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Research Paper

Exploring looked-after adolescents' reports of their dissociative experiences.



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ABSTRACT

Objective: In this study, the relationship between levels of dissociation, several pre-placement factors and other background variables was explored to facilitate understanding of the high prevalence of dissociation in adolescents living in care.

Methods: A sample of adolescents ($n = 68$) between the ages of 11 and 17 in care at Five Rivers Child Care (FRCC) participated in the study. The Adolescent Dissociative Experiences Scale (ADES), a self-administered dissociation questionnaire was compared with an established carer-report measure of dissociation, the Child Dissociative Checklist (CDC), the Strengths and Difficulties Questionnaire (SDQ) and the Trauma and Adverse Life Experiences Assessment (TALE) to explore the relationship between dissociation and other emotional, behavioural, and trauma-related difficulties in a looked-after population.

Results: The exploration of demographic variables revealed that dissociation was more likely to be present in females than males, with the age placed in care also influencing levels of dissociation. Measures related to pre-placement risk factors were not shown to be related to dissociative experiences. As expected, regression models were not significant in explaining variance in ADES scores with minimal effects from background, pre-placement risk and psychopathology variables. Finally, a discrepancy was observed between participant self-related dissociation and carer, or residential worker observational scores of the adolescents' dissociation.

Conclusion: The study's findings corroborate previous research confirming high levels of dissociation among adolescents in a specific care population, with the ADES questionnaire demonstrating the ability to measure dissociation. Utilising the ADES can offer an opportunity to understand the presentation of dissociation in looked-after children, and for clinicians, may provide a deeper comprehension when formulating a more sophisticated support or treatment plan.

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1. Introduction

1.1. The origins of dissociation

The understanding of and terminology around dissociation has changed over time. Some of its earliest conceptualizations had psychoanalytic underpinnings with suggestions that physical symptoms unexplained by organic difficulties could be expounded by repressed emotions or traumas. The term 'conversion' was proposed to describe an unbearable, internal experience which may be projected outwardly into a somatic complaint (Blitzstein, 2008; Freud, 1896). Conversion was expanded upon by Janet (1886), who, in his work,

explored the mind-body connection and the link between trauma, stress, and emotional distortion. Janet suggested the term dissociation, describing dissociation as a psychological defence present as a means of coping with overwhelming traumatic experiences (van Der Hart & Horst, 1989). Although literature has disputed the credibility of historic parameters of dissociation, the exploration of symptoms has long continued, for example, with van der Kolk et al. (1996) referring to dissociation as a compartmentalization of experience. There remains a wish for further understanding of the variability of dissociative presentations (Loewenstein, 2018).

In the most recent version of the Diagnostic and Statistical Manual of Mental Disorders (DSM-V: American Psychiatric Association, 2013), dissociation is thought to have arisen from disruptions in the normal and subjective integrated functions of consciousness, memory, identity, emotion, body representation and perception. Dissociation is conceptualised as a spectrum from 'normal' to presentations of clinical concern, for example from daydreaming when driving, to an experience of feeling disconnected from self, reality, and

Abbreviations: FRCC, Five Rivers Child Care; ADES, Adolescent Dissociative Experiences Scale; CDC, Child Dissociative Checklist; SDQ, Strengths and Difficulties Questionnaire; TALE, Trauma and Adverse Life Experiences Assessment

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experiencing lapses in identity or memory (Waller et al., 1996). At the more severe end of the spectrum, dissociation can permit alteration of thought, feeling and experience, assisting an individual to 'switch off' during the experience of emotional distress or trauma (Costa, 2016; International Society for the Study of Trauma & Dissociation, 2020).

Although dissociation could be considered a protective factor and an adaptive response to managing emotional distress (Moulton et al., 2015), in the face of extreme discomfort it can also have a disabling effect, inhibiting the development and function of regulatory stress response systems. As such, an individual may be left unable to manage intense emotions, nor able to distinguish threatening situations from those which are safe (Briere et al., 2017; Dorahy et al., 2015; Schimmenti & Carretti, 2016). The extreme disconnection from oneself or from perception of reality, referred to as depersonalization and derealization respectively, can lead to a sense of confusion, exclusion, and turmoil if left unmanaged (Steinberg, 1995). Such symptoms are particularly prevalent in looked-after populations, with the understanding of dissociation being cited as key in understanding the complexity of behavioural and emotional presentations (Martin et al., 2022).

