

Original Article

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Access to and perceived unmet need for mental health services and support in a community sample of UK adolescents with and without experience of childhood adversity

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Abstract

Aims. Children and adolescents with a history of adverse childhood experiences (ACEs) are more likely than their peers to develop mental health difficulties, but not enough is known about their help-seeking behaviours and preferences. We aimed to determine whether ACEs are associated with access to and perceived unmet need for mental health services and support amongst secondary school students.

Methods. We used multi-level logistic regression with data from the 2020 OxWell Student Survey to assess whether ACEs were associated with (1) prior access to mental health support and (2) perceived unmet need for mental health services in a community sample of English secondary school students. We assessed ACEs as a cumulative score from the Center for Youth Wellness Adverse Childhood Experiences Questionnaire: Teen Self-Report version and accounted for current mental health difficulties as measured by the 25-item Revised Children's Anxiety and Depression Scale (RCADS).

Results. Our analysis included 2018 students across 64 schools, of whom 29.9% (598/2002) reported prior access to mental health support. Of those not reporting prior access, 34.1% (469/1377) reported a perceived unmet need for services. In the unadjusted models, cumulative ACE scores were significantly positively associated with both prior access to mental health support (odds ratio (OR) = 1.36; 95% confidence interval (CI): 1.29–1.43) and perceived unmet need for mental health services (OR = 1.47; 95% CI: 1.37–1.59), meaning that students who had experienced adversity had a greater chance of having previously accessed support as well as perceiving an unmet need for services. After adjusting for mental health difficulties and other sociodemographic variables, cumulative ACE scores were positively associated with prior access (adjusted OR (aOR) = 1.25; 95% CI: 1.17–1.34 with a significant interaction between RCADS and ACE scores, aOR = 0.88; 95% CI: 0.84–0.93) as well as perceived unmet need (aOR = 1.32; 95% CI: 1.21–1.43 with a significant interaction between RCADS and ACE scores, aOR = 0.85; 95% CI: 0.78–0.91).

Conclusions. Although it is encouraging that adolescents with experience of adversity are more likely than their peers with similar levels of depression and anxiety symptoms to have accessed mental health support, there remains a concern that those who *have not* accessed support are more likely to perceive an as-yet unmet need for it. Mental health support must be available, accessible and acceptable to all who need it, especially for those groups that traditionally have not accessed services, including the more marginalised and vulnerable populations.

Introduction

Early intervention may improve mental health outcomes, yet only one-quarter to one-half of children and adolescents with diagnosable disorders access mental health services (Ford *et al.*, 2007; Merikangas *et al.*, 2011). Several factors influence access, including characteristics of the presenting mental health difficulties, recognition of difficulties, knowledge of where to seek support, attitudes toward help-seeking and perceptions of support (Radez *et al.*, 2021). In addition, parents' recognition of their child's mental health difficulties as well as their attitudes toward mental health, knowledge of available support and perceptions of service providers and treatment options may influence their decisions to seek support on behalf of their child (Crouch *et al.*, 2019; Reardon *et al.*, 2017). At the systems level, access is influenced by factors such as service availability and flexibility, waiting times, cost and administrative processes

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(Anderson *et al.*, 2017). These multi-level barriers demonstrate the complex nature of accessing timely and effective mental health support.

One underexplored area pertains to how experience of childhood adversity might impact access to mental health support. Research on childhood adversity has often focused on a 'core set' of adversities termed 'adverse childhood experiences' (ACEs), which comprise child maltreatment and household dysfunction. ACEs are common amongst children and adolescents (McLaughlin *et al.*, 2012), and clear and consistent evidence has demonstrated a strong association between adversity and a range of poor mental health outcomes in childhood and adolescence (Dunn *et al.*, 2011; McLaughlin *et al.*, 2012). In a sample of US adolescents, McLaughlin *et al.* (2012) estimated that population-attributable risk proportions for a set of 12 ACEs ranged from 15.7% for fear disorders to 40.7% for behaviour disorders. As such, childhood adversity represents a profound social determinant of mental health that requires urgent action and attention in terms of both prevention and intervention (Bhutta *et al.*, 2023; Ceccarelli *et al.*, 2022).

