

Impact of counselling provision in primary schools on child and adolescent mental health service referral rates: a longitudinal observational cohort study

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Background: In the United Kingdom, schools play an increasingly important role in supporting young peoples' mental health. While there is a growing evidence base to support the effectiveness of school-based interventions, less is known about how these provisions impact on local Child and Adolescent Mental Health Service (CAMHS) referral rates. There is a concern that an increase in school-based provision might lead to an increase in CAMHS referrals and overwhelm services. We aimed to examine the longitudinal association between Place2Be counselling provision in primary schools on CAMHS referral rates in South London. **Method:** This was a retrospective cohort study using linked data from the National Pupil Database (NPD) and CAMHS referrals to the South London and Maudsley's NHS Foundation Trust (SLaM) identified through the Clinical Record Interactive Search (CRIS) tool. The cohort included a total of 285 state-maintained primary schools in four London boroughs for the academic years of 2007–2012. During the study period, 23 of these schools received school-based mental health provision from Place2Be. The primary outcome was the incident rate ratio (IRR) of school-level accepted CAMHS referrals in 2012/13 in schools with, or without, Place2Be provision. **Results:** There was no significant association between elevated rates of CAMHS referral and Place2Be provision, even after comprehensive adjustment for school-level and pupil characteristics (IRR 0.91 (0.67–1.23)). School-level characteristics, including higher proportion of white-British pupils (IRR 1.009 (1.002–1.02)), medical staff ratio (IRR 6.49 (2.05–20.6)) and poorer Ofsted school inspection ratings (e.g. IRR 1.58 (1.06–2.34) for 'Requires Improvement' vs. 'Outstanding') were associated with increased CAMHS referral rates. **Conclusions:** Place2Be provision did not result in increased specialist mental health referrals; however, other school-level characteristics did. Future research should investigate pupils' Place2Be clinical outcomes, as well the outcomes of individuals referred to CAMHS to better understand which needs are being met by which services.

Key Practitioner Message

- Schools play an increasingly important role in supporting young peoples' mental health, and there is growing evidence in the effectiveness of school-based mental health provision. Yet some people are concerned that increasing mental health support in schools may lead to a surge in referrals to specialist Child and Adolescent Mental Health Services (CAMHS) – overwhelming services.
- We found that having counselling provision in schools did not increase referral rates into CAMHS. In combination with the known effectiveness of school-based counselling, this generates evidence that having a school-based counselling service does not lead to a flood of referrals to CAMHS but is likely to be doing well at treating mental health challenges within schools.
- Schools with a higher proportion of white-British students were associated with higher referral rates to CAMHS, indicative of an under-referral issue among young people from ethnic minority backgrounds. A review of the counselling service reported that while white-Irish and 'other' white, Asian and British-Asian students were less likely to attend counselling, black, black-British and young people from mixed or 'other' ethnic groups engaged well. School-based mental health provision might offer an alternative means of support for young people likely to face systemic barriers in accessing health care through clinical referrals.

Keywords: Mental health; counselling; school; longitudinal studies; screening

Introduction

Mental health problems in young people are common, with approximately 1 in 6 children and adolescents in the United Kingdom presenting with a diagnosable disorder and approximately 20% experiencing more than one (NHS Digital, 2020). Prevention and early intervention strategies for at-risk young people are vital (Davies, Lemer, Strelitz, & Weil, 2013). Well timed and informed support is linked to better wellbeing, including higher functioning and academic success, less psychological distress, and better long-term health outcomes and engagement with services (Stephan, Sugai, Lever, & Connors, 2015). The National Health Service (NHS) Child and Adolescent Mental Health Services (CAMHS) are required to provide evidence-based interventions for children with a range of emotional, behavioural and concentration difficulties that meet the clinical threshold for support (Salmon & Kirby, 2008). However, based on prevalence estimates, only a quarter of young people in the United Kingdom experiencing mental health difficulties are in contact with CAMHS, and only 30% receiving timely referral (Care Quality Commission, 2017; NHS Benchmarking Network, 2018; Rothl & Leavey, 2006).