1.2. Trauma and dissociation

Experiencing some form of trauma during one's lifespan is not atypical; however, the intensity, duration and frequency of such experiences may determine their impact. Terr (1991) divided childhood trauma into two different types: Type One includes detailed memories of traumatic events, whereas Type Two is defined by denial, dissociation, and numbing. Modern, colloquial approaches have attempted to examine the differences in trauma presentations further. For example, interpersonal conflicts and abrupt relocation may be thought of as little 't' traumas, with adverse life events, childhood abuse, neglect and long-term deprivation being termed large 'T' traumas (Barbash, 2017). Large 'T' or chronic trauma can overwhelm an individual's ability to cope, culminating in debilitating difficulties that tend to intensify if multiple traumatic exposures are experienced (Alisic et al., 2014; Giller, 1999; Hetzel-Riggen & Roby, 2013). What has been evidenced is exposure to early interpersonal trauma can lead to the proclivity of emotional and behavioural difficulties (Farina & Liotti, 2013), with exposure to multiple traumas, sometimes referred to as cumulative trauma (Hodges et al., 2013), being associated with emotional regulation difficulties. The aetiologic relationship between dissociative disorders and childhood trauma is now generally accepted (Steinberg, 1995).

Many studies have explored the interplay between exposure to trauma and the development of dissociative symptoms, finding that physical abuse, emotional abuse, and neglect correlate with dissociative experiences (Haferkamp et al., 2015; Martin et al., 2013). Trauma and abuse are often used interchangeably; however, not all painful experiences will result in affective or cognitive overwhelm. It is being overwhelmed by an unmanageable force that can lead to a child experiencing the event as a spectator or observer and experiencing no, or only limited, pain or distress, and ultimately being protected from being aware of the full impact of what has happened (van der Kolk et al., 1996).

Emotional abuse by family members is a significant predictor of developing dissociation, as is emotional abuse by peers (Gušić et al., 2016). Experiences of incest and sexual abuse have also been linked to dissociation (Martin et al., 2013). Models which are trauma-genic suggest childhood trauma constitutes a likelihood of later dissociative traits, and such traits may develop to protect from experiences which have been compartmentalised or disintegrated from the individual's sense of self (Sayar & Kose, 2003). Additionally, it is important to note that children and adolescents who have not been exposed to any form of childhood trauma can display dissociative symptoms, often

as a means of coping with overwhelming stressors in their everyday lives (Shirar, 1996).

1.3. Dissociation in the care system

In 2018, approximately 102,000 children were looked after in the UK, a figure which has increased yearly since 2010 (Department for Education, 2019). In England and Wales, between 63% and 68% of those who entered the care system did so due to experiencing abuse or neglect (Department for Education, 2019; Welsh Government, 2020). Research demonstrates higher rates of dissociation among looked-after children in comparison to those living within a normative family environment, with symptoms of dissociation often peaking during childhood and adolescence (Hulette et al., 2011; Putnam, 1997). Among adolescents in outpatient and inpatient facilities, rates of clinically significant dissociation have been recorded as being as high as 16% and 42% respectively (Şar et al., 2014).

Although the aetiology of dissociation remains multifaceted, one suggestion for the heightened rates of dissociative symptoms among adolescents in care is the experience of repeated relational rupture or breakdown (Farina et al., 2019). Insecure or disorganised attachment styles have been found to impact upon a child's ability to integrate connections within the brain, and in this sense, dissociation could be considered a developmental disruption of the integration of memory, emotion, and identity (Schore, 2001; Stein & Kendall, 2003). If a child or adolescent continues to experience relationships which end prematurely, it may be harder to establish safety and trust in future relationships, with their sense of self remaining disintegrated. Furthermore, research has established multiple placement transitions contribute to externalising and internalising difficulties, including dissociation, largely due to the stress and anticipation of new carers and a new placement (Kisiel et al., 2020). In adolescence this may be increasingly difficult, especially given that dissociation has been shown to increase in intensity over time (Macfie et al., 2001).

Henschel et al. (2018) examined the prevalence of dissociation among maltreated adolescents, reporting high interpersonal emotional regulation difficulties including avoidance, suppression of emotion and increased sensitivity to aggressive stimuli. If an individual experiences dissociation at a level that suggests clinical concern and no support is available, dissociative symptoms may continue into adulthood, an experience that is suggested to impact more females than males (Şar et al., 2014). Without identifying dissociation, an individual may be open to a proclivity of emotional and behavioural difficulties in the long-term, as well as further potential placement instability (Alisic et al., 2014; Hetzel-Riggin & Roby, 2013).

1.4. Assessing dissociation

Several tools have been developed to quantify experiences of dissociation, including self-report assessments and behaviour-based observer-report measures. The Child Dissociative Checklist (CDC; Putnam et al., 1993) is a well validated, carer-rated dissociation screening tool which aims to identify dissociative traits. The CDC is often used by default due to the age of children with presenting symptoms, and their assumed lack of ability to provide an accurate account of their own presentation. The CDC has demonstrated reliability and validity when completed by carers and teachers (Putnam & Peterson, 1994) and is recommended for interpreting dissociation (Potgieter Marks et al., 2017). An important question for dissociation researchers is how to access and assess this population's internal experiences (Martin et al., 2022).