In terms of the possible influence of ACEs on mental health help-seeking, it is plausible that exposure could serve as a barrier. For example, experiences of maltreatment or family dysfunction could reduce an adolescent's trust in adults and impede them from seeking support (Leavey *et al.*, 2011; Lester *et al.*, 2020; Munoz *et al.*, 2019) or may signal that parents or carers are less willing or able to seek support on their child's behalf (Leavey *et al.*, 2011; Stebbins, 2020; Villagrana, 2010). Conversely, if recognised and acted upon by professionals, adversity could serve as a facilitator for accessing mental health services by bringing vulnerable children and adolescents to the attention of wider systems of care (e.g. schools, medical providers or social care; Stebbins, 2020). Individuals in these systems may then help to facilitate access to support (Horwitz *et al.*, 2012; Stebbins, 2020).

Whilst several studies have examined whether experience of adversity is associated with service use, most do not adjust for mental health difficulties, which complicates interpretation because the correlates of accessing support may actually be correlates of the mental health difficulties themselves (Ford, 2008). The few studies that have examined whether experience of adversity is *independently* related to service use have substantial methodological differences and report conflicting findings. For example, Alcalá and Balkrishnan (2019) used data from the US National Survey of Children's Health to determine the individual and cumulative associations of nine ACEs with past-year service use for children and adolescents aged 2–17 years. Amongst those with a parent-reported lifetime 'behavioural, mental, congenital or developmental condition' (20%; $N = 17,146$), most adversities were significantly associated with an increased likelihood of service use (adjusted odds ratios (aORs) = 1.23–2.27), as was the total number of ACEs (the 'cumulative ACE score'; aOR = 1.27; 95% confidence interval (CI): 1.21–1.32). However, a second analysis of data from the 2016 wave of the same survey did not replicate these findings: amongst those 6- to 17-year-olds whom parents identified as having a past-year 'mental or behavioural condition' requiring treatment or counselling (15%; $N = 5723$), Stebbins (2020) reported no clear relationship between the cumulative ACE score and service use. A further analysis of the subsample of 3812 children and adolescents with any ACE demonstrated that increased parental vulnerability, including poor parental coping and low emotional support, reduced the likelihood of service use. After controlling for parental factors, those with two (aOR = 0.47; 95%

CI: 0.29, 0.76) or three (aOR = 0.56; 95% CI: 0.33, 0.96), but not four or more, ACEs were significantly less likely than those with one ACE to have accessed services.

Another relevant consideration for understanding help-seeking pathways is perceived need, referring to beliefs about whether one would benefit from support. Children and adolescents who have a perceived need but who have not accessed support that adequately addresses this need (i.e. a 'perceived unmet need') are a particularly important group about whom little is known. A recent survey from a representative community sample of 2310 Australian adolescents aged 13–17 years provides some insight on this matter (Schnyder *et al.*, 2019). Of the one-third who identified a need for support, around half reported that their needs were fully met (i.e. that they had accessed sufficient support), one-in-four reported that their needs were partially met (i.e. they had accessed some support but that it was not sufficient) and one-in-five reported that their needs were unmet (i.e. they needed support but had never accessed any). To our knowledge, however, no studies have quantitatively explored perceived (unmet) need amongst those who have experienced childhood adversity.

Understanding how vulnerable groups interact with mental health services and support is critical for ensuring that all adolescents can access support when needed. In this study, we used data from a large school-based survey to determine whether and how experience of childhood adversity is associated with access to and perceived unmet need for mental health services and support amongst secondary school students.

Methods

Data source: OxWell Student Survey

This study used data from the June to July 2020 wave of the OxWell Student Survey, a repeated cross-sectional, online, self-report survey of student mental health and well-being (Mansfield *et al.*, 2021). The target study population for the survey consists of students aged 8–18 years in English primary and secondary schools and further education colleges (FECs). The study team recruits participating schools in partnership with local authorities. Schools then enrol their students by providing them with secure log-in details to an online platform where they can read about the survey and provide informed consent (ages 16+) before taking part.

The survey is typically administered during school day, but due to the Covid-19-related partial school closures, the study team adapted procedures to allow students to complete the 2020 survey from their homes if they were not receiving in-school educational provision. The survey platform does not collect any identifiable information about participants, which (1) helps increase the diversity and representativeness of the sample, (2) enables a parental opt-out model to ensure maximum participation and (3) encourages more accurate and honest responses (Mansfield *et al.*, 2021). The study was approved by the University of Oxford Research Ethics Committee (Reference: R62366/RE001).

