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# An exploration of ex-boarding school adults' attachment styles and substance use behaviours

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**ABSTRACT**

Our study examines the relationship between boarding school attendance, adult attachment styles, parental bonding, and substance use, aiming was to quantitatively investigate if caregiver deprivation caused by boarding contributes to enduring outcomes in adults. In a sample of 149 adults, measures included AUDIT and DUDIT (substance use), Parental Bonding Instrument (parental care), and Experiences in Close Relationships (adult attachment). Pearson's correlation revealed a significant negative association between age at first boarding and anxiety, avoidant attachment styles, and poorer parental care, whilst a significant positive relationship was identified between age at first boarding and perceived parental care. This was supported by a hierarchical regression which demonstrated that the model predicted 29% of the variance in age at first boarding. These results contribute towards the formulation and treatment of ex-boarders and to research considering the effects of boarding school experiences on difficulties in adult life.

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Attachment theory (Bowlby, 1907–1990) examines how the quality of a relationship and interactions between an infant and their caregiver can influence the development of an "Internal Working Model" (IWM) in their child, determining relationship expectations which extend into adulthood. Bowlby believed that when an adult is attuned to their offspring's needs, their IWM is structured around a belief that their care giver will be there when they need them in the future. For the child whose parent is not attuned to their needs and does not comfort them when they need it, this could create an IWM that they are unworthy (Bowlby, 1973). Bowlby's (1973) ground-breaking work on the long-term effects of maternal deprivation and its effect on one's IWM revolutionised the thinking of his time (Bretherton, 1992). Attachment theory remains one of the most influential theories of socioemotional development (Schore, 2019, p. 18).

According to the Independent School Council (ISC) 69680 UK children attended boarding school as of January 2020 (ISC, 2020). Sending children to boarding school in the UK has been a long-standing tradition in the middle and upper classes of society, and so normalised within this culture that historically few have challenged the psychological impact of this form of education (Duffell, 2015). Boarding school provides an example of

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when a child and caregiver are separated for weeks at a time, which can be a traumatic experience for the young child (Schaverien, 2004). Bowlby, who boarded himself from the age of 7 (Holmes & Holmes, 2014), describes how an individual is more likely to be afraid when a situation is compounded by more than one fear factor. Elements he found children to be particularly fearful of included: strangers or strange surroundings; being in the dark; and being alone, all of which may be experienced by school boarders. We are more likely to respond in fear to a situation when our attachment figure is unavailable and the greatest fear of all is that our attachment figure will be unavailable and unresponsive when we need them (Bowlby, 1973). In the case of boarding, that is for most of the school calendar.

Research into the effect of separation from an attachment figure at specific ages is limited. According to Bowlby (1973) confidence in the availability of attachment figures throughout childhood and into adolescence influences our expectations into adulthood. While the period of 6 months to 5 years old is the most critical, the proceeding 12 years are also influential. This is evidenced by Rusby and Tasker (2008) in their exploration of attachment style disruption outcomes in World War II child evacuees, where younger evacuees were found to have the lowest incidence of secure attachment styles following reunion. Considering this, attachment theory (Bowlby, 1969) may also explain potential long-term psychological effects on a child of attending boarding school, and how that might manifest in adulthood. Indeed, research proposes that attending boarding school constitutes a childhood developmental trauma with emotional consequences that may persist into adulthood (Duffell & Basset, 2016; Schaverien, 2011). Schaverien (2011), a practicing psychotherapist and psychoanalyst, has used thematic analysis on observations from her many years providing therapy to ex-boarders to record adult symptoms and patterns of behaviours known as "Boarding School Syndrome" (BSSyn). Individuals who attended boarding school may present with depression, marital and work-related difficulties, and dissociative amnesia. Additional support to this model is proposed by Duffell (2000), a psychotherapist who has worked with individuals and in group workshops with many ex-boarders over the past 25 years. Based on his observations, he describes a collection of personality traits as that of a "Boarding School Survivor" (BSS). Based in part on attachment theory, they both explain in the context of boarding school the process a child may go through to develop a "survival" personality persisting into adulthood and potentially displaying elements of BSSyn.