Barriers to accessing specialist care are multifaceted and may include limited mental health knowledge and literacy, stigma and inaccessible mental health services (Schnyder, Panczak, Groth, & Schultze-Lutter, 2017). Families at heightened risk of having a child with mental health difficulties, such as those living in poverty or experiencing discrimination, are also more likely to face barriers in accessing support (Department of Health, 2015). A huge amount of mental health related additional contact occurs within schools, which are associated with significant costs to the education sector (Newlove-Delgado, Moore, Ukoumunne, Stein, & Ford, 2015; Snell et al., 2013). Collaboration between mental health services and schools is important in minimising challenges for vulnerable families and young people accessing care (Radez et al., 2020). Educational settings are well placed to promote help-seeking behaviour by reducing stigma and increasing mental health knowledge (Koller & Bertel, 2006). Furthermore, whole-school approaches can support individuals to be mentally healthy (Jonathan, 2019) and aid the identification of young people in need of further specialist support (Levitt, Saka, Hunter Romanelli, & Hoagwood, 2007).

In recent years, there has been increasing pressure for schools and colleges to take an active stance in supporting students' emotional well-being and resilience (Warwick, Maxwell, Statham, Aggleton, & Simon, 2008), with the government Green Paper setting out plans for inter-agency collaboration between schools and public health services (Department of Health & Department for Education, 2017) While there has been widespread attempt by schools to identify mental health need and promote positive wellbeing (Department of Health & Social Care, 2018), approaches, initiatives and resources vary as evidenced by considerable variation of rates of mental health care utilisation by schools (Downs, Gilbert, Hayes, Hotopf, & Ford, 2017). There are concerns around school staff's capacity to take on additional pastoral duties given their workload, and in the suitability of training and support (Ekornes, 2017). Teachers, school

nurses and special educational needs coordinators (SENCOs) receive differing professional training in mental health, leaving many feeling underprepared to support student mental health issues within schools (Frauenholtz, Mendenhall, & Moon, 2017). Mental health awareness and literacy programmes for educators have been shown to create positive change, improving school attitudes and perceived competency in managing mental health challenges (Cortina et al., 2019).

The UK-based charity Place2Be (England and Wales (1040756) and Scotland (SC038649)) works with students attending primary and secondary schools to prevent life-long mental illness through building resilience and promoting mental health awareness. Based within 390 schools, the Place2Be charity reaches over 360,000 children with relatively high complexity of need (i.e. 47% receiving free school meals, 8% subject to a child protection plan, 6% looked after children and 26% with Special Educational Needs) (Place2Be, 2020b). Each school has a dedicated Place2Be mental health professional who is an integral part of the school team. They work closely with pupils, families and staff to improve emotional wellbeing and mental health for the whole school. Individual and group counselling sessions for students are available and conducted by Place2Be staff, including trained and trainee counsellors, and explore key components of relationships, self-awareness, play and change (Lee, Tiley, & White, 2009). Place2Be school-based counselling has been shown to significantly improve pupils' social and emotional wellness, as rated by both school staff and parents (Lee et al., 2009). Young people accessing Place2Be counselling are shown to present with multiple, and often severe, difficulties, including generalised anxiety, low self-esteem, family tensions and mood swings (Toth et al., 2020).

While some students may need CAMHS input, others may not meet the clinical thresholds, or face barriers in accessing specialist care (Ford & Parker, 2016). As a core component of Place2Be is embedding a mental health professional to support students within schools, referrals to CAMHS are made where appropriate. School-based programmes that collaborate with CAMHS and clinical workers have been shown to improve students' health outcomes, by sharing good practice and building professional relationships (Kutcher, Wei, McLuckie, & Bullock, 2013). The benefits to pupils are supported by other school counselling initiatives, which have demonstrated reductions in psychological distress in primary school aged children (Daniunaite, Cooper, & Forster, 2015). The effectiveness of school-based counselling has also been supported in controlled trials, for example as shown in the ETHOS study (Cooper et al., 2021).

Placing emphasis on school-based interventions may likely alleviate pressure on CAMHS, by managing mild-moderate mental health challenges within schools (Hudson, 2019). However, conversely, there are concerns that such services will increase clinical burden, by identifying more young people in need of specialist support (Wolpert, Deighton, & Patalay, 2011). While there is a strong evidence-base for interventions to support young peoples' social-emotional and academic outcomes, and ongoing research to implement these programmes into school settings (Fazel, Hoagwood, Stephan, & Ford,

2014), there is less known about the impact these initiatives have on healthcare utilisation.

Aims

This study aimed to examine (a) the longitudinal association between school-based counselling and CAMHS referral rates and (b) associations between school-level characteristics on CAMHS referral rates.