We used the school identifier collected in the OxWell data to link student responses to publicly available school- and area-level characteristics collected by the Office for National Statistics (ONS; Gov.uk, 2019) and Department for Education (DfE; Gov.uk, 2020).

Participants

Participants in these analyses were adolescents in Years 12 and 13 (approx. age 16–18 years) at state-maintained and independent

secondary schools and FECs located primarily in Oxfordshire, Berkshire and Buckinghamshire.

Measures

Access to mental health support and perceived unmet need for mental health services

The OxWell Survey assessed prior access to mental health support with the question 'Have you ever received any mental health support (e.g. from an adult at school or college/CAMHS/private psychologist/counsellor/charity service)?' ('yes', 'no'). Amongst those who *had not previously accessed mental health support*, the survey assessed perceived unmet need for mental health services with the question 'Have you ever felt that you could have benefitted from using mental health services?' ('yes', 'no').

Adverse childhood experiences

The survey measured cumulative ACE scores using the Center for Youth Wellness Adverse Childhood Experiences Questionnaire (CYW ACE-Q): Teen Self-Report version (Center for Youth Wellness, 2015). The questionnaire presents participants with a list of 10 ACEs including child maltreatment (physical, sexual and emotional abuse; physical and emotional neglect and witnessing domestic violence) and household dysfunction (parental separation/divorce, drug or alcohol use of a household member, incarceration of a household member and mental ill health of a household member) and asks them to indicate the number of experiences they have had (i.e. cumulative scores range 0–10). As such, it does not give information on individual ACEs. Psychometric properties for the CYW ACE-Q have not been reported, but it is a recommended measure for assessing ACEs (Oh *et al.*, 2018).

Covariates

The survey assessed current mental health difficulties using the 25-item Revised Children's Anxiety and Depression Scale (RCADS-25; Ebesutani *et al.*, 2012). All statements have four response categories according to frequency (0 – 'never', 1 – 'sometimes', 2 – 'often', 3 – 'always'). Responses sum to a Total Anxiety and Depression score (0–75), with higher scores indicating greater difficulties. In accordance with scoring guidance, we transformed these scores into *t*-scores by gender and age category and took the diagnostic threshold to be *t*-scores ≥ 70 (Chorpita, 2020). The RCADS-25 has demonstrated acceptable reliability in school-based samples and adequately discriminates between those with and without mental health diagnoses (Ebesutani *et al.*, 2012).

The survey also includes the following sociodemographic variables, which we used as covariates: gender ('girl' or 'boy'), school year (12 or 13), free school meal eligibility ('yes', 'no', 'don't know') and birthplace (born in the UK; 'yes', 'no', 'would rather not say').

Analysis

We used DfE and ONS data to explore the characteristics of the participating schools and compare with national statistics. For both outcomes (prior access and perceived unmet need), we calculated unadjusted ORs and 95% CIs for our main independent variable (cumulative ACE score) and covariates (RCADS score, gender, school year, free school meal eligibility and student birthplace). In our main analyses, for the free school meal eligibility variable, we re-coded 'don't know' responses as 'no' as a conservative estimate of eligibility, and for the birthplace variable, we re-coded 'prefer not to say' as missing data. We used complete case multi-level logistic regression (R *lme4* package; Bates *et al.*, 2015) with school as a random effect to examine the relationship between cumulative

Table 1. Characteristics of participating schools ($N = 57$)^a

Characteristic	
School context	
Urbanicity N (%)	
Rural	5 (8.8)
Urban	52 (91.2)
Area-level deprivation (Index of Multiple Deprivation) Median (IQR) ^b	
	7 (4)
Characteristics of the school community	
Percentage of students eligible for free school meals Mean (SD)	
	8.3 (5.6)
Percentage of students who are White British Mean (SD)	
	59.7 (26.6)
Operational features of the school	
Type of school N (%)	
State-funded	53 (93.0)
Independent	4 (7.0)
Mixed or single sex school N (%)	
Mixed	44 (77.2)
Girls only	7 (12.3)
Boys only	6 (10.5)
Number of students Mean (SD)	
	1115 (295)

^aData only available for $N = 57$ schools with linkable DfE and ONS data; all percentages use a denominator of 57. Characteristics of the school community are reported for $N = 53$ state-funded schools as independent schools are not required to report these.

