health difficulties. This section emphasised the vulnerability of youth to mental health difficulties, the relationship between mental health and educational achievement and the importance of early detection in improving outcomes. Several activities were included to convey evidenced stigma reducing messages (e.g. "see the person"; Clement, Jarrett, Henderson, & Thornicroft 2010), including a 'myths' quiz and a film clip made by young service users to depict adolescent depression.

Particularly effective elements in enhancing staff confidence may have been the delivery of training by local and experienced mental health professionals, the inclusion of clear, evidence-based information and simple crisis framework and trainer acknowledgement of staff as the "experts" on the school environment. These characteristics may have increased the extent to which staff felt they could 'believe' what was being taught, reduced fears of 'saying the wrong thing' (Kidger et al., 2009) and increased staff appreciation of their valuable contribution and unique position.

Clinical Implications

Theoretically, the improvements generated by the workshops could benefit schools, their staff and students in several ways. Firstly, studies show that staff associate deficits in their confidence and skill with increased stress, burnout and poor mental health (Rothi et al., 2008; Kidger et al., 2009). In strengthening these outcomes therefore, workshops may help to improve job satisfaction and reduce sickness, absence and turnover. Increases in confidence may also lay the foundations for future training and other types of school-based interventions. Studies have shown that where staff are confident, school-wide efforts are more likely to be successful (Wyn, Cahill, Holdsworth, Rowling & Carson, 2000) and training gains are more likely to be transferred into practise (Salas and Cannon-Bowes, 2001).

Potentially the effects of the training could also benefit students. Staff may be less likely to overlook or avoid students with developing or existing depression, and may be more likely to actively offer support. Arguably, a depressed student stands a greater chance of being noticed in a school where 86% of staff can identify depression, than where just 67% can.

The results of this study suggest that future workshops may enhance their outcomes by selecting modest and achievable goals which are based on formulations of staff need. To ensure that workshops are truly useful to staff, mental health professionals may wish to assess the particular challenges faced by each school in regards to student mental health and collaboratively agreeing the content of workshops with senior staff. Related to this, our experiences during recruitment indicate that offering workshops of one hour duration may be more acceptable for schools and allow more to take advantage of the training. Efforts to increase identification may be most successful where some effort is made to acknowledge and reduce potential barriers to change, such as staff stigma and attitudes. The atrophy found in outcomes of both confidence and identification at three months follow up, whilst not statistically significant, suggests that staff may require booster sessions if effects are to be sustained in the longer term.

Where behaviour is the main target, practice in workshops may improve outcomes. Cross et al. (2011), found that just 30 minutes of behavioural rehearsal with role-play and the provision of feedback to staff, significantly enhanced the effects of training intervention on communicating with distressed students. To increase website use, workshops could include activities in which staff use the website to answer questions or deal with hypothetical scenarios. Group discussion could then encourage staff to identify any potential barriers and strategies for overcoming these. Ensuring the website link is uploaded onto each class computer and active follow up of training with reminders may cue staff into using it and prevent it from being forgotten. That staff reported frequent use of websites at baseline perhaps indicates the popularity of the internet amongst staff as a method of learning. As NICE guidelines (2007) suggest that the "acceptability" of an intervention to a target

population is important in ensuring effectiveness, mental health professionals designing future workshops may wish to consider ways in which this popularity could be harnessed.

Future Research

Within this paper, several tentative suggestions are made regarding both the components of workshops which may have generated change and the implications of these changes. Future studies should aim to measure both of these systematically. Asking staff to rate the impact of each workshop section on confidence for example, may highlight specific characteristics which are more (and less) useful and enable workshops to be refined and streamlined. This seems particularly important in an environment where time if so scarce. Qualitative interviews with staff about their experiences of the workshops and how any gains have translated into practice may highlight outcomes which can then be measured.

Experiences carrying out this study suggest that careful planning is essential to ensure that research protocol and design can be followed. Researchers may need to commence recruitment at least 12 months prior to training delivery (as this is when schools fill their training calendars), so that enough schools are available to be matched across conditions. Researchers should also consider the potential impact of the time of year (and school holidays) on data collection as well as on the effectiveness of the workshop itself. It may well be that there are optimal times for delivering both.

In terms of study design future researchers may wish to utilise online surveys to gather data, as these may be more convenient for staff to complete and reduce any student fears around

confidentiality. Studies should also consider sampling only the students of participating staff as this would increase the likelihood that any impact is detected.

Rowling (2009) points out that currently, much of the evidence on improving mental health outcomes comes from the health sector and as such, existing interventions do not fit with the breadth and complexity of conditions in schools that must be considered to bring about change. She argues that interventions need to be designed and evaluated within the school structure rather than adjusted to fit. This may not be easy; the school environment by necessity lacks flexibility and its structure can significantly impair training and research efforts. NICE guidance (2007) suggests that to change behaviours, interventions should be developed in collaboration with target populations and involve partnership working. Experiences conducting this study support this and suggest that both research and training endeavours would benefit considerably from the involvement of school professionals in their design, delivery and promotion. It is felt that this may not only enhance the effectiveness of the intervention but would significantly improve the research itself; potentially increasing recruitment and improving navigation of complex school systems and potential barriers.

Conclusion

This study shows that brief workshops can be effective interventions for increasing school staff ability to identify student depression and confidence to support students with mental health difficulties. Like previous studies however, findings suggest that they may be less effective at changing actual behaviours. The breadth and longevity of the improvements found, and the extent to which they make real differences to staff and students, all require objective measurement in future studies. To improve and sustain workshop impact, different

workshop designs and components, such as behavioural rehearsal, booster sessions, modular packages and one hour sessions should be explored. Understanding the educational context and the specific training needs of individual schools may significantly enhance training and research practise. The involvement of school staff in training design and delivery may be the key to both successfully conducting school research and improving outcomes.

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EXECUTIVE SUMMARY

Brief training with school staff about student mental health

Gemma Jones

This document provides an overview of the research conducted in partial fulfilment of the requirements for the degree of Doctorate in Clinical Psychology programme at the University of Birmingham. This document summarises the literature review and a research paper both written in preparation for submission to peer-reviewed journals.

Literature review: How effective is brief training of school staff about student mental health? A review of the evidence

Background

The importance of protecting good childhood mental health and preventing ill-health is increasingly recognised and forms a key part of UK government mental health strategy (No Health Without Mental Health, 2010). School staff may play an important role in school mental health promotion and prevention efforts (Weare, 2010). Many education policies argue that staff should receive training in student mental health (DfES, 2004) and school staff report that training should fit within the context of the school environment and professional development structures (Kidger, Gunnell, Biddle, Campbell, & Donovan (2010). Brief in-service training for staff about student mental health may have several positive impacts upon staff and students, but no reviews have been conducted to establish how effective this training may be. This reviews aims to determine 1) the effectiveness of brief "in-service" training for school staff about student mental health and 2) how long any impacts may last.

Results

A search of the existing literature found 14 papers of sufficient quality to be included in the review. Between them, these studies examined the impact of training upon staff knowledge, self-appraisals (e.g. confidence and preparedness to support students), skills, behaviour and attitudes related to student mental health. Overall, there were more studies, and also studies of better quality that measured staff knowledge and appraisals; and the results showed that training was generally effective with improvements which lasted for up to a year. There were fewer studies found on the impact of training upon staff skills, behaviours and attitudes and overall these studies were of poorer quality. These limited findings have been mixed but indicate that training has a lesser impact on these outcomes with very limited changes to behaviour reported by staff following training.

Conclusions

The pattern of results found were consistent with evaluations of health campaigns conducted with the general public and also with literature regarding the difficulties in translating training gains into actual behavioural change. Many studies had strengths which increased the extent to which their results could be trusted but they had several common areas of weakness which not only reduced their reliability but may partly explain why so little changes to behaviours were found. The weaknesses included:- the ways in which outcomes were measured and that studies may not have been large enough or long enough to capture any improvements which did occur. Other possible reasons that training appears to have less impact upon behaviour, skills and attitudes may be that these are more difficult for staff to change, perhaps due to limitations in the school environment or for personal reasons.

For training to benefit students, staff behaviour, skills and attitudes need to ultimately improve. In order to achieve this, training may need to be longer and more frequent or be delivered as part of a whole school approach. In delivering future training it seems important that mental health professionals are both realistic and transparent about the limitations of brief training. Successful workshops may be those which target those behaviours and skills where some change has been found in the existing studies (e.g. giving out mental health information to students) and those which incorporate the recommendations of these studies; i.e. that trainers use non –psychiatric language, and ensure that the training aims are achievable for staff within the realities of their particular school environment. With so few studies currently examining the effects of brief training, more research is needed to examine training of different types and on other topic areas. It should aim to objectively measure potential training benefits which have so far not been captured, such as staff turnover and stress levels.

Research paper: A non-randomised cohort study of a workshop with school staff about student mental health

Background

Depression during childhood can have a significant negative impact upon the lives of young people and can reduce their long-term health, achievement and wellbeing. UK government policies highlight the significant role of school staff in the identification and support of students who may have depression (NHS Advisory Service, Together We Stand, 1995). However, many school staff report feeling unprepared to do so and would like INSET training to improve skills in supporting students, increase their understanding of mental health difficulties and knowledge of where to get help if necessary (Rothi, Leavey, & Best, 2008) .