Method

Study design and sample

This historical cohort study utilised an existing National Institute for Health Research (NIHR) linkage between longitudinal education and health administrative data. The South London and Maudsley NHS Foundation Trust Biomedical Research Centre (SLaM BRC) Clinical Records Interactive Search (CRIS) tool was used to extract information on secondary mental health services, including CAMHS, in four culturally and economically diverse London boroughs (Southwark, Lambeth, Lewisham and Croydon) between the years of 2007 and 2013. SLaM CAMHS provide multidisciplinary community and specialist mental health services to assess and treat childhood mental health disorders. The Department for Education (DfE) National Pupil Database (NPD) contains information on routinely collected educational records of all pupils in primary and secondary state schools, as well as school-level characteristics. The NPD records cover 91% of school age children within the SLaM catchment area, with the linked SLaM CAMHS-NPD data set containing 29,278 mental health and education matched records between 2007 and 2013 (Downs et al., 2017, 2019; Perera et al., 2016).

All primary school aged children and adolescents who were identified via the NPD as being a resident within SLaM boroughs during the academic years 2007–2012 (using term dates) were included. Individual data were aggregated to school level for each academic year, permitting an evaluation of population dominators for school-level incident rates for referrals. A total of 285 schools were identified within the 6-year period.

Outcome

The primary outcome was the school-level rate per 1000 children of first accepted referrals to CAMHS in the academic year of 2012/13. The rate was defined as the mean number of pupils per school accepted to CAMHS in 2012/13 divided by the total number of pupils (in thousands) per school for the same year. Each referral was allocated to a school based on where the pupil attended at the time of the referral (via linked CAMHS-NPD record). Only the first referral for each individual that recorded during the study period was analysed. Referrals occurring outside the study period were excluded. All special and alternative provision schools, pupil referral units, small schools (<60 pupils) secondary schools, and nurseries were excluded. This was due to type of education setting (e.g. as the counselling service does not operate within specialist schooling or nurseries) and small sample sizes (secondary schools). In addition, individuals attending a school that was out of the SLaM catchment area were excluded.

Exposure

Schools were categorised as having counselling provision if the service was in place at least one academic year over the study period as determined by the CRIS-NPD extract (i.e. academic years 2007/08–2012/13). School-specific dates of service activity were provided by the counselling charity (Place2Be).

Covariates

School-level characteristics during the academic year 2007/8 were derived from the NPD via a Collections Online Learners, Education, Children and Teachers (COLLECT) tool and explored as covariates (Department for Education, 2016). Office for

Standards in Education (Ofsted) ratings associated with inspections undertaken in the academic year 2008/9 were obtained from school-level data published by the Department for Education (DfE) and linked to the data set via school unique reference number (Ofsted, 2008). In the UK, Ofsted inspect and regulate services that care and/or provide education for children and young people, awarding ratings of outstanding, good, requires improvement, or requires special measures. We present data on two measures of neighbourhood deprivation (both grouped in quartiles): (a) Income Deprivation Affecting Children Index (IDACI) and (b) Index of Multiple Deprivation (IMD) score, which are reflective of the percentage of children who live in low-income households (Penney, 2019). The percentage of students receiving free school meals was used as a proxy for school-population deprivation. Eligibility for free school meals is based on family income as assessed by local authority or school administration. Pupil characteristics in 2007/8 were aggregated at school level and included the percentage of pupils that were; of white-British ethnicity, female, had a SEND statement, meeting expected proficiency at Key Stage 2 (KS2, year 6, age 11) English and mathematics, and the overall percentage absence rate. The size of school was determined by the number of full-time (>20 hr per week) students registered. Information on staff was explored, including headcount of qualified teaching staff, pupil-teacher ratio, number of full-time equivalent teaching assistants (TAs), higher-level TAs (HLTAs), special educational needs coordinators (SENCO), staff categorised as medical (i.e. school nurses) and nonqualified teaching staff. In addition, the number of full-time equivalent minority ethnic pupil support staff and bilingual support assistants per school were calculated and used. The accepted CAMHS referral rate in 2007/8 was investigated as a predictor of the outcome, in order to adjust for unmeasured differences in pupil and school-level characteristics that might influence CAMHS referral rates in 2012/13.