^bIn the Index of Multiple Deprivation (McLennan *et al.*, 2019), lower deciles represent relatively more deprived areas.

ACE score and our two outcomes, adjusting for the covariates listed above and including an interaction term between cumulative ACE score and RCADS score. We additionally scaled the RCADS score to improve the models' numerical stability.

Results

Participants

A total of 2360 Year 12 and 13 students across 65 secondary schools and FECs accessed the survey (N.B. an exact response rate is not possible under our recruitment model; Mansfield *et al.*, 2021). Survey administrators removed 342 (14.5%) responses due to non-engagement or unrealistic/inconsistent responses (Mansfield *et al.*, 2021), leaving a final sample of 2018 participants across 64 schools (Table 1).

Compared with national statistics, participating schools were slightly larger (mean headcount = 1115 vs. 986) and more ethnically diverse (mean percentage White British = 59.7% vs. 66.7%). Participating schools had a lower percentage of students eligible for free school meals than the national secondary school average (mean percentage = 8.3% vs. 17.3%), although it should be noted that nationally, the proportion of eligible students drops drastically in Years 12/13.

Prior access to mental health support

Out of 2002 students, 598 (29.9%) reported prior access to mental health support (Table 2), including 61.6% (170/276) of those

Table 2. Cumulative ACE score and prior access to mental health support

	Total sample ^a	Prior access to mental health support					
		Have not accessed	Have accessed	Unadjusted OR	p-value	Adjusted OR N = 1867	p-value
	N = 2002	N = 1404 (70.1%)	N = 598 (29.9%)	[95% CI]		[95% CI]	
Individual-level factors							
Gender N (%)							
Male	786 (39.4)	620 (78.9)	166 (21.1)	Ref.	Ref.	Ref.	Ref.
Female	1207 (60.6)	781 (64.7)	426 (35.3)	2.04 [1.66, 2.51]	p < 0.001	1.46 [1.13, 1.88]	p = 0.004
School year N (%)							
Year 12	1635 (81.7)	1182 (72.3)	453 (27.7)	Ref.		Ref.	
Year 13	367 (18.3)	222 (60.5)	145 (39.5)	1.70 [1.34, 2.16]	p < 0.001	1.67 [1.27, 2.21]	p < 0.001
Free school meals N (%)							
No	1661 (83.5)	1174 (70.7)	487 (29.3)	Ref.	Ref.	Ref.	Ref.
Yes	123 (6.2)	73 (59.3)	50 (40.7)	1.65 [1.13, 2.40]	p = 0.010	1.26 [0.81, 1.97]	p = 0.298
Don't know	205 (10.3)	148 (72.2)	57 (27.8)	0.93 [0.67, 1.28]	p = 0.659	-	-
Birthplace N (%)							
UK	1685 (84.2)	1158 (68.7)	527 (31.3)	Ref.	Ref.	Ref.	Ref.
Elsewhere	310 (15.5)	240 (77.4)	70 (22.6)	0.64 [0.48, 0.85]	p = 0.002	0.66 [0.47, 0.92]	p = 0.015
Prefer not to say	7 (0.4)	6 (85.7)	1 (14.3)	0.41 [0.02, 2.49]	p = 0.376	-	-
Adverse childhood experiences							
Cumulative ACE score Median (IQR)	1 (2)	0 (2)	2 (3.75)	1.36 [1.29, 1.43]	p < 0.001	1.25 [1.17, 1.34]	p < 0.001
Mental health							
RCADS total score Mean (SD)	51.1 (16.9)	47.2 (15.0)	60.5 (17.5)	1.05 [1.04, 1.06]	p < 0.001	-	-
RCADS total score (scaled)	-	-	-	-	-	2.51 [2.12, 2.97]	p < 0.001
Interaction term							
RCADS total score (scaled) * Cumulative ACE score	-	-	-	-	-	0.88 [0.84, 0.93]	p < 0.001

^aPercentages are calculated using those who responded as a denominator, so Ns < 2002 for each variable are due to missing data.

scoring above the clinical threshold on the RCADS and 24.5% (401/1639) of those scoring below. Figure 1 shows the proportion of students who had previously accessed mental health support by cumulative ACE score in the full sample (Fig. 1a) as well as those scoring above the RCADS clinical threshold (Fig. 1b).