Presenting problems for the BSS may include relationship troubles (Schaverien, 2004). The BSS has learnt as a child to suppress emotions and become self-sufficient from a young age, making vulnerability in adult romantic relationships difficult to achieve (Duffell & Basset, 2016). The young child at boarding school experiences a constant cycle of boarding and returning home, which may contribute to an "IWM" that they expect to be abandoned. This expectation of abandonment may continue into adulthood and may contribute to an adult insecure attachment style (Schaverien, 2015). An avoidant individual may find it difficult to open up to another in a relationship, be very self-reliant, and be dismissive of those attachments they do have. A highly anxious attached individual may worry about how available their attachment figure is to them and seek reassurance excessively. Individuals who score highly on both anxiety and avoidance may be wary of close relationships for fear of getting hurt or rejected. An insecure attachment style may result in difficulties in forming and maintaining personal relationships (Hazan & Shaver,

1987). This is supported by Foster et al. (2003) who found that World War II child evacuees were more likely than their non-evacuee counterparts to have insecure attachment styles, and Rusby (2010) who analysed subsequent divorce rates among 780 World War II child evacuees, and found that the younger the child was fostered, the higher the incidence of divorce in later life.

In addition to relationship problems, Duffell and Basset (2016) found that ex-boarders often report substance use difficulties. Whilst further research exploring boarding and substance use is lacking, if boarding at a young age can be considered a childhood trauma, as suggested above, evidence to support the findings of Duffell and Basset (2016) can be found in literature exploring the association between childhood trauma and substance use. Indeed, research consistently indicates a relationship between childhood trauma and substance use (Min et al., 2007; Simons et al., 2003). Research has also identified an association between childhood trauma, substance abuse, and insecure attachment (De Rick et al., 2009; Segura-García et al., 2016; Wedekind et al., 2013), with perceived parental bonding being used as a measure to assess aetiology in substance use abusers (Segura-García et al., 2016). Considering this, the present study sought to explore the relationship between the specific childhood trauma event of school boarding, and subsequent attachment and substance use outcomes.

Whilst quantitative research in adult attachment and substance use outcomes of ex-boarders is in its infancy in the UK, explorations of these relationships have been conducted in samples of Native American ex-boarders of residential schools in Canada. Many thousands of Indigenous children were forced to attend residential schools in a church and state funded incentive to "Europeanise" them, in what is now considered by many to be a cultural and physical genocide (Partridge, 2013). Indeed, thousands of Indigenous children died from disease, malnutrition, and abuse in these institutions, though a lack of comprehensive records means the exact number of deaths is unknown (Van Moorsel, 2013). Zephier Olson and Dombrowski (2020) reviewed 27 studies exploring "Indian" residential school attendance, familial relationship disruption, and substance use, and found that disrupted family attachment had a mediating impact between boarding school attendance and substance use. Authors also consider the subsequent individual and community outcomes resulting from the intergenerational trauma of attachment disruption and substance use outcomes of residential school attendance. Whilst this research supports the rationale of the present study, the disparity in context cannot be ignored; Indigenous children were taken forcefully from their families and stripped of their identities under the motto "kill the Indian, save the man" (Slapin, 2006), whereas British children were sent to prestigious institutions only accessible to the reputable and wealthy. Indeed, Duffell (2000) describes the lasting impacts of BSSyn as a "nameless shame," experienced without sympathy because it was born of an institute of privilege; the BSS quietly accepts their paradoxical privileged victimhood.

The current study sought to build on the existing qualitative literature exploring UK institutions by quantifying some of the presenting complexities of ex-boarding school adults in therapy, including difficulties with parental bonding, romantic relationships, and substance use. The present study examined to what extent attending a boarding school increases the risk of drug and alcohol abuse in adulthood, impacts the perceived parental care and bonding ex-boarders experienced with their parents, and increases the likelihood of anxious and avoidant

attachment styles in both adult romantic relationships. When analysed continuously, it is hypothesised that there will be a significant relationship between lower age at first boarding and increased attachment disorder and substance use outcomes.

## Methodology

### *Participants*

A power analysis was conducted with the statistical software G Power (Erdfelder et al., 2009), which determined the minimum sample size required for a continuous analysis was 67. Subsequently, 83 adults were recruited through an advertisement distributed on social media via the Facebook page Boarding School Action, the members of which are interested in promoting research that seeks to understand the effects of attending boarding school, and therefore more likely to want to participate. Permission was granted from the administrator of the page. Additionally, snowball sampling was utilised due to the potential difficulty of finding participants, and an advertisement was distributed using email, via the researcher's contacts who attended a boarding school. Of the 83 individuals recruited, 51 identified as female (61.4%) and 32 as male (38.6%), Participants' age ranged between 18 and 77 years.