Very few previous studies have evaluated the effectiveness of short training workshops about student mental health with school staff, particularly in regards to training about depression. Those which have been done, have shown mixed results, with improvements to knowledge and confidence and some skills and behaviours (Jorm et al., 2010, Moor et al., 2007). The aim of this study is to evaluate the effects of a brief workshop about student mental health on the abilities of school staff to identify student depression, their confidence to support students with mental health difficulties, and the frequency that they access sources of mental health information and give information to students.

Design

This study was a non-randomised cohort study. As such, each school and their staff were allocated to one of two groups. Schools in the first group (intervention group) received training in the summer term 2011. Schools in the second group were placed on a waiting list and received training in the autumn term. Staff in all schools completed a short questionnaire in the summer term prior to anyone being trained. The questionnaire contained a short vignette about a student with depression and asked them to identify what they thought was the matter with the student. It also asked them how confident they felt to support students with mental health problems and how often in the last month they had accessed mental health information from a website. A sample of students from each school also completed a one page questionnaire at this time. This student questionnaire asked them whether they had received any information about mental health from staff in the previous month. Staff in the intervention group then took part in the training and completed the questionnaire again. Three months later, staff in both the intervention and control groups repeated the questionnaire. Changes in the scores of staff in both groups were therefore measured over time so that the

differences between those who had, and who had not received training could be measured. Students were asked to complete their questionnaires once again, three months after staff at their schools had been trained.

Participants

268 secondary school staff from five schools in the West Midlands, UK took part in the workshop. Staff with a variety of roles and experience attended the training although the majority were white and female. A total of 1094 students from these schools completed questionnaires.

Intervention

The two and a half hour workshop was delivered by local mental health professionals. The content covered common difficulties, in particular how depression may appear in students and how to provide support to a student in distress. The workshop included a PowerPoint presentation, small and large group exercises, a quiz and film clips. At the end of training, staff were provided with a local website containing information about common mental health difficulties and local resources.

Analysis

All data within the questionnaires was coded and entered onto a database. Statistical analysis was then conducted to compare differences in scores over time and differences between the scores of groups who had, and those who had not, been trained. Monitoring changes in the scores of the control group, even though they had not been trained, allowed any changes to be

seen that naturally occurred over time without training, or as a result of repeating the questionnaire a second time.

Results

In contrast to the findings of previous research, results indicated that staff increased their identification of depression over time. Those who had been trained increased to a significantly greater degree than those who had not. When measured three months later, the improvements found in the trained group remained. In terms of confidence, the trained group increased significantly more that those in the control group and again improvements in the trained staff were found to remain when measured three months later. To test whether the control group also increased in confidence and identification ability after they received the training, their before and after training scores were also compared. This showed that control staff also improved in their confidence after training. Whilst their ability to identify depression did increase, this was not to a statistically significant level. Findings showed that the frequency with which the staff reported accessing web-based mental health information and the frequency with which students reported receiving information had not increased three months after training.

Conclusions

Consistent with previous research, this study suggests that whilst brief workshops can increase confidence, they may be less effective for changing behaviours. Spending more time on the website in the workshop; allowing staff to practise using the website; leaving the website on each class computer and reminding staff about the existence of the website may have encouraged greater staff usage. The time of year in which data was captured and the

ways in which the student outcome was measured may also help to explain why no changes to behaviour were reported.

Unlike previous research this study did increase staff identification of depression. Components of the workshop that may have been particularly effective at increasing confidence and identification may have been the use of small groups, time for discussion and the delivery of clear information from "professionals". The use of non-medicalised language, activities conveying anti-stigma messages and emphasis on the relevance of mental health to education may have also helped to tackle some of the barriers which may exist to identification depression by school staff . Follow up results on confidence and identification show that the effects of workshops can last in the short term, but that booster sessions and ongoing staff support may be required for them to be sustained over longer periods.

Findings suggest that in order to be successful, workshops should focus on small goals which are realistic, achievable and based on the identified needs of staff and their schools in relation to student mental health. Training content should be designed to fit in with existing school policies and ethos. It also seems important that mental health professionals have an adequate understanding of the educational environment and the potential barriers that it could present to training and research goals. Working collaboratively with school staff to design and deliver workshops and research may enhance the effectiveness and success of both. Improvements to staff confidence and identification may have a number of benefits to schools, their staff and students. However, much more research is needed to establish what these might be, how large they may be and how long they may last.

APPENDIX 2:

SEARCH STRATEGY FOR LITERATURE REVIEW

Electronic Database Searched	Search strategy	
Psych-INFO	1 *(school* adj1 staff).ti,ab* 2 *(school* adj1 teacher*).ti,ab* 3 *"teaching staff".ti,ab* 4 *"school nurse*".ti,ab* 5 *("pre-service teacher*" OR "preservice teacher*" OR "trainee teacher*" OR "student teacher*" OR "school administration staff" OR "school secretar*" OR "dinner supervisor*" OR "pastoral staff" OR SENCO OR (school adj1 Mentor*) OR "head teacher*" OR "teaching assistant*").ti,ab* 6 *exp TEACHERS/* 7 *("university tutor*" OR "university lecturer*" OR "college lecturer*" OR "college tutor*").ti,ab* 8 *1 OR 2 OR 3 OR 4 OR 5 OR 6 OR 7* 9 *(literacy OR knowledge OR aware* OR train* OR "professional development" OR "mental health first aid" OR "teacher training" OR (staff adj1 workshop*) OR (teacher adj1 workshop*) OR "teacher ducation").ti,ab* 10 *(teacher* adj1 attitude*) OR (teacher* adj1 opinion*) OR (teacher* adj1 belief*) OR (teacher* adj1 view*) OR (teacher* adj1 stigma)).ti,ab* 11 *(teacher adj2 literacy) OR (teacher adj2 knowledge) OR (teacher adj2 aware*) OR (teacher adj2 train*) OR "professional development" OR "mental health first aid" OR "teacher training" OR (staff adj1 workshop*) OR (teacher adj1 workshop*) OR "teacher education".ti,ab* 12 *STIGMA/ OR HEALTH PROMOTION/ OR HEALTH LITERACY/ OR HEALTH EDUCATION/ OR TEACHER EDUCATION/ OR INSERVICE TEACHER EDUCATION/ OR TEACHER ATTITUDES.* 13 *9 OR 10 OR 11 OR 12* 14 *(mental* OR psychiatr* OR anxiety OR depression OR pscyhosis OR "eating disorder*" OR anorexia OR bulimia OR OCD OR "Obsessive compulsive disorder" OR ADHD OR "Attention Deficit Hyperactivity Disorder" OR "child abuse" OR "children at risk" OR suicide OR "self-harm" OR "self harm" OR "self esteem" OR anger OR "drug use" OR "alcohol use" OR "drug and alcohol use" OR "substance misuse").ti,ab* 15 *exp MENTAL DISORDERS/ OR exp EATING DISORDERS [+NT]/ OR exp PSYCHOSIS [+NT]/ OR exp ANXIETY DISORDERS [+NT]/ OR exp AFFECTIVE DISORDERS [+NT]/* 16 *MENTAL HEALTH/* 17 *14 OR 15 OR 16* 18 *8 AND 13 AND 17* 19 *exp AUTISM/* 20 *autis*.ti,ab* 21 *ASPERGERS SYNDROME/* 22 *asperger*.ti,ab* 23 *exp DEMENTIA/* 24 *(dementia OR alzheimer*).ti,ab* 25 *19 OR 20 OR 21 OR 22 OR 23 OR 24* 26 *18 not 25* 27 *26 [Limit to: Publication Year 1995-2012 and English Language]*	
MEDLINE	1 *(school* adj1 staff).ti,ab;* 2 *(school* adj1 teacher*).ti,ab;* 3 *"teaching staff".ti,ab;* 4 *"school nurse*".ti,ab;* 5 *("pre-service teacher*" OR "preservice teacher*" OR "trainee teacher*" OR "student teacher*" OR "school administration staff" OR "school secretar*" OR "dinner supervisor*" OR "pastoral staff" OR SENCO OR (school adj1 Mentor*) OR "head teacher*" OR "teaching assistant*").ti,ab;* 6 *("university tutor*" OR "university lecturer*" OR "college lecturer*" OR "college tutor*").ti,ab;* 7 *1 OR 2 OR 3 OR 4 OR 5 OR 6;* 8 *(literacy OR knowledge OR aware* OR train* OR "professional development" OR "mental health first aid" OR "teacher training" OR (staff adj1 workshop*) OR (teacher adj1 workshop*) OR "teacher education").ti,ab;*	