In the unadjusted model, the cumulative ACE score was significantly positively associated with prior access to mental health support (OR = 1.36; 95% CI: 1.29–1.43), meaning that students who had experienced adversity had a greater likelihood of having previously accessed support. Complete case analysis resulted in a final sample size of N = 1867 (93.3% of those with outcome data; Table 2), with exclusion from the model due primarily to missingness on RCADS scores (N = 87) and cumulative ACE scores (N = 42; Supplementary Table S1). Figure 1 indicates a potential interaction between ACEs and RCADS, as shown by visually different patterns between Fig. 1a and b. This interaction was significant (aOR = 0.88; 95% CI: 0.84–0.93; see Supplementary Figure S1 for the modelled proportion accounting for this interaction). The cumulative ACE score was positively associated with access to

support (for a 'typical' student at a 'typical' school, with an average RCADS score, aOR = 1.25; 95% CI: 1.17–1.34).

Perceived unmet need for mental health services

Of the 1377 students who had not previously accessed support, 469 (34.1%) perceived an unmet need for mental health services (Table 3), including 72.0% (77/107) of those scoring above the clinical threshold on the RCADS as well as 22.9% (278/1214) of those scoring below. Figure 1 shows the proportion of students with a perceived unmet need for mental health services by cumulative ACE score in the full sample (Fig. 1c) and for those scoring above the RCADS clinical threshold (Fig. 1d).

In the unadjusted model, the cumulative ACE score was significantly positively associated with perceived unmet need for mental health services (OR = 1.47; 95% CI: 1.37–1.59), meaning that students who had experienced adversity had a greater likelihood of perceiving an unmet need for mental health services. Complete case analysis resulted in a final sample size of N = 1284 (93.2% of