### *Materials*

Questionnaires were selected based on their reliability, origin, ability to answer the research questions and if they had been seen to be useful in meeting the aims of previous relevant studies.

#### *Alcohol use disorders identification test (AUDIT)*

AUDIT is a 10 question measure designed by the World Health Organisation (WHO) as a simple assessment of current alcohol consumption (Malet et al., 2005). A definition of what constitutes one drink is given and then one is asked to choose the frequency of which the statements occur. Such as *"how often in the last year have you found that you have been unable to stop drinking once you had started,"* with five answer options; never, less than monthly, monthly, weekly, daily or almost daily (Malet et al., 2005). It has been shown to be a useful and reliable tool for measuring harmful drinking behaviours in the general population (De Meneses-Gaya et al., 2009), Cronbach's $\alpha = .92$ (Hildebrand & Noteborn, 2015); Cronbach's $\alpha = .77$ in the present study. From the responses, a total score (maximum 40) is calculated and can be bracketed into four categories: 0–7 = no dependence, 8–15 = increasing risk, 16–19 = higher risk, and 20 plus = likely alcohol dependence (Donovan et al., 2006). The current study used the total score (out of 40) as a continuous dependent variable in the analysis to avoid loss of information by categorising (Erdfelder et al., 2009).

### *Drug use disorders identification test (DUDIT)*

DUDIT is an 11-item measure identifying at-risk drug use behaviours and was designed to work alongside AUDIT to identify current drug use (Berman et al., 2003). The questions start with a list of drugs (of which alcohol and tobacco are excluded) and a description of when pill taking counts as a drug for the purposes of the questions. Very similar to AUDIT, one is asked to choose the frequency of which the statements occur but this time in relation to drugs, such as "how often are you influenced heavily by drugs?" with five answer options; never, less often than once a month, every month, every week, daily or almost every day (Berman et al., 2003). It is a reliable measure with studies showing Cronbach's Alpha ranging from .74 to .97 (Hildebrand, 2015); Cronbach's α = .82 in the present study. A sum of the scores gives a total of 44 and it is suggested when using in research for populations where you would not expect to find many drug users (such as in the present study), a cut-off score of 2 for women and 6 for men indicates a drug related problem and over 25 indicating likelihood of drug dependency (Berman et al., 2003). The current study used the total score (out of 44) as a continuous dependent variable.

### *The experiences in close relationships-revised (ECR-R) questionnaire (Fraley et al., 2000a)*

The ECR-R measures adult attachment security in relation to emotionally intimate partners on two levels: anxiety and avoidance. It gives 36 statements asking the participant to rate each one on a Likert scale, where 1 = strongly disagree and 7 = strongly agree; 18 items measure attachment anxiety with statements such as: *"I'm afraid that I will lose my partner's love"* and 18 items measure attachment avoidance with statements like *"I prefer not to show a partner how I feel deep down"*. Previous studies using this measure show an average Cronbach's alpha of .89 for anxiety and .91 for avoidance (Graham & Unterschute, 2015); Cronbach's α = .92for anxiety and α = .95for avoidance in the present study. This measure has successfully demonstrated a relationship between maternal deprivation and adult insecure attachment (Fraley et al., 2013). It yields two dependent variable scores out of 18, one for anxiety and one for avoidance. A high score on these indicates anxiety and avoidant insecure attachment styles (Fraley et al., 2000b).

### *Parental bonding instrument (PBI)*

The PBI is retrospective reliable instrument that measures adult perception of parental care during the first 16 years of life (Wilhelm & Parker, 1990). Participants are shown 16 statements relating to how they perceived the attitudes and behaviours of their parents and asked to indicate how like or unlike the statement is on a Likert scale. The PBI provides two scores for each parent on *care* with statements such as *"appeared to understand my problems and worries"* and *over protection* with statements such as *"tried to control everything I did."* Subsequently, participants' beliefs about their parents can be assigned to one of four quadrants; affectionate constraint (high care and high over-protection), affectionless control (low care and high over-protection), neglectful parenting (low care and low protection), and optimal parenting (high care and low control) (Parker et al., 1979).