Data analysis

The analysis was conducted on STATA 14.1 for Windows (Stata-Corp, 2015). Descriptive statistics are presented on the school-level characteristics, including the annual rate of first accepted CAMHS referrals for each year in the study period. Poisson regression was used to calculate incidence rate ratios (IRR) for CAMHS accepted referral rates in 2012/13 in schools with counselling, versus all other schools. We report 95% confidence intervals (CI) for the IRRs that were calculated using Huber-White sandwich estimates of variance. We examined the effect of adding counselling status into a model that included all other school-level characteristics as covariates, including prior CAMHS referral rates in 2007/8. This approach was employed in order to better adjust for differences in school-level characteristics that are likely to be associated with CAMHS referrals. To avoid issues of collinearity we included only one area-level indicator of deprivation (quartile of IMD) in the multivariable model. The impact of removing prior CAMHS referral rates in 2007/8 from the model was investigated as a sensitivity analysis.

Ethical approval

Approval for the linkage of SLaM CAMHS and NPD data for secondary analysis was granted by the Oxfordshire Research Ethics Committee C (08/H0606/71 + 5).

Results

A total of 285 primary schools were identified within the 6-year period, of which 23 (8%) received the counselling provision. Almost all schools were mixed gender (schools with counselling provision; 92% $n = 260/262$, other schools; 100% $n = 23/23$, $p = .9$).

Descriptive statistics

Table 1 describes the mean rate of CAMHS referrals by school year for schools participating in the counselling

Table 1. Mean school size, rate and numbers of students referred to CAMHS by year for schools with and without counselling provision

Place2Be counselling	Year	Schools (n)	Students (mean)	No. students referred (mean)	Referral rate (mean per 1000 students)	Standard deviation
No	2007/08	262	310.38	4.06	12.8	8.1
	2008/09	261	311.42	3.85	12.8	7.7
	2009/10	257	319.48	3.81	12.2	7.7
	2010/11	250	327.07	3.02	9.5	6.8
	2011/12	236	335.38	2.47	8.12	6.9
	2012/13	228	349.02	2.12	6.81	5.6
Yes	2007/08	23	330.15	5.09	16	6.3
	2008/09	23	332.39	3.87	12.1	7.6
	2009/10	23	340.33	3.43	11.1	10
	2010/11	23	356.37	3.09	8.3	4.4
	2011/12	23	365.61	3.39	10.3	5.8
	2012/13	22	397.27	2.61	7.14	5.3

Table 2. Descriptive statistics of school-level characteristics and Place2Be counselling provision status

	NonPlace2Be schools		Place2Be schools		p Value
	N (mean/%)	SD	N (mean/%)	SD	
School characteristics					
Free school meals	262 (27.4)	12.8	23 (33.0)	12.0	.04
White-British	262 (28.1)	20.2	23 (25.9)	20.2	.63
Most deprived quartile (IDACI)	251 (24.7)	–	23 (26.1)	–	.10
Most deprived quartile (IMD)	251 (27.7)	–	23 (34.8)	–	.06
SEND statemented pupils	262 (1.6)	1.5	23 (2.3)	2.0	.04
Overall absence	262 (5.7)	1.4	23 (5.7)	1.3	.46
Ofsted rating (%)					
Outstanding	215 (27.4)	–	19 (36.8)	–	.62
Good	215 (65.1)	–	19 (52.6)	–	
Requires improvement	215 (6.1)	–	19 (10.5)	–	
Special measures	215 (1.4)	–	19 (0.0)	–	
Staff characteristics					
	Mean	SD	Mean	SD	
FTE Teaching assistant (TA)	262 (8.23)	7.13	23 (9.73)	8.80	.35
FTE Higher level TA	262 (0.17)	0.58	23 (0.52)	0.96	.009
FTE SEN staff	262 (1.60)	2.48	23 (2.25)	4.69	.27
FTE other ethnic support staff	262 (0.17)	0.53	23 (0.20)	0.41	.77
FTE Bilingual ethnic minority support staff	262 (0.13)	0.47	23 (0.13)	0.29	.98
FTE Nursing or medical staff	262 (0.02)	0.23	23 (0.0)	0.00	.61
Pupil-teacher Ratio	262 (20.8)	3.74	23 (19.9)	3.18	.25
Qualified teacher	262 (17.2)	6.46	23 (18.3)	6.14	.43
Nonqualified teacher	262 (0.38)	0.82	23 (0.30)	0.52	.66

FTE, Full-time equivalent; KS2, Key Stage 2; SEND, Special Educational Needs and Disability.

service and nonparticipating schools. School numbers vary year on year reflecting school closures and new schools opening. Referral rates are shown to decrease overtime in both arms, as only the first accepted clinical referral per individual is counted. The descriptive statistics for school-level characteristics in 2007/8 are presented in Table 2. Schools where the counselling service was implemented had a higher proportion of pupils eligible for free school meals (33% vs. 27%, $p = .04$), higher proportions of SEND statemented pupils (2.3% vs. 1.6%, $p = .04$) and employed more FTE HLTAs (0.52 vs. 0.17 FTE staff, $p = .009$) than schools without the provision.