Similarly, the Adolescent Dissociative Experiences Scale (ADES; Armstrong et al., 1997) assesses dissociation, with the key difference being that it is a self-report measure for completion by adolescents. The ADES questionnaire is widely used and often combined with other measures to explore the relationship between dissociation and

life experiences, such as trauma and attachment. Research from [Waller et al. \(1996\)](#) suggests that the ADES can reflect basic aspects of dissociation, including dissociative amnesia, absorption and imaginative involvement, passive influence, depersonalization, and derealisation. The ADES has been used extensively within adolescent populations, both among normative and clinical cohorts ([Farrington et al., 2001](#)).

1.5. Research aims

The present study aims to examine the prevalence of dissociation in a sample of adolescents with a high level of emotional and behavioural difficulty as identified by the SDQ, who were living in foster care at Five Rivers Child Care Ltd. (FRCC), a provider of services for looked-after children in England. As part of this study, levels of dissociation are examined in relation to demographic characteristics (gender), pre-placement variables (changes in placement), traumatic experiences (presence and impact) and externalising and internalising behaviours. To further establish the properties of the ADES, the adolescents' self-reports of dissociation will be compared to an equivalent report on dissociation from foster carers.

1.6. Hypotheses

Based on previous research and studies, we hypothesise:

1. There will be differences in relation to pertinent demographic characteristics and levels of dissociation. Specifically, we expect adolescent girls to demonstrate higher levels of dissociation than boys, and we anticipate there will be a relationship between adolescent age and dissociation.
2. There will be differences in relation to pre-placement variables and levels of dissociation. We predict that adolescents with more placement changes will experience higher levels of dissociation, as will those with more complex experiences of trauma. The TALE questionnaire will be used to explore experiences of early adversity and will act as a contrasting measure to explore this expectation.
3. The ADES will have strong concurrent validity with the CDC, with both being sensitive at detecting clinical levels of dissociation.
4. Additionally, we expect the ADES to demonstrate a positive association with the total difficulty score of the carer-reported Strengths and Difficulties Questionnaire (SDQ), demonstrating a correlation between total difficulties and experience of dissociation.

2. Method

2.1. Overview

This study was conducted in collaboration between the Anna Freud National Centre for Children and Families (AFNCCF) and Five Rivers Child Care Limited (FRCC), the latter being an organization who provide services for looked-after children. In this study some preliminary properties of the ADES were examined, exploring its internal evaluative items, scales, and sub-scales. The ADES was contrasted with the parallel carer-completed Child Dissociative Checklist, whilst it was also validated against further measures of trauma and psychopathology to ascertain whether there were any patterns and associations.

2.2. Design

The present study utilises a non-randomised design, with participants being selected based on the score obtained on the SDQ. Those whose scores were categorised as high (≥ 17) on the SDQ completed

some additional measures delivered online, including the ADES, which were not part of the baseline protocol. The ADES was completed by the young person online through a measure collection tool/platform (POD). Additional measures in this study had been completed by the young persons' carers and supervising social workers.

2.3. Participants

Sixty-eight adolescents ($n = 68$) aged between 12 and 17 from residential and foster care at FRCC were recruited for participation. Of the sample, 34 identified as female, and 34 as male. Most participants identified themselves as 'White British' (94%). The remaining participants (6%) identified as White British/Caribbean, White European, Mixed Ethnicity and British Pakistani. Among the sample, 67.2% had been placed as singletons whilst 33.8% had been placed with at least one sibling. The number of previous placements varied greatly; 44.1% of participants had experienced no previous placements, and 55.9% had between 1 and 8 previous placements.

2.4. Measures

2.4.1. Adolescent Dissociative Experiences Scale (ADES: [Putnam, 1997](#))

The ADES is a self-rated questionnaire aiming to understand how adolescents (aged 11–17) experience dissociation. There are thirty items within the questionnaire, rated from zero to ten, with zero meaning 'Never' and ten meaning 'Always'. These items are categorised into four subscales: 'Amnesia', 'Depersonalisation', 'Passive Behaviour' and 'Absorption'. The total score is calculated by averaging the mean of the thirty item scores. The ADES demonstrates consistency between the main scale and each subscale, with high validity in identifying high levels of dissociation ([Putnam, 1997](#)).

2.4.2. Child Dissociative Checklist (CDC: [Armstrong et al., 1997](#))

The CDC is a questionnaire completed by a child's primary caregiver seeking to explore the presence or absence of dissociative symptoms. There are twenty items on the questionnaire, rated 'Not True', 'Somewhat or Sometimes True' and 'Very True'. The total score is calculated by adding the output of all twenty items together. The CDC has been validated as internally consistent and reliable in differentiating between children demonstrating dissociation and those who do not display traits (Cronbach alpha $\alpha = 0.86$; [Putnam & Peterson, 1994](#)). The measure has exhibited acceptable test-retest reliability ([Putnam et al., 1993](#)) and good concurrent validity ([Wherry et al., 1994](#)).