Previous work has successfully linked the PBI to attachment and problematic behaviour, including drug difficulties (Musetti et al., 2016) and the scale has shown to be reliable over time (Wilhelm et al., 2005). Previous studies have found Cronbach's alpha between .80 and .93 for care and overprotection from mother and father (Arrindell et al., 1989); Care

Cronbach's α = .97for mother and α = .95for father; Overprotection Cronbach's α = .89for mother and α = .88for father in the present study. The current study will use the continuous score for care and overprotection from the mother and father, yielding four dependent variables for reasons previously discussed, to avoid loss of information by categorising into quadrants (Erdfelder et al., 2009). A high care score indicates parental trust, responsiveness, and compassion, and a low care score might represent coolness, lack of interest and concern, and neglect. A high overprotection score suggests parental control, invasive behaviour, and restriction of freedom compared to a low score indicating parental encouragement to be autonomous and act independently (Segura-García et al., 2016).

### *Procedure*

The recruitment advertisement contained a link to an online Qualtrics survey designed by the researcher. Following reading the information sheet and providing consent, participants completed a demographic questionnaire (including gender identity, age at the time of completing the study, and the age they attended boarding school if applicable) followed by the four measures (AUDIT, DUDIT, ECR-R, and the PBI). No participants asked for their data to be removed from the set but several requested a copy of the results. No financial reward was offered for participation.

### *Data analysis*

Continuous exploration of the data was conducted using Pearson's Correlations, with the age at first boarding compared with all the study outcome variables. To ascertain predictive power, a regression analysis was conducted with age at first boarding as the outcome variable, and predictor variables PBI (Block 1), and ECR-R (Block 2) using the Enter method.

## Results

The mean scores from the AUDIT, DUDIT, ECR-R, and the PBI are depicted in Table 1. High scores on anxiety and avoidance indicate insecure adult attachment styles, with lower scores suggesting a more secure attachment style (Fraley et al., 2000b).

**Table 1.** Mean scores from the AUDIT, DUDIT, ECR-R, and the PBI.

| | Minimum | Maximum | Mean | Std. Deviation | Skewedness | Kurtosis |
|---|---|---|---|---|---|---|
| AUDIT | .00 | 28.00 | 5.99 | 5.36 | 1.74 | 4.00* |
| DUDIT | .00 | 34.00 | 1.80 | 5.51 | 5.00* | 26.41* |
| ECR-R Anxiety | 1.33 | 6.17 | 3.58 | 1.23 | .87 | −.82 |
| ECR-R Avoidance | 1.22 | 6.33 | 4.04 | 1.35 | −.18 | −.92 |
| PBI Care Score Mother | −1.00 | 36.00 | 17.40 | 11.42 | .08 | −1.21 |
| PBI Overprotection Score Mother | .00 | 38.00 | 14.60 | 8.68 | .57 | −.16 |
| PBI Care Score Father | .00 | 36.00 | 16.25 | 10.35 | .35 | −.88 |
| PBI Overprotection Score Father | .00 | 31.00 | 11.70 | 7.53 | .50 | −.31 |

* indicates where Skewedness and Kurtosis levels violated acceptability. Of the two variables for which this occurred, results are not presented, and did not reach significance.

### *Pearson's correlation*

A Pearson's Correlation (See Table 2) was run whereby all study outcome variables were correlated with age at first boarding. No significant associations were observed between age at first boarding and alcohol use or drug use, however, significant relationships were identified between age at first boarding and attachment outcomes. There was a significant negative correlation identified between higher age at first boarding and lower avoidant attachment scores $r = -.37$, with age started boarding school explaining 14% of the variability in avoidance scores; lower anxious attachment scores, $r = -.43$, explaining 19% of the variability in anxiety scores (this remained significant to $< .001$ following Bonferroni correction); lower PBI mother over-protection scores, $r = -.25$, explaining 6% of the variability in mothers over-protection score; lower PBI father over-protection scores $r = -.31$, explaining 9% of the variability Father's over-protection score. Significant positive correlations were identified between lower age at first boarding and lower PBI mother care scores $r = .40$, explaining 16% of the variability in mothers care score (this remained significant to $< .001$ following Bonferroni correction); and lower PBI father care scores, $r = .26$, explaining 7% of the variability Father's care score. These results indicate a dose-response relationship between age at first boarding and attachment outcomes.