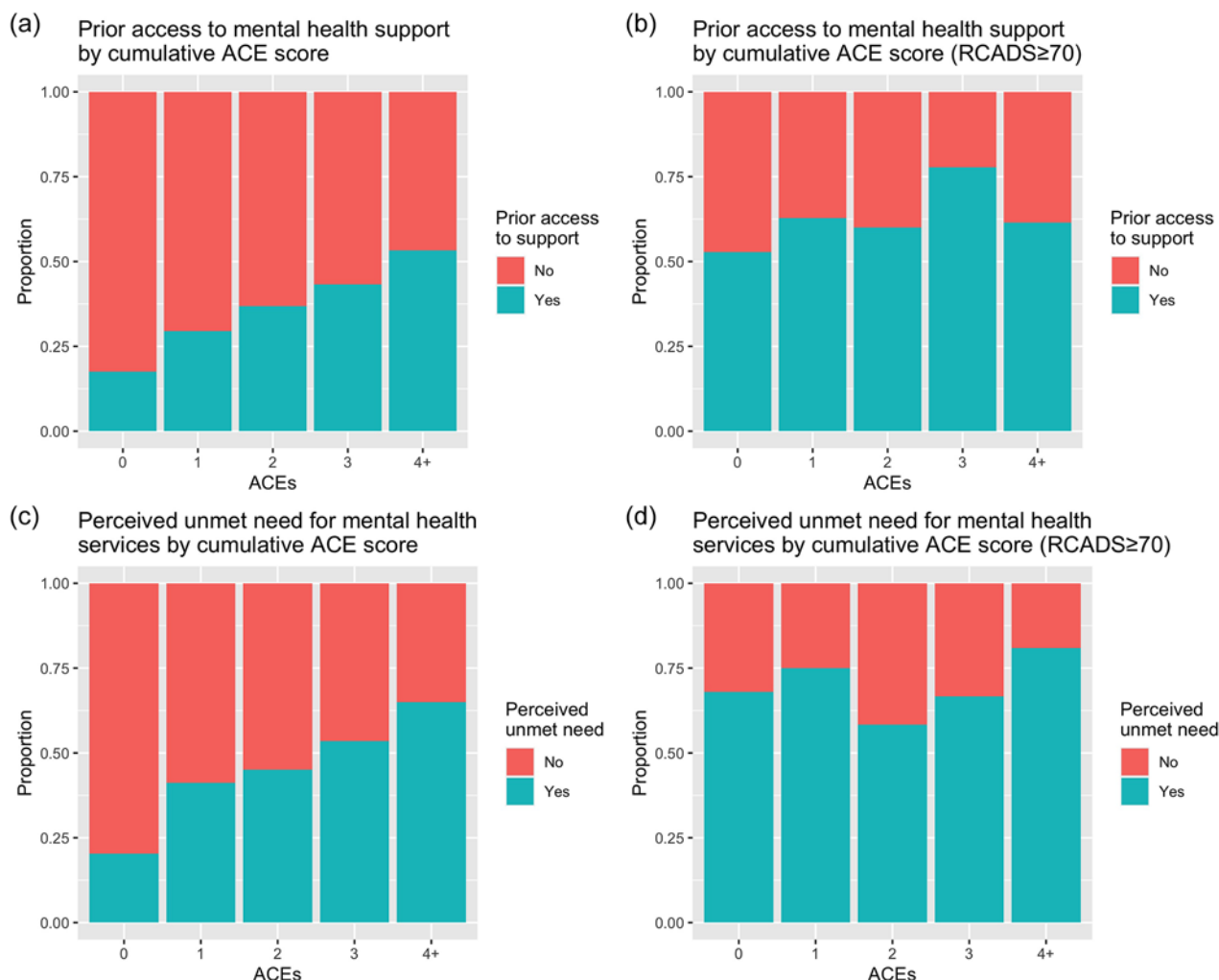


Figure 1. (a) Proportion of students with prior access to mental health support by cumulative ACE score for the total sample of Year 12/13 students ($N = 1960$); (b) proportion of students with prior access to mental health support by cumulative ACE score for the 14% of students scoring in the clinical range on the RCADS ($N = 271$); (c) proportion of students with perceived unmet need for mental health services by cumulative ACE score for the total sample of Year 12/13 students ($N = 1321$); (d) proportion of students with perceived unmet need for mental health services by cumulative ACE score for the 8% of students scoring in the clinical range on the RCADS ($N = 107$).

those with outcome data; Table 3), with exclusion from the model due primarily to missingness on RCADS scores ($N = 56$) and cumulative ACE scores ($N = 31$; Supplementary Table S1). Figure 1 indicates a potential interaction between ACEs and RCADS, as shown by visually different patterns between Fig. 1c and d. This interaction was significant (aOR = 0.85; 95% CI: 0.78–0.91; see Supplementary Figure S2 for the modelled proportion accounting for this interaction). The cumulative ACE score was positively associated with perceived unmet need for services (for a ‘typical’ student, aOR = 1.32; 95% CI: 1.21–1.43).

Discussion

We analysed survey data from a community sample of school-aged students to explore mental health help-seeking amongst adolescents with self-reported experience of childhood adversity. Both before and after adjusting for current mental health difficulties, experience of adversity (measured as a cumulative ACE score) was associated with a greater likelihood of prior access to mental health support and perceived unmet need for mental health services.

In the context of the mixed evidence, it was encouraging that experience of adversity was associated with a higher likelihood of prior access to support. One possible explanation relates to systems of care – the coordinated networks of community-based services and supports that can help facilitate access to mental health support if and when needed (Miller *et al.*, 2012; Stebbins, 2020). Whilst parents are often acknowledged as the primary gatekeepers for their children’s mental health (Crouch *et al.*, 2019; Radez *et al.*, 2021; Reardon *et al.*, 2017; Ryan *et al.*, 2015), there are many other individuals with a similar role, including social workers, mental health professionals, other health and allied health professionals, school staff and criminal justice professionals (Duong *et al.*, 2021; Stebbins, 2020). Knowledge of adversity may trigger these individuals to identify difficulties and encourage help-seeking. For example, Horwitz *et al.* (2012) have shown that as children with possible experience of maltreatment come into contact with schools or medical professionals, or have more intensive involvement with the child welfare system, they are more likely to use mental health services.