2.4.3. Trauma and Adverse Life Events scale (TALE: [Cross et al., 2018](#))

The TALE is a tool designed to explore and understand experiences of childhood adversity. Completed by a social worker or clinician, the 28-item questionnaire is split into two parts: the first presents 14 questions regarding the experience of traumatic and adverse life events, with the second part exploring the impact of these experiences. The former is scored 'Not Known', 'Possible' and 'Definite', with the impact statement scored 'Minimal', 'Moderate' and 'Severe'. The scores are totalled independently, providing a score for experienced traumatic experiences and a second score indicating the perceived impact. Preliminary analyses on the TALE have demonstrated acceptable reliability ($\alpha=0.71$), and when contrasted to the CDC and SDQ, the TALE is suggested to be a reliable tool for screening for looked-after children's experiences of adversity ([Kerr-Davis et al., 2022](#)).

2.4.4. Strengths and Difficulties Questionnaire ([Goodman, 1997](#))

The SDQ is a brief, 25-item emotional and behavioural screening tool used for children between 2 and 17 years old, with 8 additional impact questions. The SDQ in this instance was completed by the keyworker or primary caregiver, however, there are versions of the SDQ for education staff and self-reported versions too. The total score

is calculated to present an overall level of risk, with the scores also being divided into five subscales: 'emotional symptoms', 'behavioural symptoms', 'hyperactivity or inattention symptoms', 'peer difficulties' and 'prosocial behaviour'. Scores above 17 indicate a level of clinical significance. The SDQ has demonstrated both good test-retest reliability (Stone et al., 2015) and concurrent and discriminant validity of a good level (Muris et al., 2003). For this study, internalising and externalising subscales were also used in analyses. Internalising consisted of emotional symptoms and peer difficulties, while externalising consisted of behavioural symptoms and hyperactivity (Goodman, 2001).

2.5. Planned analysis

SPSS version 28 will be utilised to conduct all analyses. Descriptive and mean comparisons tests will be employed to explore the relationship between levels of dissociation and participant background variables, focusing on gender, placement change, and experience of adversity. Cronbach's Alpha will allow for the examination of the internal reliability of the ADES, with a Chi-Square Test being utilised to explore the concurrent validity of the ADES by comparing it to the CDC. Correlation tests will be used to reveal how dissociation levels relate to behavioural and emotional difficulties, specifically those obtained via the SDQ.

2.6. Ethical approval

The data collected for this study is part of a wider research project established by FRCC, which obtained ethical approval by University College London (UCL). The assessment data collected is part of the FRCC routine assessment process, which is in place to monitor and review outcomes for children in care at FRCC. Due to the age differences, consent was obtained in two ways: informed consent was obtained from the young people aged sixteen or above, with foster carers or keyworkers consenting on the behalf of children under sixteen. All data and participant information were kept anonymous and employed for research-use only. Data that was shared with AFNCCF was done so via encrypted email, and only with the Senior Research Consultant at AFNCCF, with whom FRCC has a contract of work.

3. Results

3.1. Descriptive statistics of the ADES

Table 1 illustrates the participants average total scores on the ADES questionnaire (M = 2.90, SD = 1.79), with skewness of 0.47 (SE = 0.29) and Kurtosis of -0.84 (SE = 0.58). Sixty-six percent of the total scores were below 4, and 34% above, the latter indicating possible dissociative traits.

To further check the data normality of ADES, we implemented the Kolmogorov-Smirnov test (see Table 2). The average mean scores on the ADES did not follow the normal distribution, D (53) = 0.13, p = .01. Therefore, it was appropriate to reject the null hypothesis that assumes that the data is normally distributed within this population. We could, however, perform parametric tests, since the sample size was large enough (n = 67).

Table 1
Descriptive statistics of the ADES.

	N	Min	Max	Mean	Std. Deviation	Skewness	Std. Error	Kurtosis	Std. Error
ADES	67	0.10	7.10	2.90	1.79	0.47	0.29	-0.84	0.58

Table 2
Kolmogorov-Smirnov Test of the ADES.

	Stats	Df	Sig.
ADES	0.13	67	.01

*p < 0.05.

3.2. Internal reliability of the ADES

We evaluated the internal consistency of the ADES questionnaire data to assess whether all items related to the same underlying constructs or dimensions. Such analysis provides further confidence in using the total scores and subsequent subscales.

In the sample (n = 50), participant scores on the full scale demonstrated 'fairly strong' internal reliability, with Cronbach's Alpha of α = 0.94. Further reliability analyses on the ADES four subscales demonstrated 'good' internal consistency for the subscale 'Depersonalisation' (12 items, α = 0.87) with the other three subscales demonstrating 'acceptable' internal consistency: 'Amnesia' (α = 0.76); 'Absorption' (α = 0.71); and 'Passive Behaviour' (α = 0.76). These results are displayed in Table 3.