### *Hierarchical multiple regression*

A hierarchical multiple regression was run to determine if the addition of ECR-R (anxious score, and avoidant score) improved the prediction of VO2max over and above PBI scores (care, and overprotection of mother, and care, and overprotection of father) alone. The full model of PBI and ECR-R to predict age at first boarding (Model 2) was statistically significant, $r^2 = .29$, $F(8, 63) = 18.68$, $p < .001$; adjusted $r^2 = .23$. However, the strength of the correlations does reduce when included in the regression, potentially indicating that some of the variance is shared with other factors, and thus weaken when included in the model of the regression. See Table 3 for full details on each regression model.

## Discussion

The aim of the current study was to explore the impact of attending a UK boarding school as a child, in a sample of adults. It was hypothesised that there would be significant relationships between age at first boarding and attachment and substance use outcomes. Whilst no relationship was identified between lower age at first boarding and alcohol and substance use outcomes, a dose-response relationship was observed between age at first boarding and attachment outcomes, with regression analysis demonstrating a causal relationship between lower age at first boarding and poorer caregiver attachment outcomes.

Higher insecure avoidant attachment scores are associated with lower starting age at boarding school (Foster, Davies, & Steele, 2004); an adult who has an insecure avoidant attachment style could find it difficult to open up to another and appear very self-reliant; characteristics of the BSS (Duffell & Basset, 2016). With the absence of a parental attachment figure to turn to, the young boarder may expand their IWM to support themselves in all matters; an essential defence mechanism generated by the need to survive in an

Table 2. Correlation matrix of all variables, conducted on participants who boarded.

| | Age started boarding school | AUDIT | DUDIT | ECR-R anxiety | ECR-R avoidance | PBI care mother | PBI overprotection mother | PBI care father | PBI overprotection father |
|---|---|---|---|---|---|---|---|---|---|
| Age started boarding school | 1 | −.12 | −.10 | −.43** | −.37** | .40** | −.25* | .26* | −.31** |
| AUDIT | | 1 | .51** | .19 | .16 | −.29* | .03 | −.06 | −.00 |
| DUDIT | | | 1 | .14 | .21 | −.14 | .02 | .03 | .07 |
| ECR-R anxiety | | | | 1 | .56** | −.45** | .36** | −.19 | .3** |
| ECR-R avoidance | | | | | 1 | −.51** | .04 | −.38** | −.01 |
| PBI care mother | | | | | | 1 | −.31** | .45** | −.13 |
| PBI overprotection mother | | | | | | | 1 | −.15 | .66** |
| PBI care father | | | | | | | | 1 | −.12 |
| PBI overprotection father | | | | | | | | | 1 |

**. Correlation is significant at the 0.01 level (2-tailed).
*Correlation is significant at the 0.05 level (2-tailed).

**Table 3.** Hierarchical multiple regression predicting age at first boarding from PBI and ECR-R scores.

| Variable | | B coef | *SE B* | Beta | *t* | *p* |
|---|---|---|---|---|---|---|
| Step 1 | | | | | | |
| PBI | Care Score Mother | .07 | .03 | .35 | 2.77 | .01 |
| | Overprotection Score Mother | .02 | .04 | .07 | .48 | .64 |
| | Care Score Father | .02 | .03 | .07 | .59 | .56 |
| | Overprotection Score Father | −.09 | .05 | −.30 | 2.04 | .05 |
| Step 2 | | | | | | |
| PBI | Care Score Mother | .04 | .03 | .21 | 1.15 | .14 |
| | Overprotection Score Mother | .02 | .04 | .07 | .48 | −.07 |
| | Care Score Father | .01 | .03 | .05 | .40 | −.04 |
| | Overprotection Score Father | −.08 | .05 | −.26 | 1.78 | −.17 |
| ECR-R | Anxiety | −.356 | .28 | −.18 | 1.27 | −.92 |
| | Avoidance | −.256 | .26 | −.15 | 1.00 | −.77 |
| Variable | | | | Beta | *t* | *p* |
| Step 1 | | | | | | |
| PBI | Care Score Mother | | | .35 | 2.77 | .01 |
| | Overprotection Score Mother | | | .07 | .48 | .64 |
| | Care Score Father | | | .07 | .59 | .56 |
| | Overprotection Score Father | | | −.30 | 2.04 | .05 |
| Step 2 | | | | | | |
| PBI | Care Score Mother | | | .21 | 1.15 | .14 |
| | Overprotection Score Mother | | | .07 | .48 | −.07 |
| | Care Score Father | | | .05 | .40 | −.04 |
| | Overprotection Score Father | | | −.26 | 1.78 | −.17 |
| ECR-R | Anxiety | | | −.18 | 1.27 | −.92 |
| | Avoidance | | | −.15 | 1.00 | −.77 |

$R^2$ = .24 for Step 1; .29 for Step 2.

environment lacking care and support. Attachment theory could predict that the ex-boarders who started in their early years have internalised these cognitive schemas to replay in adulthood. It is possible that some of the later boarders, who had previously had a loving and attuned caregiver, had internalised their attachment figure prior to boarding and consequently did not physically need to turn to them so much in times of need (Bowlby, 1973).