Multivariable regression model

Results from the fully adjusted model are presented in Table 3. We found that more nursing and medical staff (adj IRR 6.49 (2.05–20.6), $p = .002$) and higher rates of white-British students (adj IRR = 1.009 (1.002–1.02),

$p = .008$) were associated with higher rates of CAMHS referrals. Schools with Ofsted ratings of 'Requires Improvement' (vs. those with 'Outstanding' ratings) were also associated with higher rates of referrals to CAMHS (adj IRR = 1.58 (1.06–2.34), $p = .02$). CAMHS referral rate in 2007/08 was positively correlated with referral rates in 2012/13 (adj IRR 1.02 (1.01–1.03), $p = .002$), and higher ratios of pupils to teachers (adj IRR 0.92 (0.86–0.98), $p = .008$) were associated with lower referral rates. No association was found between high level of deprivation (compared to the least deprived quartile) and referral rates (adj IRR 1.36 (0.77–1.91), $p = .08$).

After adjustment for potential confounders, we found CAMHS referral rates were not significantly associated with either school size (adj IRR = 1.001 (0.997–1.004), $p = .69$), gender balance (adj IRR = 1.003 (0.97–1.03), $p = .86$), absence rates (adj IRR = 0.99 (0.91–1.09), $p = .9$), the proportion of pupils meeting KS2 expected

Table 3. Incident rate ratios (IRRs) and 95% confidence intervals for fully adjusted models of the association between school characteristics and CAMHS referral rates in 2012/13

Characteristics	Fully adjusted analysis		
	Adj IRR	95% CI	<i>p</i> Value
School and student characteristics			
Place2Be (vs. no Place2Be)	0.91	0.67–1.23	.55
2007/8 CAMHS referral rate	1.02	1.01–1.03	.002
School size (FTE pupils)	1.001	0.997–1.004	.69
Gender balance (% girls)	1.003	0.97–1.03	.86
Free school meals (%)	1.009	0.999–1.02	.07
White-British (%)	1.009	1.002–1.02	.008
SEND statemented pupils (%)	1.01	0.94–1.09	.79
Overall absence (%)	0.99	0.91–1.09	.90
Not meeting expected proficiency KS2 English & Maths (%)	1.002	0.99–1.001	.68
IDACI Quartile			
	1 (least deprived)	Not included in fully adjusted model	
	2		
	3		
	4 (most deprived)		
IMD quartile	1 (least deprived)	Baseline	–
	2	1.03	0.72–1.46
	3	1.15	0.81–1.63
	4 (most deprived)	1.36	0.97–1.91
Ofsted rating	Outstanding	Baseline	–
	Good	0.94	0.76–1.18
	Requires improvement	1.58	1.06–2.34
	Special measures	1.39	0.63–3.05
Staff characteristics			
FTE Teaching assistant (TA)	1.00	0.99–1.02	.85
FTE higher level TA	0.94	0.80–1.10	.45
FTE SEN staff	1.000	0.97–1.03	.98
FTE other ethnic support staff	0.82	0.65–1.04	.10
FTE bilingual ethnic minority support staff	0.89	0.72–1.09	.24
FTE nursing or medical staff	6.49	2.05–20.6	.002
Pupil-teacher ratio	0.92	0.86–0.98	.008
Qualified teacher	0.99	0.93–1.05	.71
Nonqualified teacher	1.06	0.95–1.18	.29

FTE, full-time equivalent; KS2, Key Stage 2; SEND, Special Educational Needs and Disability.

level in English and Maths (adj IRR = 1.002 (0.99–1.01), $p = .68$) and proportion of pupils with SEN statement (adj IRR = 1.01 (0.94–1.09), $p = .79$).