		9	(teacher* adj1 attitude*) OR (teacher* adj1 opinion*) OR (teacher* adj1 belief*) OR (teacher* adj1 view*) OR (teacher* adj1 stigma)).ti,ab;	
		10	(teacher adj2 literacy) OR (teacher adj2 knowledge) OR (teacher adj2 aware*) OR (teacher adj2 train*) OR "professional development" OR "mental health first aid" OR "teacher training" OR (staff adj1 workshop*) OR (teacher adj1 workshop*) OR "teacher education".ti,ab;	
		11	INSERVICE TRAINING/;	
		12.	HEALTH EDUCATION/;	
		13.	HEALTH PROMOTION/;	
		14.	HEALTH LITERACY/;	
		15.	SOCIAL STIGMA/ OR PREJUDICE/;	
		16.	ATTITUDE TO HEALTH/;	
		17.	8 OR 9 OR 10 OR 11 OR 12 OR 13 OR 14 OR 15 OR 16;	
		18.	(mental* OR psychiatr* OR anxiety OR depression OR pscyhosis OR "eating disorder*" OR anorexia OR bulimia OR OCD OR "Obsessive compulsive disorder" OR ADHD OR "Attention Deficit Hyperactivity Disorder" OR "child abuse" OR "children at risk" OR suicide OR "self-harm" OR "self harm" OR "self esteem" OR anger OR "drug use" OR "alcohol use" OR "drug and alcohol use" OR "substance misuse").ti,ab;	
		19.	exp MENTAL DISORDERS/ OR exp EATING DISORDERS/ OR exp PSYCHOTIC DISORDERS/ OR exp ANXIETY DISORDERS/ OR exp MOOD DISORDERS/;	
		20.	MENTAL HEALTH/;	
		21.	17 OR 18 OR 19;	
		22.	7 AND 17 AND 21;	
		23.	exp AUTISTIC DISORDER/;	
		24.	autis*.ti,ab;	
		25.	ASPERGER SYNDROME/;	
		26.	asperger*.ti,ab;	
		27.	exp DEMENTIA/;	
		28.	(dementia OR alzheimer*).ti,ab;	
		29.	23 OR 24 OR 25 OR 26 OR 27 OR 28;	
		30.	22 NOT 29	
		31.	30 [Limit to: Publication year 1995-2012 and English Language].	
CINAHL		1.	(school* adj1 staff).ti,ab;	
		2.	(school* adj1 teacher*).ti,ab;	
		3.	"teaching staff".ti,ab;	
		4.	"school nurse*".ti,ab;	
		5.	("pre-service teacher*" OR "preservice teacher*" OR "trainee teacher*" OR "student teacher*" OR "school administration staff" OR "school secretar*" OR "dinner supervisor*" OR "pastoral staff" OR SENCO OR (school adj1 Mentor*) OR "head teacher*" OR "teaching ssistant*").ti,ab;	
		6.	("university tutor*" OR "university lecturer*" OR "college lecturer*" OR "college tutor*").ti,ab;	
		7.	1 OR 2 OR 3 OR 4 OR 5 OR 6;	
		8.	(literacy OR knowledge OR aware* OR train* OR "professional development" OR "mental health first aid" OR "teacher training" OR (staff adj1 workshop*) OR (teacher adj1 workshop*) OR "teacher education").ti,ab;	
		9.	(teacher* adj1 attitude*) OR (teacher* adj1 opinion*) OR (teacher* adj1 belief*) OR (teacher* adj1 view*) OR (teacher* adj1 stigma)).ti,ab;	
		10.	(teacher adj2 literacy) OR (teacher adj2 knowledge) OR (teacher adj2 aware*) OR (teacher adj2 train*) OR "professional development" OR "mental health first aid" OR "teacher training" OR (staff adj1 workshop*) OR (teacher adj1 workshop*) OR "teacher education".ti,ab;	
		11.	STAFF DEVELOPMENT/;	
		12.	HEALTH EDUCATION/;	
		13.	HEALTH PROMOTION/;	
		14.	STIGMA/ OR PREJUDICE/;	
		15.	HEALTH BELIEFS/;	
		16.	ATTITUDE TO HEALTH/;	
		17.	ATTITUDE TO MENTAL ILLNESS/;	
		18.	8 OR 9 OR 10 OR 11 OR 12 OR 13 OR 14 OR 15 OR 16 OR 17;	
		19.	(mental* OR psychiatr* OR anxiety OR depression OR psychosis OR "eating disorder*" OR anorexia OR bulimia OR OCD OR "Obsessive compulsive disorder" OR ADHD OR "Attention Deficit Hyperactivity Disorder" OR "child abuse" OR "children at risk" OR suicide OR "self-harm" OR "self harm" OR "self esteem" OR anger OR "drug use" OR "alcohol use" OR "drug and alcohol use" OR "substance misuse").ti,ab;	
		20.	exp MENTAL DISORDERS/OR exp EATING DISORDERS/ OR exp PSYCHOTIC DISORDERS/ OR exp ANXIETY DISORDERS/ OR expAFFECTIVE DISORDERS/;	

	21. MENTAL HEALTH/;
	22. 19 OR 20 OR 21;
	23. 7 AND 18 AND 22;
	24. exp AUTISTIC DISORDER/;
	25. autis*.ti,ab;
	26. ASPERGER SYNDROME/;
	27. asperger*.ti,ab;
	28. exp DEMENTIA/;
	29. (dementia OR alzheimer*).ti,ab;
	30. 24 OR 25 OR 26 OR 27 OR 28 OR 29;
	31. 23 NOT 30
	32. 31 [Limit to: Publication year 1995-2012 and English Language].
British Education Index (BEI)	1. AB,TI (school* NEAR/1 staff or school* NEAR/1 teacher* or "teaching staff" or "school nurse*") 2. AB,TI ("pre-service teacher*" or "preservice teacher*" or "trainee teacher*" or "student teacher*" or "school administration staff" or "school secretar*" or "dinner supervisor*" or "pastoral staff" or SENCO or "head teacher*" or "teaching assistant*") 3. AB,TI (university tutor*" or "university lecturer*" or "college lecturer*" or "college tutor*") 4. AB,TI (school NEAR/1 mentor*) 5. AB,TI teacher* 6. (SECONDARY SCHOOL TEACHERS OR BEGINNING TEACHERS OR DEPARTMENT HEADS OR DEPUTY HEAD TEACHERS OR HEAD TEACHERS OR MIDDLE SCHOOL TEACHERS OR PRESCHOOL TEACHERS OR PRIMARY SCHOOL TEACHERS OR STUDENT TEACHERS OR SUBSTITUTE TEACHERS OR SUPPORT TEACHERS OR TUTORS) 7. 1 OR 2 OR 3 OR 4 OR 5 OR 6 8. AB,TI (literacy or knowledge or aware* or teacher* NEAR/1 attitude* or teacher* NEAR/1 opinion* or teacher* NEAR/1 belief* or teacher* NEAR/1 view* or teacher* NEAR/1 stigma) 9. AB, TI (train* or "professional development" or "mental health first aid" or "teacher training" or staff NEAR/1 workshop* or teacher* NEAR/1 workshop* or "teacher education") 10. AB, TI (teacher NEAR/2 literacy or teacher NEAR/2 knowledge or teacher NEAR/2 aware* or teacher NEAR/2 train* 11. (TEACHER ATTITUDES OR BELIEFS OR STUDENT TEACHER ATTITUDES OR ATTITUDE CHANGE OR BIAS) 12. TEACHER EDUCATION 13. (HEALTH EDUCATION OR HEALTH PROMOTION OR STRESS MANAGEMENT OR PREVENTION OR STRESS PSYCHOLOGICAL)) 14. 8 OR 9 OR 10 OR 11 OR 12 OR 13 15. AB,TI (mental* or psychiatr* or anxiety or depression or psychosis or "eating disorder*" or anorexia or bulimia or OCD or "obsessive compulsive disorder" or ADHD or "Attention Deficit Hyperactivity Disorder" or "child abuse" or "children at risk" or suicide or "self harm" or "self esteem" or anger or "drug use" or "alcohol use" or "drug and alcohol use" or "substance misuse") 16. (MENTAL HEALTH OR MENTAL DISORDERS OR PSYCHOPATHOLOGY OR EATING HABITS OR PSYCHOSIS OR PSYCHOLOGICAL PATTERNS) 17. 15 OR 16 18. 7 AND 14 AND 17 19. (AUTISM OR AB,TI autis*) 20. AB,TI asperger* 21. AB,TI (Dementia or alzheimer*) 22. 19 OR 20 OR 21 23. 18 NOT 22 24. Limit to English Language and 1995-2012
Australian Education Index (AEI)	1. AB,TI (school* NEAR/1 staff or school* NEAR/1 teacher* or "teaching staff" or "school nurse*") 2. AB,TI ("pre-service teacher*" or "preservice teacher*" or "trainee teacher*" or "student teacher*" or "school administration staff" or