Background Statistics

3.3. Gender differences

An independent sample T-test indicated female participants (n = 34) had significantly higher ADES scores (M = 3.47, SD=1.74) than male participants (n = 34; M = 2.48, SD = 1.78; p = .03 two-tailed). In this sample, females were found to be more susceptible to dissociative traits than boys, and more likely to self-report subjective experience of dissociation. When examining the subscales of the ADES, it was found that females scored higher on both the depersonalisation and passivity subscales, evidenced in Table 4.

3.4. Age difference

As demonstrated in Table 5, Pearson r correlations suggested no significant statistical relationships between age at assessment and

Table 3
Internal consistency reliability of ADES.

ADES Items	No. items	Cronbach's Alpha (α)
Total (30 items)	30	0.94
Depersonalisation (12 items)	12	0.87
Amnesia (7 items)	7	0.76
Absorption (6 items)	6	0.71
Passive Behaviour (5 items)	5	0.76

Table 4
Comparison of ADES mean scores by gender.

	Male (n = 34)		Female (n = 34)		T Value	Df.	Sig.
	M	SD	M	SD			
ADES total	2.48	1.78	3.47	1.74	2.23	61	.03
Amnesia	2.83	3.14	3.47	0.74	1.38	61	.71
Absorption	3.27	3.53	3.80	1.95	0.98	61	.32
Depersonalisation	1.76	2.52	3.31	2.01	3.26	61	.002
Passivity	2.67	3.27	3.88	2.09	2.41	61	.002

Table 5
Age and ADES scores.

	Age at assessment	Age at referral
ADES total	0.17	0.26*
Amnesia	-0.73	0.18
Absorption	-0.24	0.17
Depersonalisation	0.27	0.30
Passivity	0.17	0.25

* $p < .05$ (two-tailed).

ADES, $r(67) = 0.17, p = .18$. However, the results demonstrated a 'moderately positive' correlation, with a medium effect, between ADES scores and their age at referral to FRCC, $r(63) = 0.26, p = .04$ (two-tailed).

3.5. Placement history

Participants' previous placement numbers were grouped into three categories: zero previous placements ($n = 27$), one or two previous placements ($n = 18$), and three or more previous placements ($n = 12$). For a small number of participants ($n = 11$) placement history was unavailable. A One-way ANOVA examined the mean difference of ADES score. As indicated in Table 6, no statistically significant difference was found between group means, $F(2,53) = 0.11, p = .90$, despite the dissociation level being marginally higher in the group who had three or more previous placements ($M = 3.20, SD = 2.14$).

Further exploration was carried out on whether participants had been placed as singletons or with one or more siblings. Within this sample, participants placed alone had marginally higher dissociation rates ($M = 3.15, SD = 1.85$) than those placed with siblings ($M = 2.61, SD = 1.86$) though the overall finding was not statistically significant as indicated in Table 7.

3.6. Early trauma

Pearson correlations was carried out between the ADES score and responses from the TALE inventory to explore how a social worker report on participants' early experiences of adversity and trauma impacted upon their dissociative experiences. In Table 8, neither the

Table 8
Correlating ADES scores with TALE.

	TALE1	TALE2
ADES total	-0.36	-0.17
Amnesia	-0.25	-0.02
Absorption	-0.26	0.08
Depersonalisation	-0.47*	-0.21
Passivity	-0.34	-0.19

$p < .05$.

number of traumatic experiences (TALE 1) nor the perceived level of impact (TALE2) were correlated with the ADES. However, the depersonalisation subscale demonstrates a negative significant correlation with TALE1.

3.7. ADES and CDC

Next, adolescents' self-rated scores on the ADES are examined in relation to the carer report equivalent scale (CDC). For this examination, binary variable was created for the ADES total score with scores above or below the cut-off '4.0' indicating whether they were 'clinical' or not (Armstrong et al., 1997). Similarly, CDC total score was similarly coded into a binary variable based on a score above '12.0' as the clinical cut-off point (Putnam, 1997).

A Chi Square test between these two binary variables suggested no statistically significant association between the two scales ($\chi(1) = 2.00, p = .16$). Though not significant, Table 9 below indicates a clear trend with adolescents who rated themselves above the clinical cut-off on the ADES as being more likely to have been scored above the carer-reported clinical cut-off.

Table 9
Comparison of the ADES and the CDC.

		CDC above 12	CDC below 12	Total
ADES Below 4	Count	18	18	36
	Proportion%	50%	50%	100%
ADES Above 4	Count	5	12	17
	Proportion%	29.4%	70.6%	100%

Table 6
Comparison of ADES mean scores across placement history difference.