Our findings additionally offer insight into perceived unmet need for mental health services, an important indicator of service

Table 3. Cumulative ACE score and perceived unmet need for mental health services

	Total sample ^a	Perceived unmet need for mental health services					
		No perceived unmet need	Perceived unmet need	Unadjusted OR	<i>p</i> -value	Adjusted OR	<i>p</i> -value
	<i>N</i> = 1377	<i>N</i> = 908 (65.9%)	<i>N</i> = 469 (34.1%)	[95% CI]		<i>N</i> = 1284 [95% CI]	
Individual-level factors							
Gender <i>N</i> (%)							
Male	612 (44.5)	447 (73.0)	165 (27.0)	Ref.	Ref.	Ref.	Ref.
Female	763 (55.5)	461 (60.4)	302 (39.6)	1.77 [1.41, 2.24]	<i>p</i> < 0.001	1.27 [0.96, 1.69]	<i>p</i> = 0.099
School year <i>N</i> (%)							
Year 12	1156 (84.0)	777 (67.2)	379 (32.8)	Ref.	Ref.	Ref.	Ref.
Year 13	221 (16.0)	131 (59.3)	90 (40.7)	1.41 [1.05, 1.89]	<i>p</i> = 0.024	1.51 [1.06, 2.17]	<i>p</i> = 0.024
Free school meals <i>N</i> (%)							
No	1151 (84.1)	755 (65.6)	396 (34.4)	Ref.	Ref.	Ref.	Ref.
Yes	70 (5.1)	52 (74.3)	18 (25.7)	0.66 [0.37, 1.13]	<i>p</i> = 0.135	0.46 [0.24, 0.88]	<i>p</i> = 0.019
Don't know	147 (10.7)	95 (64.6)	52 (35.4)	1.04 [0.72, 1.49]	<i>p</i> = 0.811	-	-
Birthplace <i>N</i> (%)							
UK	1137 (82.6)	739 (65.0)	398 (35.0)	Ref.	Ref.	Ref.	Ref.
Elsewhere	234 (17.0)	163 (69.7)	71 (30.3)	0.81 [0.59, 1.09]	<i>p</i> = 0.171	0.75 [0.52, 1.09]	<i>p</i> = 0.131
Prefer not to say	6 (0.4)	6 (100)	0 (0.0)	N/A	-	-	-
Adverse childhood experiences							
Cumulative ACE score <i>Median (IQR)</i>	0 (2)	0 (1)	1 (3)	1.47 [1.37, 1.59]	<i>p</i> < 0.001	1.32 [1.21, 1.43]	<i>p</i> < 0.001
Mental health							
RCADS total score <i>Mean (SD)</i>	47.3 (15.1)	42.8 (12.4)	56.0 (16.0)	1.07 [1.06, 1.08]	<i>p</i> < 0.001	-	-
RCADS total score (scaled)	-	-	-	-	-	3.34 [2.68, 4.18]	<i>p</i> < 0.001
Interaction term							
RCADS total score (scaled) * Cumulative ACE score	-	-	-	-	-	0.85 [0.78, 0.91]	<i>p</i> < 0.001

^aPercentages are calculated using those who responded as a denominator, so *N*s < 1377 for each variable are due to missing data. *N.B.* Only those who have not previously accessed support are presented with this question.

availability, accessibility and acceptability. Whilst others have studied this concept in the general adolescent population (Schnyder *et al.*, 2019), our study provides unique insight within the context of childhood adversity. It is concerning that those who have experienced adversity were more likely than their peers with similar levels of mental health difficulties to perceive an unmet need, and it is important to understand why these adolescents are not accessing support when they feel as though they could benefit from it. It may be that they have more complex, multi-faceted needs in addition to their mental health needs (Kerns *et al.*, 2014; Lester *et al.*, 2020) or face additional or amplified barriers in comparison with their peers, such as concerns about confidentiality or parental involvement (Lester *et al.*, 2020; Soleimanpour *et al.*, 2017). They might also struggle to trust adults due to their specific experiences, which could prevent them from seeking or engaging with help (Kerns *et al.*, 2014; Lester *et al.*, 2020; Munoz *et al.*, 2019).

Limitations

This study has several strengths, including use of a large community sample of adolescents, consideration of multiple aspects of the help-seeking pathway and use of statistical models that consider the multi-level structure of the data. However, there are also a number of limitations. In terms of the sample, whilst the schools recruited were diverse in their sociodemographic characteristics, determining sample representativeness is difficult because characteristics such as ethnicity, non-binary gender identities and special educational needs are not assessed in the survey. Furthermore, the participation rate for 2020 will have been lower than in previous waves because of school closures. This has important implications: students in unsafe home environments may not have accessed the survey or may have done so but provided inaccurate responses (for example, if a parent was present).