	"school secretar" or "dinner supervisor*" or "pastoral staff" or SENCO or "head teacher*" or "teaching assistant*")*
	3. *AB,TI (university tutor*" or "university lecturer*" or "college lecturer*" or "college tutor*")*
	4. *AB,TI (school NEAR/1 mentor*)*
	5. *AB,TI teacher**
	6. *(BEGINNING TEACHERS OR MIDDLE SCHOOL TEACHERS OR PRESCHOOL TEACHERS OR PRIMARY SCHOOL TEACHERS OR SECONDARY SCHOOL TEACHERS OR STUDENT TEACHERS OR TUTORS OR DEPARTMENT HEADS OR TEACHER AIDES)*
	7. *1 OR 2 OR 3 OR 4 OR 5 OR 6*
	8. *AB,TI (literacy or knowledge or aware* or teacher* NEAR/1 attitude* or teacher* NEAR/1 opinion* or teacher* NEAR/1 belief* or teacher* NEAR/1 view* or teacher* NEAR/1 stigma)*
	9. *AB, TI (train* or "professional development" or "mental health first aid" or "teacher training" or staff NEAR/1 workshop* or teacher* NEAR/1 workshop* or "teacher education")*
	10. *AB, TI (teacher NEAR/2 literacy or teacher NEAR/2 knowledge or teacher NEAR/2 aware* or teacher NEAR/2 train**
	11. *(TEACHER ATTITUDES OR TEACHER BELIEFS OR TEACHER RESPONSE OR TEACHER BEHAVIOUR OR BIAS)*
	12. *(TEACHER EDUCATION OR INSERVICE TEACHER EDUCATION OR PRESERVICE TEACHER EDUCATION)*
	13. *(HEALTH EDUCATION OR HEALTH PROMOTION OR STRESS MANAGEMENT OR PREVENTION OR TEACHER STRESS)*
	14. *8 OR 9 OR 10 OR 11 OR 12 OR 13*
	15. *AB,TI (mental* or psychiatr* or anxiety or depression or psychosis or "eating disorder*" or anorexia or bulimia or OCD or "obsessive compulsive disorder" or ADHD or "Attention Deficit Hyperactivity Disorder" or "child abuse" or "children at risk" or suicide or "self harm" or "self esteem" or anger or "drug use" or "alcohol use" or "drug and alcohol use" or "substance misuse")*
	16. *(MENTAL HEALTH OR MENTAL DISORDERS OR PSYCHOPATHOLOGY OR EATING HABITS OR EATING DISORDERS OR PSYCHOSIS OR PSYCHOLOGICAL PATTERNS)*
	17. *15 OR 16*
	18. *7 AND 14 AND 17*
	19. *(AUTISM OR AB,TI autis*)*
	20. *(ASPERGER SYNDROME OR AB,TI asperger*)*
	21. *(ALZHEIMERS DISEASE OR AB,TI (Dementia or alzheimer*))*
	22. *19 OR 20 OR 21*
	23. *18 NOT 22*
	24. *Limit to English Language and 1995-2012*
ERIC	1. *AB, TI (school staff or school teacher* or "teaching staff" or "school nurse*")*
	2. *AB,TI ("pre-service teacher*" or "preservice teacher*" or "trainee teacher*" or "student teacher*" or "school administration staff" or "school secretar*" or "dinner supervisor*" or "pastoral staff" or SENCO or "head teacher*" or "teaching assistant*")*
	3. *AB,TI (school NEAR/1 mentor*)*
	4. *(SECONDARY SCHOOL TEACHERS OR TEACHER AIDES OR DEPARTMENT HEADS OR PRINCIPALS OR ADMINISTRATORS OR ASSISTANT PRINCIPALS OR BEGINNING PRINCIPALS OR TEACHERS OR MIDDLE SCHOOL TEACHERS OR PRESCHOOL TEACHERS OR PRESERVICE TEACHERS OR TUTORS)*
	5. *1 OR 2 OR 3 OR 4*
	6. *AB,TI (literacy or knowledge or aware* or teacher* attitude* or teacher* opinion* or teacher* belief* or teacher* view* or teacher* stigma)*
	7. *AB, TI (train* or "professional development" or "mental health first aid" or "teacher training" or staff workshop* or teacher* workshop* or "teacher education")*
	8 *AB, TI (teacher literacy or teacher knowledge or teacher aware* or teacher train*)*
	9. *(TEACHER ATTITUDES OR BELIEFS OR BIAS)*
	10. *TEACHER EDUCATION*
	11. *(HEALTH EDUCATION OR HEALTH PROMOTION)*
	12 *6 OR 7 OR 8 OR 9 OR 10 OR 11*

13. AB,TI (mental* or psychiatr* or anxiety or depression or psychosis or "eating disorder*" or anorexia or bulimia or OCD or "obsessive compulsive disorder" or ADHD or "Attention Deficit Hyperactivity Disorder" or "child abuse" or "children at risk" or suicide or "self harm" or "self esteem" or anger or "drug use" or "alcohol use" or "drug and alcohol use" or "substance misuse")
14. (MENTAL HEALTH OR MENTAL DISORDERS OR PSYCHOSIS OR PSYCHOPATHOLOGY OR EATING HABITS OR EATING DISORDERS OR PSYCHOLOGICAL PATTERNS OR ANXIETY DISORDERS OR DEPRESSION (PSYCHOLOGY))
15. 13 OR 14
16. 5 AND 12 AND 15
17. (AUTISM OR ASPERGER SYNDROME)
18. AB,TI (asperger* OR autis*)
19. AB,TI (dementia or alzheimer*)
20. (ALZHEIMERS DISEASE OR DEMENTIA OR MATHEMATICS ANXIETY)
21. 17 OR 18 OR 19 OR 20
22. 16 NOT 21
23. Limit to 1995-2012
24. Limit to English Language
25. EXCLUDE BOOKS; REPORTS; OTHER SOURCES; CONFERENCE PAPERS & PROCEEDINGS; DISSERTATIONS AND THESES.
26. EXCLUDE OPINION PAPERS; COLLECTED WORKS: SERIALS; GUIDES: CLASSROOM: TEACHER; GUIDES: NON-C LASSROOM; REPORTS: GENERAL; REFERENCE MATERIALS: BIBLIOGRAPHIES;

RISK OF BIAS FRAMEWORK

Risk of Bias Criteria	3. Yes (low risk)	2. Partially (medium risk)	1. No (High risk)	1. Unreported (High risk)
Title, abstract & Intro				
1. Is there a clearly focused question with information on target population & outcomes? Does background information provide clear rationale and lead to a clear hypothesis?				
Design				
2. Is there a large enough sample size?				
3. Is there a control group?				
4. Is there a follow up long enough to capture the intended effects with low loss to follow up?				
Method:				
5. Recruitment bias: Do the sampling/recruitment methods minimise bias?				
6. Classification bias Was exposure to training accurately measured to minimise bias?				
7. Measurement bias Were objective outcomes used in addition to subjective outcomes?				
8. Measurement bias: Are the psychometric properties of the measures established (e.g.Cronbach's alpha > 0.70)				
Analysis				
9. Are the analysis methods clearly described and coherent with the research aims?				
Results				
10. How precise are the results? (confidence intervals)				
Discussion				
11. Are the limitations of research and potential bias acknowledged & discussed?				
12. Are the results consistent with other evidence?				
Total				

APPENDIX 4:

REFERENCE LIST OF STUDIES INCLUDED IN THE LITERATURE REVIEW

Barbaresi, W. J., & Olsen, R. D. (1998). An ADHD Educational Intervention for Elementary Schoolteachers: A Pilot Study. *Developmental and Behavioural Pediatrics*, 19, 2, 94-100.

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Jones, H. A., & Chronis-Tuscano, A. (2008). Efficacy of Teacher In-Service Training for Attention-Deficit/Hyperactivity Disorder. *Psychology in the Schools*, 45, 10, 918-929.

Jorm, A. F., Kitchener, B. A., Sawyer, M. G., Scales, H., & Cvetkovski, S. (2010). Mental health first aid training for high school teachers: a cluster randomized trial. *BMC Psychiatry*, 10, 51, http://www.biomedcentral.com/1471-244X/10/51

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Moor, S., Maguire, A., McQueen, H., Wells, J. E., Elton, R., Wrate, R., & Blair, C. (2007). Improving the recognition of depression in adolescence: Can we teach the teachers? *Journal of Adolescence*, 30, 81-95.

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Reutzel, T. J., Desai, A., Workman, G., Atkin, J.A., Grady, S., Todd, T., Nguyen, N., Watkins, M., Tran, K., Liu, N., Rafinski, M., & Dang, T. (2008). Medication Management in Primary and Secondary Schools: Evaluation of Mental Health Related In-Service Education in Local Schools. *The Journal of School Nursing,* 24, 239-247.

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Sayal, K., Hornsey, H., Warren, S., MacDiarmid, F., & Taylor, E. (2006). Identification of children at risk of Attention Deficit/Hyperactivity Disorder. *Social Psychiatry Psychiatric Epidemiology*, 41, 806-813.

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Tompkins, T. L., Witt, J., & Abraibesh, N. (2010). Does a Gatekeeper Suicide Prevention Program Work in a School Setting? Evaluating Training Outcome and Moderators of Effectiveness. *Suicide and Life Threatening Behavior*, 40, 5, 506-515.

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Wyman, P. A., Inman, J., Guo, J., Brown, C. H., Cross, W., Schmeelk-Cone, K., & Pena, J. B. (2008). Randomized Trial of a Gatekeeper Program for Suicide Prevention: 1-Year Impact on Secondary School Staff. *Journal of Consulting and Clinical Psychology*, 76, 1, 104-115.

APPENDIX 5: SUMMARY OF STUDIES RATES AS "WEAK"

Study *Country*	Sample Size (N=Pre+Post) Staff Type	Design Data Points Follow up (FU)	Intervention Topic Duration Facilitator (s)	Outcome (s)	Measures No. of items Response options Previously published	Results
Hillman & Siracusa (2001) USA	N= 44 No. of schools not reported 1 District Elementary Teachers	Single group (Uncontrolled) Pre-post-test. No FU	Identification and intervening with children of alcoholics (COA's) & children abused and neglected (CANS) 2 x 2.5 hour workshops Designed and delivered by authors (Hillman & Siracusa, 1992).	1. Ability to identifying indicators of abuse 2. Intentions to intervene	1 & 2 In-service Teacher Survey (ITS) No details reported	1. Staff more likely at post test to: Use psychological factors to identify physically abused children (p=0.0187) and sexually abused children (p=0.0024) Use physical indicators to identify sexually abused children (p=0.251). 2. No significant increase in numbers reporting intentions to use classroom support interventions ("talk to the child")
O'Donnell, Joshi & Lewin (2007) USA	N= 262 No. of schools not reported School based childcare, nurses recreation & transport workers Elementary, middle & high schools	Single group (uncontrolled) No FU	Developmental responses to trauma Between 1 & 2 days (4-16 hours) Delivered by 6 x trainers (psychologists, psychiatrists, social workers and education professional)	1. Actual knowledge about developmental responses to trauma 2. Confidence in helping students exposed to trauma	1 & 2: 26 item, multiple choice Author designed	1. Increased levels of knowledge pre-post. No statistics reported 2. Increased self-reported confidence to recognise warning signs of trauma & support children cope with effects. No statistics reported.