Higher insecure anxiety scores are associated with lower starting age at boarding school. An anxious attachment as a result of a maternal separation can manifest as a fear of attachment figure unavailability; it can lead to intense attachment behaviour such as over-dependence and constant vigilance of the whereabouts of an attachment figure, borne from a fear that they will not be available when needed (Bowlby, 1975). In a boarding school environment, parental attachment figures would be physically absent all of the time. For the ex-boarder, this could lead to an internalisation that in times of need, their attachment figure would be unavailable and in adult life lead to high attachment anxiety. However, according to C. R. Fraley (2019), as teenagers we turn to our peers for support and at boarding school one would be surrounded by one's peers constantly. Considering this, later boarders in the current study may have relied on the support of their peers over their parents, and indeed had a longer time spent at home in their early years to form more secure caregiver attachments, thus reducing the impact of attachment disruption.

There was a significant relationship between age started boarding and PBI care scores, where parental care is associated with later starting age at boarding school. Indeed, regression analysis identified care from mother to be a strong predictor of age at first boarding. The lower care scores indicated by earlier boarders may suggest a perception that their parents lacked interest and concern (Segura-García et al., 2016). It could be predicted

that a young child who has been left in the care of strangers might feel this way. According to Bowlby (1973) experiences of the perceived availability and reliability of attachment figures during childhood is an accurate portrayal of the experiences received. Additionally, the results suggest that a low parental care score relates to a high avoidance and anxiety score. This indicates that the perception of lack of love and empathy from parental figures may result in an insecure adult attachment style. Considering PBI overprotection scores, there was a significant negative correlation between higher age at first boarding and lower overprotection scores for the mother and father, however, regression analysis only identified overprotection scores for the father as a predictive factor. This indicates a weaker relationship, which may be explained as boarders are away from home for 9 months of the year, and it is possible that this type of parental behaviour (parental control and invasive behaviour [Segura-García et al., 2016]) is less likely to have a significant impact.

The current study aimed to determine if the age at which a child attends boarding school is a contributory factor towards difficulties in adulthood, and found that younger boarders had poorer attachment outcomes, with parental bonding identified as a predictive factor for age at first boarding. No relationship was observed between age at first boarding and alcohol and substance use outcomes. The participants from the current study were recruited from the general public, unlike the qualitative work conducted by Schaverien (2015), and Duffell and Basset (2016), with clients directly accessing therapy. Exploring a non-clinical sample is an advantage of the present research, allowing researchers to explore the scope of the influence of boarding at the sub-clinical, but still impactful, level. A further benefit of utilising a general population sample is the higher response rate, allowing our investigation to meet the power analysis. Indeed, the response from ex-boarders was enthusiastic, with many responding to the advertisement within 48 hours of release. This perhaps suggests a desire within the ex-boarding school community to discuss their experiences, an opportunity that many feel they do not have. According to Duffell (2000) the public and parental perception of the "privilege" of attending a boarding school may mean that some ex-boarders feel they cannot vocalise their negative feelings towards boarding school. The current study may validate the perceived experiences ex-boarders have faced and also highlight to an individual that they may benefit from talking about those experiences in therapy or other social support forums. Conversely, while the sample size did meet the power analysis, this was still a relatively small sample and consequently results may not be generalisable to the boarding school population; the findings only reflect those willing to talk about their experiences. For some who had more adverse experiences, they may not have felt able to talk about the impact boarding school had on them. Similarly, those who have less adverse experiences may not have felt as compelled to talk about them as those who participated.