	0 previous placements $n = 27$		1-2 previous placements $n = 18$		3 or more previous placements $n = 12$		f value	sig.
	M	SD	M	SD	M	SD		
ADES total	2.92	1.92	2.90	1.78	3.20	2.14	0.11	0.90
Amnesia	3.17	1.61	2.89	1.71	3.71	2.50	0.735	0.484
Absorption	3.53	2.35	3.51	1.72	4.26	2.73	0.522	0.596
Depersonalisation	2.55	2.14	2.45	2.24	2.64	1.83	0.032	0.968
Passivity	3.25	2.23	3.37	2.06	3.38	2.28	0.023	0.978

Table 7
Comparison of ADES mean scores in solo versus sibling placements.

	Placed without siblings		Placed with siblings		t value	df.	sig.
	M	SD	M	SD			
ADES total	3.15	1.85	2.61	1.86	1.03	55	0.31
Amnesia	3.27	1.75	3.03	2.05	0.462	55	0.65
Absorption	3.78	2.14	3.34	2.32	0.704	55	0.49
Depersonalisation	2.80	2.07	2.03	0.93	1.36	55	0.18
Passivity	3.54	2.21	2.93	1.94	1.02	55	0.31

3.8. Behavioural and emotional difficulties

3.8.1. ADES and SDQ

Next, scores on the ADES were examined in relation to adolescents' own self-reports of the overall psychosocial functioning on the SDQ. Table 10 indicates there was not a significant correlation between the ADES and the SDQ.

3.9. Multiple regression

Finally, a regression model was conducted to investigate the role of potential factors and variables in adolescent-reported dissociative levels, evidenced in Table 11. Predictor variables were entered into the hierarchical regression models. In the initial step of the analysis, demographic characteristics (i.e., age at referral, age at assessment, gender) were entered into the model. These were followed by risk-specific characteristics, which included number of previous placements, placed alone or with sibling(s), trauma scores (TALE1, TALE2), and in the final step, SDQ Total score was added to the model.

The initial Step was not significant in explaining variance in total ADES scores, $R^2 = 0.18$, $F(3, 64) = 2.57$, $p = .062$. Age at referral ($\beta = 0.110$, $p = .230$), Age at assessment ($\beta = 0.049$, $p = .711$), and Gender ($\beta = -0.774$, $p = .088$) were not significantly contributed to the model, suggesting that these variables do not appear to be factors for predicting dissociation in adolescence. In the second model, the addition of pre-placement risk factors (number of previous placements, placed alone with or without sibling(s), trauma scores on TALE1 and TALE2) only fractionally increased the variability explained by the model by 5.5%, however, such increase was not significant, $R^2_{change} = 0.000$, $F(7, 60) = 1.663$, $p = .135$. Among the predictors, there was no statistical significance – number of previous placements ($\beta = -0.09$, $p = .760$), placed alone or with sibling(s) ($\beta = -0.08$, $p = .987$), TALE1 ($\beta = -0.174$, $p = .088$) and TALE2 ($\beta = 0.022$, $p = .706$). In the final model, the addition of SDQ Total Behavioural problems made no change to the variability explained by the model ($R^2_{change} = 0.055$, $F(8, 59) = 1.434$, $p = .202$). The SDQ Total score was not statistically significant ($\beta = -0.32$, $p = .892$).

Table 10
Comparison of the ADES Subscales and SDQ.

	SDQ total difficulties score	SDQ internalising	SDQ externalising
ADES total	0.02	.085	.123
Amnesia	0.01	.080	.020
Absorption	-0.03	.064	.155
Depersonalisation	0.16	.090	.045
Passivity	0.21	.107	.236

4. Discussion

The ADES questionnaire demonstrated strong internal consistency, aligning with previous research that highlighted its ability to differentiate between varying levels of dissociation (Armstrong et al., 1997). All four of the ADES subscales determined strong internal reliability of the measure and its various components of assessment, with the continuous response on the scale of 0 to 10 providing participants with more variability and flexibility in assessing their own experience of dissociation. This multidimensional construct is crucial to measuring dissociation levels; its psychometric properties allow for an examination of the extent and patterns of dissociation in adolescents who score below and above the cut-off score, determining presence, or not, of dissociation (Armstrong et al., 1997).

The present study considered demographic factors such as gender, placement history, and experience of early adversity. Regarding gender, female adolescents were found to experience higher rates of dissociation, thus supporting previous research acknowledging a higher prevalence of dissociation among females (Gusić et al., 2016). Şar et al. (2014) acknowledged that non-treated dissociation in females has the propensity to deteriorate further and persist into adulthood. Additional research has not, however, established why dissociation is particularly high in females compared to males, although it has been suggested that the experience of specific types of abuse, such as sexual abuse, may be present in the history of those who experience more severe dissociative traits (Wamser-Nanney & Cherry, 2018). Regardless of gender, this provides confirmation of the importance of screening for dissociation to ensure identification and, if necessary, an appropriate plan of support, to mitigate the potential impact on future life trajectory.