APPENDIX 5: SUMMARY OF STUDIES RATES AS "WEAK"

Study *Country*	Sample Size (N=Pre+Post) Staff Type	Design Data Points Follow up (FU)	Intervention Topic Duration Facilitator (s)	Outcome (s)	Measures No. of items Response options Previously published	Results
Reutzel, Desai, Workman, Atkin, Grady & Todd (2008) USA	N=78 12 schools 1 school district Teachers, nurses, admin staff & other personnel. Primary and secondary Schools	Single Group (Uncontrolled) Pre-post-test. No FU	ADHD &/or depression & medication management 1 x 1 hour workshop 4 facilitators (2 x Clinical Pharmacist and 2 x mental health therapists-one of each per session-different pairs-ADHD vs depression)	1.Actual Knowledge of ADHD 2. Knowledge of depression 3. Confidence in knowledge	1. 14 items T/F/Don't know 2. 16 items T/F/Don't know 3. 6 items 5 point Scale "Strongly Agree" to "Strongly Disagree" All designed by authors	1 & 2. Significant increases in knowledge about ADHD & Depression (p<0.05) 3. Those in depression training reported more confidence post test in their knowledge of symptoms, risk factors & use of anti-depressants (P=0.00, p=0.00 & p=0.01 respectively. Those in ADHD training reported more confidence at post-test in knowledge of symptoms, risk, anti-depressants, how medication works and adverse effects of meds. (all p=0.00)

APPENDIX 6:
PARTICIPANT INFORMATION SHEETS

SCHOOL INFORMATION SHEET

Your school is being offered a free staff training session which is being delivered as part of a research study into the role of schools in student mental health. The study is part of a UK government-funded initiative which, in collaboration with National Healthy Schools, aims to improve the mental health of young people. The study is being designed and evaluated by leading psychology researchers from the University of Birmingham and experienced mental health professionals. It is hoped that the results will help demonstrate the value of training school staff about student mental health.

Who is taking part?

We are looking to recruit a total of 8 secondary schools and 400 teaching staff in Warwickshire and the West Midlands. The training will be open to all members of admin, teaching and support staff at participating schools.

What does the training involve?

Each school will receive one training session of approximately 2.5 hours. This session will take place on school premises. It will contain information and guidance on working with students with mental health difficulties and information about referral routes and helpful sources of advice. The training is based on the findings of international research, government policy and the expertise of experienced psychological clinicians and researchers.

It will be delivered by local mental health professionals in collaboration with a specialist voluntary organisation.

What will participation involve for my school?

In order to evaluate the impact of the training, we will be asking staff and students for their views. A sample of students from each year group will be asked to fill out a brief questionnaire before and after staff undertake the training. The questionnaire will ask students about the types of information and support that they currently receive from staff about mental health. The questionnaire will take approximately 10 minuets to complete and could be incorporated into form time or PHSE lessons.

In addition, staff attending the training will be asked to fill out a questionnaire prior to the summer holidays, during a staff meeting, immediately before and after the training and three months later. Two members of staff from each school will be invited take part in an hour-long interview on their experiences of the training.

When is this going to happen?

Training will be delivered to four schools between March and July 2011 and a further four in September to December. All eight schools will need to complete the first set of questionnaires prior to the summer break 2011.

What are the benefits for my school?

Research has found that secondary school staff, commonly express concerns about their increasing role in student mental health. They report a lack of knowledge and skills, a lack of

information on appropriate sources of support and low levels of confidence in their abilities to support students who experience difficulties. The training is intended to address all of these issues. It is hoped that the systematic evaluation of the training will provide good quality evidence of the importance of supporting teaching staff. This may be useful in securing future funding for similar initiatives and increased support from mental health services. Taking part in the training would also help each school to develop their healthy school status.

Are there any risks to staff or students?

It is not predicated that participation will present any risks to the emotional or physical health of staff or students. The training and evaluation are being rigorously designed and delivered by experienced professionals. The study is part of a national project and the research will have been approved by the ethics committee at the University of Birmingham. Information sheets will be provided to the staff, students and parents of the students who are taking part two weeks prior to the training to ensure they are fully informed about the process before they give consent. Students and parents can chose to opt out of the study if they wish. Debriefing sheets will also be provided to ensure that staff and students can access support should any personal issues be raised.

What do I need to do if I wish for my school to take part?

It is expected that the training will be over-subscribed. In order to ensure that the benefits of the training are maximized and that as many staff as possible can participate, interested schools will be allocated to a shortlist. They will then be selected on a number of criteria including the ability of the school to facilitate and support the training and the number of staff they could encourage to attend. I am currently meeting with short-listed schools to discuss

these factors. Should you wish to arrange such a meeting or have any further questions please do not hesitate to contact me on XXXXXXXXXX or XXXXXXXXXX

Kind regards,

Gemma Jones

Trainee Clinical Psychologist

STAFF INFORMATION SHEET

Sir/Madam,

As you may be aware, your school has agreed to take part in a 2.5 hour staff training session on student mental health. This training will be delivered on the 26th of April 2011 by the CLAHRC project (Birmingham) and in collaboration with The National Healthy Schools Programme. CLAHRC is a government funded initiative established to promote the emotional health and wellbeing of young people in Birmingham.

You are being invited to participate in research to evaluate the CLAHRC training. Participation will involve you completing a short questionnaire before and after the training and at three months follow up. We are also looking for volunteers to take part in an interview about the training. Interviews will be tape recorded and the information collected will be transcribed and analysed.

The data collected will be anonymous and coded and will remain confidential to the research team. Data and contact details will be kept on password protected data sticks and in secure cabinets to ensure confidentiality at all times. Direct quotes from the interviews may be published in the write up of the final thesis. Should you decide to take part, you will have the right to withdraw from the research at any time without consequence. You will be free to withdraw your data from the study prior to the write up and before the 19th of December 2011.

The findings of the research will be fed back to the schools once the write up is complete. If you have any questions relating to the research or would like to discuss it at any point in the process, please feel free to contact me on the details below.

Yours faithfully

Gemma Jones

Trainee Clinical Psychologist

Tel: XXXXXXXXX

Email: XXXXXXXXX

STAFF TRAINING ON STUDENT EMOTIONAL HEALTH AND WELL-BEING

STUDENT INFORMATION SHEET

Your school is taking part in a project to train teaching staff about the emotional and mental health of young people. This is part of a bigger project to improve the health and wellbeing of young people across Birmingham. We would like your help to explore the impact and effects of this training. Can you help?

If I get involved, what will I be asked to do?

- In your form groups you will be asked to complete a short questionnaire. This will ask you about the information that staff give you about emotional and mental health. The questionnaire should take no more than 10 minutes and will be given to the whole class at the same time.

- About 3 months later, after the staffs have completed their training, you will be asked to complete the same questionnaire again so we can see if there have been any changes.

- The answers that you give will be kept private and confidential (this means we will not show your questionnaires to your friends, parents, teachers or anyone outside the research team). Your questionnaires will be kept safe and secure.

Do I have to take part?

- No. It is for you and your parents to decide if you wish to take part. Your parents/carer will have received a letter in the post about the research and will need to agree that they are happy for you to take part- you may want to talk with them about this . If you decide to take part, you can change your mind at any time during the research without giving a reason. If after you have completed the questionnaire you decide that you do not want it to be used in the research, you need to tell your teacher this. You would need to do this within 2 weeks of us visiting your school.

Who will see my answers on the questionnaires?

- Only researchers from the University of Birmingham will see your answers – no one from school will know what you have written. You will hand your questionnaire to the researcher who will put it in an envelope.

- The things you write down will stay private and confidential; this means we will not you're your parents/carers or teachers. This is unless we are worried about the safety of you or someone else.

If I have questions or want to speak to someone, where can I go?

- If you have any questions please talk to your teacher, (school to complete) and/or your parent or carer.

- You could also speak to the researcher, who will be happy to help – Gemma Jones XXXXXXXXXXXX or on XXXXXXXXXXX

**STAFF TRAINING IN STUDENT EMOTIONAL
HEALTH AND WELL-BEING
INFORMATION SHEET FOR PARENTS/GUARDIANS**

Dear Sir/Madam,

Your child's school has chosen to take part in a project to provide training to school staff on student emotional health and well-being. The training will be provided by mental health professionals from CLAHRC (The Collaboration for Leadership in Applied Health Research). CLAHRC are a government-funded project established to promote the emotional health and wellbeing of young people in Birmingham. We wish to invite your child to take part in this project by helping us to evaluate the training.