We found bivariate associations between CAMHS referral rates and a number of school/staff characteristics (Table S1) lost significance after adjustment in fully multivariable model, these included greater school neighbourhood deprivation based on IMD quartile (adj IRR = 1.36 (0.97–1.91), $p = .08$ for the most vs. least deprived quartile) the proportion of pupils eligible for free school meals (adj IRR = 1.009 (0.999–1.02), $p = .07$), bilingual support staff (adj IRR = 0.89 (0.72–1.09), $p = .10$), ethnic minority support staff (adj IRR = 0.82 (0.65–1.04), $p = .10$). There was no evidence of an association between CAMHS referral rates in 2012/13 and Place2Be provision (adjusted IRR 0.91 (95% CI 0.67–1.23), $p = .55$) in the multivariable Poisson regression model adjusted for previous referral rates, school and staff characteristics and student demographics (see Table 3).

Sensitivity analysis

Results from the multivariable Poisson model that excluded CAMHS referral rates in 2007/8 were similar to the main analysis (Table S1). Counselling provision was not significantly associated with CAMHS referral

rates in 2012/13 (adj IRR = 0.95 (0.66–1.35), $p = .76$) and the same set of covariates were statistically significantly associated with the outcome in both the main and sensitivity analyses.

Discussion

This is one of the first UK studies to describe the association between provision of school-based counselling provision and local CAMHS referral rates. The results demonstrated no longitudinal association between counselling provision status and accepted referral rates, even after comprehensive adjustment for the school-level workforce and pupil characteristics. While there is evidence in previous literature that school-based counselling does not change mental health service use (Corrieri et al., 2014), this study also showed the relationship was not mediated by societal factors, such as level of neighbourhood deprivation. In combination with the known effectiveness of school-based counselling (Lee et al., 2009), these results suggest that the Place2Be programme is likely doing well at managing mental health challenges within schools. Moreover, the counselling provision was found in schools with higher school-level deprivation, as determined by number of pupils

receiving free school meals, and greater proportion of SEND statemented pupils, suggesting that the counselling service is reaching schools with a higher complexity of need.

We found that higher rates of medical staff and lower student-teacher ratios were associated with more CAMHS referrals, independent of other school characteristics. This builds on existing evidence that staff mental health knowledge and work capacity are important factors in identifying at-risk students for secondary care (Ekornes, 2017; Frauenholtz et al., 2017). Staff with a specialist medical background may be more comfortable and familiar at detecting mental health difficulties (Guttu, Engelke, & Swanson, 2004). However, only a minority of schools included in this study employed staff classified as medical, thereby limiting scope for further investigation within our sample. Conflicting with other studies, the results demonstrated no relationship between the number of TAs/HLTAs and bilingual support assistants on referral rates (Martin-Jones & Saxena, 2003; Webster et al., 2011). Therefore, while broadly speaking, a lower student-staff ratio is thought to encourage help-seeking and specialist referrals, this association might only be when staff have knowledge and experience of managing student mental health challenges (Frauenholtz et al., 2017). While schools with the counselling provision have increased numbers of specialist mental health staff, they also offer school-based mental health provision with known effectiveness (Lee et al., 2009). This may explain why these schools were not associated with CAMHS referral rates, as a proportion of mental health challenges were likely being met within schools.

We found that school-level ethnic composition was also associated with higher CAMHS referral rates, with referrals more likely for schools with a higher proportion of white-British students. This is in keeping with previous research, which illustrates differences in ethnic representation and engagement with secondary care services for nonwhite young people (Chui et al., 2020; Memon et al., 2016). A recent review of the counselling provision (Place2Be) found that while white-Irish and other white, Asian and British-Asian students were less likely to attend counselling compared to their school peers, black, black-British and young people from mixed or 'other' ethnic groups were shown to engage with the school-based provision (Place2Be, 2020a). Considering these results, school-based counselling may provide a means of support for young people more likely to face systemic barriers in accessing health care through clinical referrals. Interestingly, our findings show that number of ethnic minority support staff was negatively associated with CAMHS referral rates in the bivariate analysis, but this effect became nonsignificant in the adjusted model, although retaining a sizable effect (IRR 0.86). Research into ethnic and cultural differences in referral patterns is needed to explore this further, and worthy of further investigation. Our findings highlight the need to better understand the role of ethnicity in how young people accessing prevention/early support interventions, including differences in help-seeking and presenting symptoms (Jongsma, Turner, Kirkbride, & Jones, 2019; Stansfeld et al., 2004). Our results showed that schools with an Ofsted rating of 'Requires Improvement' (vs. those with 'Outstanding') had higher rates of