No statistically significant relationship was found between dissociation levels and age at time of assessment. Nevertheless, it was noted that the later the adolescent was referred to FRCC, the higher their levels of experienced dissociation were. This finding supports research around experience of dissociation correlating with the number of placement endings or breakdowns (Hulette et al., 2011). No significant relationship was found between dissociation, frequency of placement moves, and whether the placement was with siblings or without. Research exploring these variables in relation to the CDC, another dissociative checklist, found similar results, although interestingly dissociation was found to be higher in singleton placements than in sibling placements (Martin et al., 2022).

Unexpectedly, no significant relationship was found between early experiences of trauma and resulting level of dissociation. However, research has documented that although there is a strong correlation between adverse childhood experiences and dissociative traits, it is not certain that experiences of trauma will result in symptoms of dissociation (Wamser-Nanney & Cherry, 2018). Further research is required to explore the different facets of pre-placement history and

Table 11
Hierarchical regression analyses predicting adoptive fathers' PSI scores in childhood (P1).

Predictors	B	SE B	β	p-value	R ²	ΔR^2
Step 1				< 0.001	.066	.108
Age at referral	.110	.091	.169	.220		
Age at assessment	-0.049	.133	.051	.711		
Gender	-0.774	.447	-0.213	.088		
Step 2				< 0.001	.065	.055
No. placements	-0.009	.031	-0.037	.760		
Placed alone/sib	-0.008	.521	-0.002	.987		
TALE1	-0.174	.100	.271	.808		
TALE 2	.022	.058	.059	.706		
Step 3					.049	.000
CBCL Total	-0.032	.231	.018	.891		

**p < .01.
***p < .001.

personal experience that may influence the presence or absence of dissociative traits.

Moreover, the sample size of the TALE was small, and therefore this specific analysis was not sufficiently powered to detect differences between early trauma and dissociation. It must be emphasised that the TALE is a new questionnaire, and this study may provide evidence of the complexity of establishing a measure both brief enough to be useful for screening in clinical settings, and comprehensive enough to capture the scope of adversity (Gray et al., 2004). In addition, recall of traumatic experience may be influenced by mental states and memory fluctuation, with the intensity of the experience open to reporter inaccuracy, especially coming from a third party, e.g., the social worker (Colman et al., 2016). Further examination of the TALE within larger samples would be necessary before researchers can rely on it to proficiently correlate with present experienced difficulties (Kerr-Davis et al., 2022).

Further analyses examined how dissociative experiences might relate to other aspects of young people's psychopathology (internalizing and externalizing behaviours). The self-reported ADES scores did not correlate with the total difficulty score obtained from the carer reported SDQ, the measure used to initially identify participants for the present study. This lack of correlation may be subject to the 'psychoform' symptoms – symptoms phenomenologically experienced in the mind (Nijenjuis & Den Boer, 2009) – involved in dissociation, where young people have difficulties integrating cognition and emotion and eventually succumb to feelings of depersonalisation (Henschel et al., 2018). It is also evidenced in research by Choi et al. (2017) that adolescence is a critical developmental period wherein lots of changes in body, behaviours and emotions are typical. It therefore may be harder to define what is a typical trait of the whirlwind of adolescence, versus what is the appearance of dissociative symptoms. That said, the SDQ was not completed by the adolescents themselves, which highlights a notable limitation in this contrast of the completed measures. A concluding regression analysis failed to reach statistical significance and confirmed that variation in ADES scores was not explained by any background, pre-placement risk and psychopathology variables.

When contrasting the self-report ADES with the carer-report CDC, both measures demonstrated ability to detect high levels of dissociation, albeit, neither correlated with each other in the present study. Individually, both assessments demonstrate reliability and validity in screening for symptoms of dissociation. Within this sample, both the child via the ADES and the carer via the CDC demonstrated awareness of the presentation or experience of dissociation. Interestingly, carer and child reports of dissociation did vary, with self-reports of dissociation via the ADES being present in 29.4% of adolescent responses, compared to a 70.6% presence via the carer reported CDC. Varying factors could influence reporting, including adolescents under-reporting feelings, perhaps due to their experience being 'the norm' for them or out of an impression of being assessed and therefore wishing to appear 'normal'. Additionally, there is a chance that carers may over-report their experiences of their adolescents' behaviours or traits, especially if they themselves are experiencing heightened levels of stress. Another factor to consider is the closeness of the carer-adolescent relationship. If the adolescent is less present in the home, it may be more difficult for the carer to accurately reflect on their young person's presentation and experience.