Eight secondary schools in Birmingham will undertake the training. Researchers from the University of Birmingham will examine the impact of this training upon the knowledge, attitudes and types of help that staff provide to students who are experiencing difficulties. Previous research has suggested that similar training can lead to better understanding about the emotional and mental health difficulties that students may experience and the types of support that could be helpful. Similar training has been shown to improve the confidence levels of school staff in supporting students when it is needed. By participating in our research, your child will help us to learn more about the effects of the training on the levels of information and support that students receive from staff regarding emotional and mental health.

What will the study involve?

- Your child will be asked to complete a brief questionnaire on two separate occasions. This will be done as part of their usual lessons.

- The questionnaire will ask your child about the kinds of support and information they have received from staff about emotional and mental health in the previous month. They will be asked to complete this questionnaire before the training takes place and then again a month afterwards. It should take 10 minutes to complete.

- If your child does take part, their responses will be kept confidential to the researchers – school will not see the results for individual children.

Who can I contact if I have any questions about the study?

- The school's co-ordinator for the staff training – Mrs/Mr (Each school to complete), Tel: XXXXXXXX

- XXXXXXXXX, Trainee Clinical Psychologist, University of Birmingham, Tel: XXXXXXXXX

- XXXXXXXXX, Project Manager, CLAHRC project: Tel: XXXXXXXXXX

Please discuss this research with your child. If you and they agree that they would like to participate then no further action is required. Should you wish that your child does __NOT__ participate, please complete the attached form and return it to the school office :

Student's Name: _____

Neither I or my child does not want to take part in the research project *(Please tick)*_____
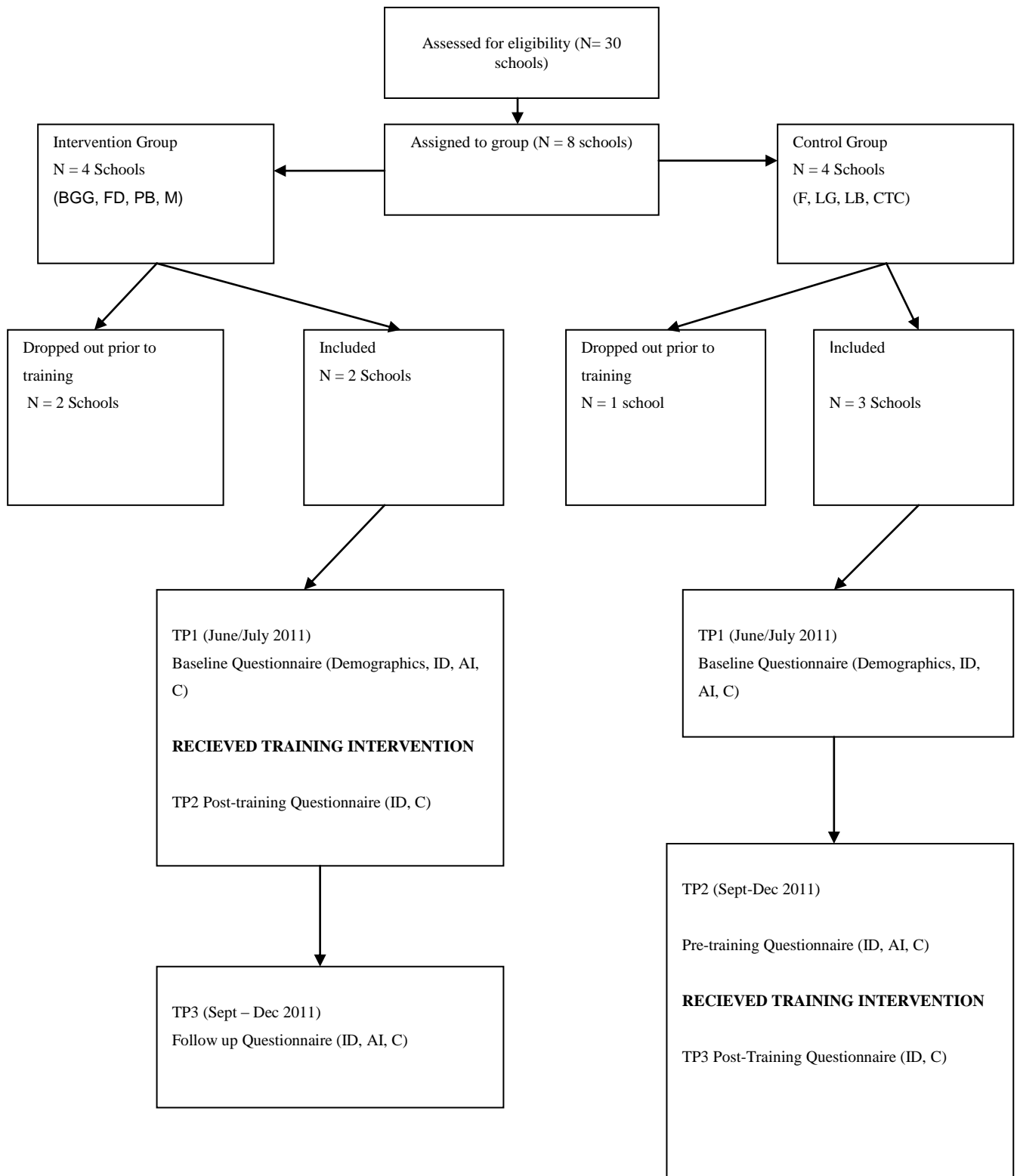
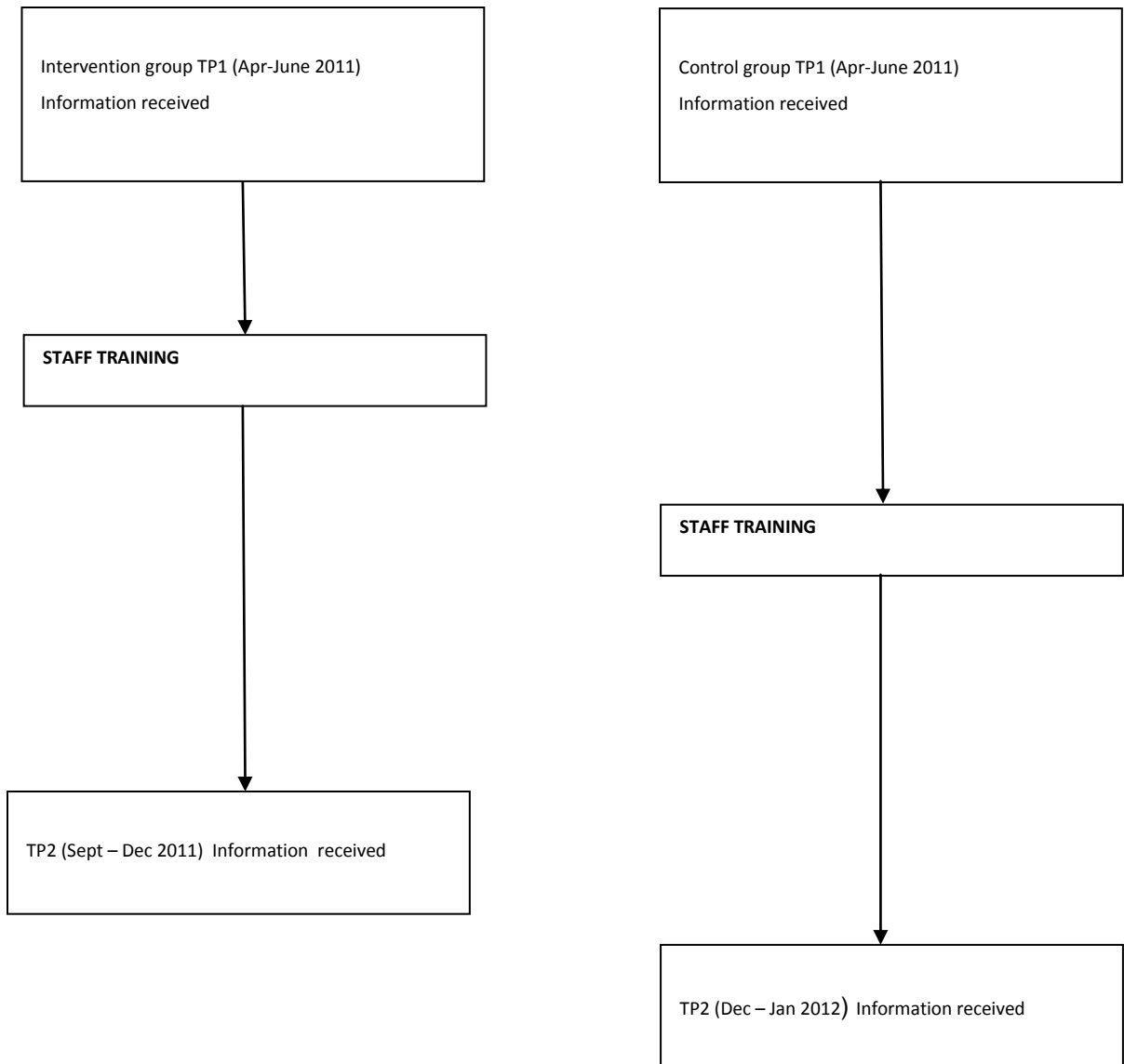**Parent's/Guardian's Name:** _____

Signed:_____

Please return this slip to the school office. Thank You.