accepted CAMHS referrals. While Ofsted mention aspects of personal development in the inspection framework, including how to keep students 'physically and mentally healthy' (Ofsted, 2019), there has been minimal association shown in previous literature between school rating and mental health outcomes for students (von Stumm et al., 2020). Schools could consider how to routinely monitor individual outcomes, including assessing effectiveness of whole-school mental health initiatives, to strengthen evidence for regulatory inspections. Collecting such comprehensive school-level mental health data would widen the scope for collaboration between research, service improvement and clinical provision for young people (Fleming, Jones, Bradley, & Wolpert, 2016). In addition, further research should seek to replicate and explain this effect, which provides further evidence of the intimate inter-relationship between mental health and education.

Implications

Our findings suggest that school-based counselling provision is not associated with an increase demand on local CAMHS, while several school-level factors are associated with heightened referral rates. We found that the counselling service (Place2Be) is in schools with a high complexity of need. Our findings suggest that such school-based counselling provision supports children and young people within schools, reducing demand on specialist mental health services. There were interesting results regarding the association of student and staff ethnicity on referrals, with white-British young people more likely to access CAMHS than students of other ethnic groups. Improving access to mental health support for *all* young people should be a priority, and schools, clinical services and local authorities need to understand the role of demographic characteristics, including ethnicity, in accessing appropriate and effective mental health support.

Strengths and limitations of the current study

This study offers unique insight into a large and diverse cohort, providing evidence from a novel educational-health data linkage. The linkage allows for comprehensive analyses of rich data with minimal burden on school or health services (Downs et al., 2017), however, it is not without limitations. While findings contribute to the evidence-base around school-based interventions, the generalisability of UK education and health data will be limited in nature. Using accepted referral to secondary care as a proxy for accessing CAMHS does not account for clinical engagement, individual outcomes, or reasons for rejected referrals. Furthermore, the workforce census data is limited in capturing the full range of support within schools, as psychological/counselling staff may be categorised as 'other' rather than 'medical' (Department of Education, 2019). More detailed information on school provisions and CAMHS outcomes are needed to fully understand how need is being met for different populations across school and health care.

Schools were categorised as having counselling provision if Place2Be was in place for at least one year throughout the study period but did not account for time as a covariate. The length of time the service is within schools may impact upon its effectiveness and associations with secondary mental health services. It should

also be acknowledged that only 8% of included schools were categorised as having counselling provision, limiting the statistical power of results. Additionally, these data represent state funded mainstream primary schools, who self-selected to receive Place2Be services, and CAMHS referral patterns for four inner-city London boroughs, and so may not be generalisable to other contexts, including rural settings or within alternative provision.

Directions for future research

Further research is needed to understand the intricacies of mental health provision for young people, both within schools and in secondary care services. This work should investigate indicators of timely referrals to CAMHS, including appropriateness and acceptance rate of referrals. Furthermore, re-entry rates should be explored for those who return to secondary care after discharge or rejected referrals. In addition, the long-term outcomes (including stress related disorders and self-harm behaviours) for young people after leaving schools where counselling services are provided are needed to understand the lasting impact such services have on life-long mental health. Such research should also be replicated across different geographical settings, to understand the international landscape of school-based support on child health outcomes.

Conclusion

This study investigated the potential impact of school-based counselling provision and other primary school-level characteristics on CAMHS referral patterns. Counselling provision was not associated with increased referral rates to CAMHS, while pupil-teacher ratio, number of medical staff, ethnic composition of students and staff, and previous referral rates were. Results offer a unique insight into local population referral patterns and highlight potential factors influencing the CAMHS referral pathway and provision of mental health care for young people.

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Ethical information

The Clinical Record Interactive Search (CRIS) data resource hosted at the South London and Maudsley (SLaM) Biomedical Research Centre (BRC) has received ethical approval for secondary analyses by the Oxford Research Ethics Committee C (reference - 18/SC/0372). The linked National Pupil Database (NPD) resource is included in this approval, with the linkage protocol detailed elsewhere (Downs et al., 2017).

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Supporting information

Additional Supporting Information may be found in the online version of this article:

Table S1. Incident rate ratios (IRRs) and 95% confidence intervals for univariable, fully adjusted and sensitivity analyses of the association between school characteristics and CAMHS referral rates in 2012.

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