4.1. Limitations

Even though the ADES has been suggested as being a reliable measure of dissociation, it is important to highlight that it is a screening and preliminary assessment tool, and as such, clinical, structured, and semi-structured interviews are required to further explore dissociative experiences. The ADES alone could be considered too crude a means to assess dimensions that are far more subtle and pre-

conscious, given that dissociation relates to identity, perception, and memory. Such understanding of dissociation further warrants the use of follow-up tools beyond the ADES, such as the aforementioned use of interviews or observations. It is important to note that any assessment should act as a springboard in the evaluation and treatment of dissociative symptoms in children and adolescents and should prompt further exploration regarding individual experiences (Silberg, 2000).

The study is under-powered with a relatively small sample size, meaning that findings have to be thought about with caution and not generalised to the population at large. The inclusion of data from those adolescents who chose not to complete the ADES may have incurred interesting findings regarding emotional and behavioural difficulty, attachment style, and even perceived experience of dissociation, via the carer completed CDC. Finally, the SDQ included in this study was completed by carers, not the adolescents themselves, and therefore the adolescents experience of their own emotional and behavioural difficulties is not captured. The contrast difference between adolescent and carer perception could have been another avenue of interest.

4.2. Future directions

Future research can proceed further in constructing the ADES questionnaire using factor analysis to determine the underlying causation of dissociation. In terms of further evaluating measures of dissociation, the exploration of the differences between the ADES and CDC may lead to new research directions, allowing further examination and comparison between these two instruments. Undeniably, larger sample sizes of a longitudinal nature will permit a deeper analysis and understanding of dissociation, which was not entirely achievable in the present study.

There is also an opportunity in future research to explore the discrepancy between self-reported and carer-reported measures. Adolescents in this study completed the ADES themselves, giving them a voice for their experiences. Children in care are often not asked to be part of their assessment process or a review of their experiences and difficulties. Giving the adolescent an opportunity to participate instils confidence, empowerment, and purpose in the adolescent, and gives them a chance to be more included in aspects of their care journey or experience. Perhaps there is also an opportunity to capture a more accurate reflection of the adolescent's dissociative experiences.

In adolescence there is an increased shift towards independence, and therefore there may be less opportunity for observation of the adolescent's behaviour or presentation. The adolescent themselves may be the better observer of their experience, and therefore, a self-report measure may provide a heightened level of accuracy. Recent research has examined the length of the ADES and has concluded that abbreviated versions of the assessment are able to retain empirical reliability regarding symptomology (Lindfors et al., 2022). This is promising for engagement, and may allow for a shorter screening, with more time to therefore be given to focusing on empirical evidence, assessing, and interviewing.

Finally, future directions could specifically explore the impact of dissociation on children and young people in the care system. Research has documented that although experiences of dissociation can impact functioning for the better (Perez-Fabello & Campos, 2011), dissociation of a severe level has been associated with a lower quality of life (Ozdemir et al., 2015). There is an opportunity to consider policy and guidance around supporting children and young people who experience dissociation, especially an approach which is more holistic, and considers the aspects of the current environment that may perpetuate the young person's dissociative experiences. Additionally, guidance around treatment or suggestions regarding ongoing therapeutic work or intervention would only be beneficial in supporting dissociation in a durable manner.

5. Conclusions

Dissociation continues to be enigmatic and difficult to fully understand, explore and study. Establishing assessments that can support with the preliminary identification of dissociation, such as the ADES questionnaire, is essential and necessary to assist with the understanding of the presence of dissociative traits. Such measures can open doors of opportunity in terms of providing wrap-around support for adolescents, should they need it.

Clinicians need to be aware of the signs of dissociation, especially when working with looked-after children. The complexities and subtleties of the symptoms of dissociation might appear quite disparate and idiosyncratic, including appearing cut-off, rapid personality changes, having poor sense of time and hearing voices. Looked-after children who dissociate may appear as though they have a fragmented sense of self with a compromised integrative capacity. Clinicians working with this population might well focus on developing more constructive and benign representations and promoting internal integration.

The present study examined the psychometric properties of the ADES to consolidate its reliability and validity. Such knowledge lends more substantiated confidence for using this instrument in alignment with others, particularly within a looked-after sector. The findings provide an opportunity for other care provisions to consider the use of the ADES within their baseline assessment measures. The model of assessment developed by FRCC follows a strict routine process of assessing emotional and behavioural difficulties at time of initial placement, with mandated monitoring of development every 6 to 12 months, to detect, prevent, and treat difficulties and pathologies. Both the ADES and the CDC are incorporated into this battery of assessments to ensure that dissociation is not missed, and therefore, this part of the child's experience can be examined and subsequently supported.

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Data availability

The data that support the findings of this study are available on reasonable request from the corresponding author. The data are not publicly available to protect confidentiality of the participants involved.

Declaration of Competing Interest

None.

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