Diagram to show staff flow through training and measures completed (ID=Identification of depression, AI=Accessing information, C=Confidence)

```
                    ┌──────────────────────────┐
                    │ Assessed for eligibility  │
                    │ (N= 30 schools)           │
                    └─────────────┬────────────┘
                                  │
┌────────────────────┐  ┌─────────────────────────┐  ┌────────────────────┐
│ Intervention Group │◄─│ Assigned to group       │─►│ Control Group      │
│ N = 4 Schools      │  │ (N = 8 schools)         │  │ N = 4 Schools      │
│ (BGG, FD, PB, M)   │  └─────────────────────────┘  │ (F, LG, LB, CTC)   │
└─────┬────────┬─────┘                                └─────┬────────┬─────┘
```

Dropped out prior to training N = 2 Schools	Included N = 2 Schools	Dropped out prior to training N = 1 school	Included N = 3 Schools

TP1 (June/July 2011)

Baseline Questionnaire (Demographics, ID, AI, C)

RECIEVED TRAINING INTERVENTION

TP2 Post-training Questionnaire (ID, C)

TP3 (Sept – Dec 2011)

Follow up Questionnaire (ID, AI, C)

TP1 (June/July 2011)

Baseline Questionnaire (Demographics, ID, AI, C)

TP2 (Sept-Dec 2011)

Pre-training Questionnaire (ID, AI, C)

RECIEVED TRAINING INTERVENTION

TP3 Post-Training Questionnaire (ID, C)

APPENDIX 7:
DIAGRAMS TO SHOW STUDENT FLOW AND MEASURES COMPLETED

Intervention group TP1 (Apr-June 2011)

Information received

↓

STAFF TRAINING

↓

TP2 (Sept – Dec 2011) Information received

Control group TP1 (Apr-June 2011)

Information received

↓

STAFF TRAINING

↓

TP2 (Dec – Jan 2012) Information received

APPENDIX 8:

PARTICIPANT CONSENT FORMS

STAFF CONSENT FORM

Study Number & Title: An exploratory study of staff training for the promotion of

emotional wellbeing in schools.

Participant Name: _____

Participant Identification Number:_____

Researcher: **Gemma Jones**

Please initial box

1. I confirm that I have understood the information sheet dated 22nd of March 2011
    (version 1) for the above study. I have had the opportunity to consider the
    information, ask questions and have had these answered satisfactorily.

2. I understand that my participation is voluntary and that I am free to withdraw at any
    time during the research without giving any reason. I can decide to withdraw my
    data from the study at any point before December 2011.

3. I understand that the data collected during this study will be looked at by the
    research team at the University of Birmingham to ensure that the analysis is a fair
    and reasonable representation of the data.

4. I understand that if I participate in the interview stage of the study, direct quotes may be published in the write- up although my name will not be attributed to any such quotes and I will not be identifiable by my comments.

5. I agree to take part in the questionnaire section of the above study.

6. I agree to take part in the interview section of the study.

....
Name of participant   Date   Signature

....
Name of researcher   Date   Signature

TEACHER TRAINING IN EMOTIONAL HEALTH AND WELLBEING STUDY

ASSENT SHEET

This study is designed to get your views on how teaching staff support the emotional and mental well-being of students. Your help is very much appreciated, thank you for taking part!

There are three important things to remember about taking part in this research:

1. You do not have to answer the question. You are free to stop at any time. You can delete or change your answers.

2. Your questionnaire is private and confidential. This means questionnaires will not be shown to anyone other than the researchers. No one from school or your family will see your questionnaire.

3. There are no right or wrong answers. We just want to know your views and opinions. Please try to be as honest as you can.

Please tick if true

I have read the information letter that I was given and I agree to

take part in the study.

Please print your name:_____

Signature: _____   **Date:**_____

APPENDIX 9:
PARTICIPANT DEBRIEF FORMS

STAFF DEBRIEF FORM

Thank you for participating in this research study, your time is very much appreciated.

During this training you have received information on student mental health, heard a young person talk about their experiences and had a chance to discuss some ideas for supporting students and accessing youth mental health services.   We hope it has been helpful.

As explained previously, you can chose to withdraw your data from the study any time before the 19th of December 2011. You should do this by contacting any of the researchers below. Should you have further questions about any aspect of the research, please feel free to get in touch.

We appreciate that talking about mental health can raise personal issues for some people. Should this be the case and you wish to access support for your own emotional health and wellbeing, you may wish to contact your G.P to discuss this further. In addition, the contacts below may be useful.

MIND: A leading mental health charity for England and Wales, MIND provide high quality information and advice about mental health. The MindInfoline is open Monday – Friday 9am-5pm.

TEL: 08457 660163   Email: mind.org.uk

The Samaritans: A nationwide charity which offers emotional support 24 hours a day to people experiencing distress. They can be accessed either by phone, email or face to face.

Tel: 08457 909090   Email:

SANEline: This is a national, out of hours telephone helpline offering emotional support and information for people affected by mental health problems. Open 6pm – 11pm everyday.

Tel: 0845 7678000   Email: SANE.org.uk

Yours Sincerely,

Gemma Jones	Gary Law	Paul Patterson
Trainee Clinical Psychologist	Clinical Psychologist	Project Manager
Tel: XXXXXXXX	Tel: XXXXXXXXX	Tel: XXXXXXXXXX
XXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXXXX

Dear Student,

Thank you for taking part! If you have any questions about the research, please speak to your form tutor or the researcher.

If you are worried about anything that the questions have asked you or are concerned about how you, a family member or friend may feel (e.g., very unhappy, anxious) it is really important that you talk to someone. This might be your parents or carers, a member of school staff or even your family doctor (GP). There are many different people and places that can provide you with help and support.

School

Your form tutor, head of year or other trusted adult can support.

Young Minds

Young Minds (www.youngminds.org.uk) is the UK's leading charity committed to improving the emotional wellbeing and mental health of children and young people. The website contains lots of useful information and helpful advice for children, young people and parents.

'Where's Your Head At'

A website focusing on mental health information for young people (http://www.wheres-your-head-at.org).   The website shows where to seek help from and what you can do to help yourself.

ChildLine

Childline (www.childline.org.uk) offers information and advice for children and young people who may feel worried, sad, unhappy or stressed. You can call ChildLine (**0800 1111**) at any time – calls are free and confidential. By visiting the website, you can also chat to a ChildLine counsellor online, send an email to ChildLine, or visit the message boards.

Get Connected

Get connected (www.getconnected.org.uk) is a confidential helpline providing support and information for young people. They can help with a range of problems and can offer anything from a listening ear to help finding somewhere safe to stay the night. Their number is **0808 808 4994.** This number is free to call and open 1pm-11pm everyday. They can also offer support by email or webchat.

Fidelity checklist for staff training

CONTENT	Tick if covered
House Rules	
Section 1- Mental Health, is it relevant to me?	
Importance for students (incl. age of onset graph)	
Importance for teachers	
Good stress -v- bad stress (incl. stress test)	
Stress and mental health – concept of "No health without mental"	
Section 2- What is mental health?	
Large group exercise : Mental illness -v- mental health	
Small group exercise – the effect of a missed nights sleep	
Neurosis -v- Psychosis	
Section 3-Working with a crisis	
Small group discussions on student with depression vignette – Kyra.	
Feedback and further large group discussion on types of crisis faced by teachers	
CLEAR approach to response	
Section 4- What are common mental health problems?	
Depression:	
Group exercise – the symptoms of depression	
Film clip of youthspace (service user contact)	
Psychosis:	
Group exercise – the symptoms of psychosis	
The importance of Early Detection in psychosis (DUP etc)	
Exercise on visual hallucinations	
Film clips – The Soloist & A beautiful mind	
Section 5- Stigma & Myths	
Presentation of 10 myths and facts	
Section 6 - Local resources:	
Show local sources of support and information.	
Discuss Youthspace & show website address	

STAFF QUESTIONNAIRE

Staff Identification Number:

Pre-training: ☐

Post training ☐
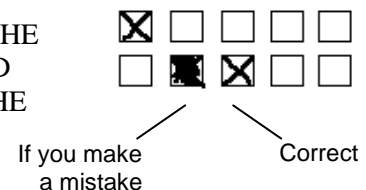
3 month follow-up: ☐

STAFF QUESTIONNAIRE

Instructions

1. Please answer all questions as honestly as you can. There are **no right or wrong answers**.

2. Your responses will be kept confidential: please **don't write your name** on the questionnaire.

3. You will be given the same number each time you complete this questionnaire so that your responses can be tracked over time. Names and identifying numbers will be stored securely and separately from questionnaires, according to Ethics Committee regulations. Results from the study will not be reported in any way which allows identification of individuals or schools.

4. Give **one** answer for each question, unless requested otherwise.

5. This questionnaire deals with complex issues and you may find that no response is present which fits your answer exactly. Where this is the case, please select the response that fits best.

USING **BLUE OR BLACK PEN**, PLACE A CLEAR 'X' INSIDE THE BOX. IF YOU MAKE A MISTAKE, FILL THE ENTIRE BOX, AND MARK THE CORRECT BOX AS SEEN IN THE EXAMPLE TO THE RIGHT.