### *Limitations and future directions*

According to Duffell and Basset (2016) ex-boarding school adults can often present with substance use difficulties in therapy. This relationship has also been observed in survivors of Native American "Indian" residential schools (Zephier Olson & Dombrowski, 2020); however, experiences and contexts differ too vastly for results to be generalised to the

UK, privileged experience. It was hypothesised that there would be a significant difference in substance use between the boarders and the day pupils; however, this was not found in the current sample. These findings are inconsistent with previous studies that have found a link between poor parental bonding and substance use (Segura-García et al., 2016). A possible explanation for the absence of differences between the groups is that neither of the measures used (AUDIT & DUDIT) screen for past substance use difficulties but instead assess current problems. For example, one of the participants in the study contacted the researcher because they were certain that their historical alcoholism was a direct result of their boarding school experience, but this was not captured by the measures used as they are now abstinent from alcohol. Further, the present study does not consider pertinent individual differences, such as how long each participant boarded, the potential comfort of having a sibling at the school, and traumatic versus favourable experiences of boarding school, which may impact their experience and subsequent adult outcomes. Indeed, whilst extensive qualitative exploration has been conducted by Schaverien (2015), which determined that boarding was a traumatic experience, this was conducted on a clinical sample, those who were more likely to have experienced trauma, and thus drawing conclusions for all ex-boarders is not appropriate. To address these limitations, the authors plan to replicate the present study, employing measures of historic drug and alcohol use, such as the Lifetime Drinking History questionnaire (LDH-q; Friesema et al., 2004), and/or the AUDIT-C (Bell & Britton, 2015), and the DUDIT-C (Basedow et al., 2021), and include a qualitative exploration of their self-disclosed experiences (favourable and unfavourable) to capture a more accurate representation of the lived experiences, and subsequent potential drug and alcohol use among this population.

Further, previous research has highlighted links between childhood trauma and insecure adult attachment styles (Min et al., 2007). The current research did not collect data surrounding other childhood traumas and family environment, and thus assertions as to the impact of boarding on attachment style and perceived parental bonding may be overstated, as such differences may result from a different early childhood trauma. In addition, adult attachment styles may be affected by adverse life events, parenthood, relationship breakup, and therapy (C. R. Fraley, 2019), which were not explored during the current study. On reflection, a possible limitation of the Parental Bonding Instrument is that it does not take into account the impact of family environment or other factors that may have influenced the perceived care and over-protection a child felt from their parents. It is possible that a poor or positive home environment could influence how a child has perceived their parental care and over-protection, thus perceived parental bonding cannot be exclusively linked to the boarding school experience. Further, the current study did not differentiate between weekly or full time boarders. It is possible that for a weekly boarder going home every week may alleviate any possible feelings of abandonment. Conversely, feelings of abandonment could be multiplied by the perception of abandonment on a weekly basis and have the effect of compounding the trauma. As above, the authors plan to address such limitations in a replication, which would include controlling for other lifetime traumas, and boarder type.

The current study adds to the existing, scarce literature of the adult attachment and substance use outcomes of childhood boarding school attendance, and determined that the younger boarders had higher anxiety and avoidance scores, indicating insecure attachment (Fraley et al., 2000b) compared with those who were older when they first

boarded. The current research indicates that attending a boarding school at an early age may adversely affect their adult attachment style in close relationships, leading authors to conclude that children should not board prior to their adolescent years. However, ex-boarders present with additional difficulties not examined in the current research, such as a compulsion to succeed, working hard, timetabling daily life, a sense of shame (Duffell & Basset, 2016), and dissociative amnesia (Schaverien, 2015). Further research aiming to formalise BSSyn may benefit from exploring these additional difficulties, which may ultimately aid in the development of a screening tool that could be used by clinicians to determine if a patient has been affected by attending boarding school.

The current study aimed to quantify and explore the possibility that attending a boarding school is sufficient separation for a child from their attachment figure to influence perceived parental care, possibly leading to adult insecure attachment style and substance use difficulties. Children who started boarding earlier had higher insecure attachment styles and lower perceived parental care. It is hoped that the current research can highlight the negative impact of early boarding, and future research in this area could lead to a more considered approach to the future well-being of the next generation.

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## Disclosure statement

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## Authors' contributions

NW conceived the study, all aspects of study design, and wrote manuscript. MIMO supervised the research, and edited for publication. Both authors contributed to study design, and reviewing and approving the final manuscript.

## Data availability statement

The data that support the findings of this study are available on request from the corresponding author, MMO. The data are not publicly available due to their containing information that could compromise the privacy of research participants.

## Ethical statement

The study described in the attached manuscript was approved by the Birmingham City University BLSS Ethics Committee in May 2020 (Approval Code: PSY_MSc_Mar20_013).

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