In terms of the survey data, the self-report nature may have introduced bias into our assessment of prior access to mental

health support, as there may be discrepancies between participants' reports and, for example, contact recorded in administrative health records. Conversely, self-report may have captured additional contacts not routinely recorded. There was also a discrepancy in the wording of our outcome measures: whilst the question about prior access asked about *mental health support*, the question about perceived unmet need asked about *mental health services*. Students may have interpreted these concepts differently, which may have led to an underestimation of the proportion reporting a perceived unmet need. Furthermore, if students responded that they had previously accessed support, they were not asked about perceived need, which will also have led to an underestimation, as students who have previously accessed support might still perceive a need for different or additional support. In terms of ACEs, the survey collected only a cumulative score, without information about individual ACEs, timing, severity or chronicity. Although this helps maintain anonymity and might give students greater confidence to disclose adversity, cumulative scores have limitations (Lacey and Minnis, 2019). Furthermore, a substantial evidence base demonstrates that retrospective reports of ACEs often poorly align with prospectively ascertained reports (Baldwin *et al.*, 2019; Danese, 2020), which may introduce bias and influence the interpretation and implications of findings.

Finally, the cross-sectional nature of the data presents challenges for interpretation, as we were not able to determine when ACEs occurred. To better understand how experience of adversity influences access to mental health support, we would need to focus on the students who experienced adversity *before* attempting to access support. Furthermore, these data do not allow us to assess mental health *at the time of accessing support*. Mental health is dynamic, and students who had accessed helpful mental health support would potentially have lower RCADS scores at the time of completing the survey than before accessing that support, which would have influenced our effect estimates.

Implications for practice

Given concerns that vulnerable children and adolescents may have reduced access to mental health services, it was encouraging to find that those with experience of adversity were more likely to have accessed support than their peers with similar levels of current mental health difficulties. However, their increased likelihood of perceiving an unmet need highlights the possible additional needs of this group and indicates that different structures might be needed in order to improve access (Soleimanpour *et al.*, 2017). There are many potential reasons why these adolescents may not have accessed support. For some, support may not have been available, whilst for others, support may have been available but not accessible. Still others may not have sought support due to negative perceptions of it or concerns about confidentiality and privacy (Soleimanpour *et al.*, 2017; Yap *et al.*, 2013). Engaging with adolescents and their families is essential for improving services (Fazel and Hoagwood, 2021; Howarth *et al.*, 2019; Lester *et al.*, 2020), especially given their insights into the barriers and facilitators of accessing and remaining engaged with the current systems (Radez *et al.*, 2021, 2021; Reardon *et al.*, 2017).

Implications for future research

Longitudinal data that allow for the establishment of chronology (i.e. relative timing of ACEs and access to services) could be an important next step in understanding pathways to support. Future

studies should also seek to move beyond a cumulative ACE score to understand the effects of individual ACEs as well as their timing, chronicity and severity (McLaughlin, 2016). Considering how ACEs cluster is also likely to be important (Lacey, 2023), as this may have implications for tailoring services and identifying which types of services and support may be most effective and acceptable for these individuals (Lacey and Minnis, 2019). There is also scope to explore barriers to accessing support amongst those with a perceived unmet need: whilst many have studied barriers for the general adolescent population (see Radez *et al.*, 2021 for a review) and some have examined barriers for children in care (Kerns *et al.*, 2014), little research has focused on the specific barriers for the broader population of adolescents who have experienced childhood adversity.

Conclusions

Although it is encouraging that adolescents with experience of adversity are more likely than their peers with similar levels of current depression and anxiety symptoms to have accessed mental health support, there remains a concern that those who have not accessed support are more likely to perceive an unmet need for it. These adolescents may have more complex, multi-faceted needs in addition to their mental health needs or face additional or amplified barriers to accessing support. Mental health support must be available, accessible and acceptable to all who need it, especially for marginalised and vulnerable populations.

Supplementary material. The supplementary material for this article can be found at <https://doi.org/10.1017/S2045796024000027>.

Availability of data and materials. The data used in this study are not publicly available. The study protocol and variable guides are available through the Open Science Framework (<https://osf.io/sekhr/>). The code for this analysis is available at <https://github.com/OxWellStudy/ACEs-helpseeking-2023>.

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Ethical standards. This study complies with the ethical standards of the relevant national and institutional committees on human experimentation and the Helsinki Declaration of 1975 (revised in 2013).

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