☒ ☐ ☐ ☐ ☐
☐ ▇ ☒ ☐ ☐

If you make a mistake   Correct

Section One: Demographics

1.1   **What is your main role in the school?**

☐   Head of department   ☐   Classroom teacher   ☐   Administration   ☐   Support/Pastoral Care

☐   Other: please specify

1.2   **How long have you been working in schools?**

☐   Less than 1 year   ☐   1-2 years   ☐   3-5 years   ☐   6-10 years

☐   11-15 years   ☐   16-20 years   ☐   More than 20 years

1.3   **How long have you been working in YOUR CURRENT SCHOOL?**

☐   Less than 1 year   ☐   1-2 years   ☐   3-5 years   ☐   6-10 years

☐   11-15 years   ☐   16-20 years   ☐   More than 20 years

1.4   **Which year group are you mainly working with this year?** *(Mark all that apply)*

☐   Year 7   ☐   Year 8   ☐   Year 9   ☐   Year 10

☐   Year 11   ☐   Year 12   ☐   All

1.5   **If you are a teacher, which subjects do you teach?** *(Mark all that apply)*

☐   The Arts   ☐   English   ☐   Technology   ☐   Language other than English

☐   Studies of Society & Environment   ☐   Science   ☐   Health & Physical Education   ☐   Mathematics

☐   Not Applicable

1.6   **Which category best describes your ethnicity?**

☐   White British   ☐   Black Other   ☐   Mixed White & Asian   ☐   Asian-Bangladeshi

☐   Black African   ☐   Mixed White & Caribbean   ☐   Mixed-Other   ☐   Asian-Pakistani

☐   Black Caribbean   ☐   Mixed White & African   ☐   Asian-Indian   ☐   Other

1.7 Into which of the following age categories do you fall?

☐ 20-25   ☐ 25-30   ☐ 30-35   ☐ 35-40

☐ 40-45   ☐ 45-50   ☐ 50-55   ☐ 55-60

☐ 65+

1.8 Are you male or female?

☐ Male   ☐ Female

Section Two: Student issues

The following scenario is about a hypothetical student called Jake.

Jake is a 15 year-old male who has been feeling unusually sad and miserable for the last few weeks. He is tired all the time and has trouble sleeping at night. Jake doesn't feel like eating and has lost weight. He can't keep his mind on his studies and his marks have dropped. Jake often puts off making any decisions and even day-to-day tasks seem too much for him. His parents and friends are very concerned about him.

2.1 What, if anything, do you think is wrong with 'Jake'?

Section Three: Help provided

Thinking about you and your own students over the previous four weeks,...

5.1 Did you visit any websites giving information about mental health problems?

☐ Never   ☐ Once   ☐ Occasionally   ☐ Frequently

5.2 How confident did you feel in helping students with mental health problems?

☐ Not at all   ☐ A little bit   ☐ Moderately   ☐ Quite a bit   ☐ Extremely

APPENDIX 13:

STUDENT QUESTIONNAIRE

**Pre-training:** ☐

Follow up: ☐

STUDENT QUESTIONNAIRE

This questionnaire asks for information about your experiences of getting information about emotional or mental health from staff. "Emotional and mental health" means any worries or confusion you have had about yourself, your friends, school, home life or things that have happened that have made you feel stressed out or upset (the kinds of things that are discussed in PSHE lessons). By "staff" we mean teachers, dinner ladies, SENCO's Mentors, classroom assistants and admin staff. If you have any questions about this, please ask your teacher.

Instructions

6. Please answer the questions as honestly as you can. There are **no right or wrong answers**.

7. Your questionnaire will not be shown to anyone else at school: please **don't write your name** on the questionnaire.

8. Your questionnaire will be stored safely. The results from the study will not be reported in any way which means others will know what answers you have given.

9. Please give **one** answer and if there is no answer that fits exactly, please choose the one which fits best.

USING **BLUE OR BLACK PEN**, PLACE A CLEAR 'X' INSIDE THE BOX. IF YOU MAKE A MISTAKE, FILL THE ENTIRE BOX, AND MARK THE CORRECT BOX AS SEEN IN THE EXAMPLE TO THE RIGHT.

☒ ☐ ☐ ☐ ☐
☐ ■ ☒ ☐ ☐

If you make   Correct
a mistake
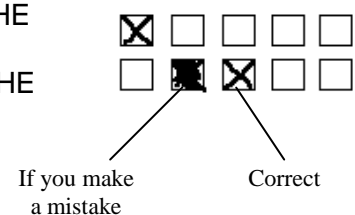
Your experiences of getting help

1. Over the past month, have you received any information about emotional or mental health

   from your teachers?

   ☐   No   ☐   Yes

Thank you for your help!

APPENDIX 14:
DATA FOR OUTCOMES

Intervention effect for depression recognition

PREPOST*grouptype; Unweighted Means (Do not panic SPSS school dataset original) Current effect: F(1, 171)=5.5177, p=.01997 Effective hypothesis decomposition						
grouptype	PREPOST	DV_1 - Mean	DV_1 - Std.Err.	DV_1 - -95.00%	DV_1 - +95.00%	N
1 Control Group	Diagnosis1	0.673077	0.046882	0.580535	0.765619	104
2 Control Group	Diagnosis2	0.740385	0.040061	0.661307	0.819462	104
3 Intervention Group	Diagnosis1	0.623188	0.057557	0.509575	0.736802	69
4 Intervention Group	Diagnosis2	0.855072	0.049183	0.757989	0.952156	69

Repeated Measures Analysis of Variance (Do not panic SPSS school dataset original) Sigma-restricted parameterization Effective hypothesis decomposition					
	SS	Degr. of - Freedom	MS	F	p
Intercept	173.4281	1	173.4281	590.5344	0.000000
grouptype	0.0871	1	0.0871	0.2965	0.586774
Error	50.2193	171	0.2937		
PREPOST	1.8565	1	1.8565	18.2356	0.000032
PREPOST*grouptype	0.5617	1	0.5617	5.5177	0.019968
Error	17.4094	171	0.1018		

Tukey HSD test; variable DV_1 (Do not panic SPSS school dataset original) Approximate Probabilities for Post Hoc Tests Error: Between; Within; Pooled MSE = .19774, df = 276.84					
grouptype	PREPOST	{1} - .67308	{2} - .74038	{3} - .62319	{4} - .85507
1 Control Group	Diagnosis1		0.424715	0.888142	0.041770
2 Control Group	Diagnosis2	0.424715		0.325002	0.344506
3 Intervention Group	Diagnosis1	0.888142	0.325002		0.000121
4 Intervention Group	Diagnosis2	0.041770	0.344506	0.000121	

Intervention effect for Confidence

	grouptype	PREPOST	DV_1 - Mean	DV_1 - Std.Err.	DV_1 - -95.00%	DV_1 - +95.00%	N
PREPOST*grouptype; Unweighted Means (Do not panic SPSS school dataset original) Current effect: F(1, 190)=14.885, p=.00016 Effective hypothesis decomposition
1	Control Group	Cofidence1	2.156863	0.102760	1.954166	2.359560	102
2	Control Group	Confidence2	2.352941	0.104034	2.147732	2.558150	102
3	Intervention Group	Cofidence1	2.377778	0.109396	2.161990	2.593565	90
4	Intervention Group	Confidence2	3.077778	0.110752	2.859316	3.296240	90

	SS	Degr. of - Freedom	MS	F	p
Repeated Measures Analysis of Variance (Do not panic SPSS school dataset original) Sigma-restricted parameterization Effective hypothesis decomposition
Intercept	2374.091	1	2374.091	1338.881	0.000000
grouptype	21.383	1	21.383	12.059	0.000638
Error	336.906	190	1.773		
PREPOST	19.196	1	19.196	47.067	0.000000
PREPOST*grouptype	6.071	1	6.071	14.885	0.000156
Error	77.489	190	0.408		

	grouptype	PREPOST	{1} - 2.1569	{2} - 2.3529	{3} - 2.3778	{4} - 3.0778
Tukey HSD test; variable DV_1 (Do not panic SPSS school dataset original) Approximate Probabilities for Post Hoc Tests Error: Between; Within; Pooled MSE = 1.0905, df = 273.01
1	Control Group	Cofidence1		0.125223	0.460183	0.000008
2	Control Group	Confidence2	0.125223		0.998419	0.000017
3	Intervention Group	Cofidence1	0.460183	0.998419		0.000008
4	Intervention Group	Confidence2	0.000008	0.000017	0.000008	

Accessing mental health information

	Mean - Group 1	Mean - Group 2	t-value	df	p	Valid N - Group 1	Valid N - Group 2	Std.Dev. - Group 1	Std.Dev. - Group 2	F-ratio - Variances	p - Variances
T-test for Independent Samples (Do not panic SPSS school dataset original) Note: Variables were treated as independent samples											
ControlMent vs. IntMent	-0.050000	0.056338	-0.851533	189	0.395551	120	71	0.776222	0.924080	1.417251	0.094546

NOTE: For the control group the dependent variable is time two minus time one. For the intervention group the dependent variable is time three minus time one

Provision of mental health information to students

	Mean - Pre-test	Mean - Post-test	t-value	df	p	Valid N - Pre-test	Valid N - Post-test	Std.Dev. - Pre-test	Std.Dev. - Post-test	F-ratio - Variances	p - Variances
T-tests; Grouping: Datapoint: Datapoint (SPSS Student Data 24.04.2012) Group 1: Pre-test Group 2: Post-test											
RMHI2	0.406957	0.298651	3.757498	1092	0.000181	575	519	0.491694	0.458108	1.152005	0.099729