UNIVERSITY OF SOUTHAMPTON

DISSOCIATION AND ADOLESCENT PSYCHOPATHOLOGY

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General Abstract

The majority of research on dissociation focuses on adulthood, although adolescence is thought to be a transitional time in the development of dissociation. This dissertation consists of two papers, both of which emphasize the importance of investigating dissociation during adolescence.

A literature review of dissociation in adolescence was carried out. Recent conceptualizations of dissociation were first evaluated, followed by a review of studies investigating the developmental course of dissociation. The relationship between normal adolescent processes and dissociation was explored and the evidence for a relationship between dissociation and adolescent psychopathology was examined. Subsequently, the empirical evidence and theoretical basis for childhood trauma and disorganized attachment leading to dissociation were evaluated. It was argued that the developmental tasks of adolescence may provoke pathological dissociation in vulnerable young people. Finally, the clinical and research implications of a greater understanding of dissociation in adolescence were outlined.

The research paper investigated the psychometric properties of the Adolescent Dissociative Experiences Scale and changes in the frequency of dissociative experiences during adolescence, as well as exploring the relationship between dissociation and psychological symptomatology in adolescence, particularly in females with anorexia. Dissociation was highly correlated with psychological symptomatology in non-clinical, mixed clinical and anorexic adolescent females and appeared to relate in a specific way to symptomatology in anorexia. The clinical and research implications of these findings were discussed.

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THE DEVELOPMENT OF DISSOCIATION AND ITS ROLE IN ADOLESCENT PSYCHOPATHOLOGY

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Short title: Dissociation in adolescence

This paper has been prepared for submission to 'Development and Psychopathology' (see Appendix A).

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The Development of Dissociation and its Role in Adolescent Psychopathology

Abstract

This paper explores the role of dissociation in the development of adolescent psychopathology and examines the role of adolescent processes in generating dissociation. The concept of dissociation is reviewed and it is concluded that dissociation is best conceptualized as a multifaceted construct composed of three major interconnected components; amnesia, depersonalization and absorption. The sparse data about the developmental course of dissociation are examined which indicate that dissociation is at its highest in childhood and adolescence and reduces in young adulthood. Adolescent processes which might contribute to high dissociation are outlined. The empirical evidence for a relationship between dissociation and psychological problems in adolescence is reviewed and it is argued that dissociation may be an important developmental factor in adolescent psychopathology. The causes of pathological dissociation are considered and the empirical evidence and theoretical basis for childhood trauma and disorganized attachment leading to dissociation are evaluated. It is argued that the developmental tasks of adolescence are particularly likely to provoke pathological dissociation in young people who have experienced trauma or disorganized attachment. Finally, the clinical and research implications of a greater understanding of dissociation in adolescence are discussed.

Key words: Dissociation, adolescence, trauma, attachment, development.

The Development of Dissociation and its Role in Adolescent Psychopathology

There has been a recent proliferation of articles in the adult literature (e.g., Brodsky, Cloitre, & Dulit, 1995; Everill & Waller, 1995) detailing the role of dissociation - the failure to integrate experiences - in various psychological problems. Those psychological disorders include posttraumatic stress disorder (Branscomb, 1991) and dissociative disorders (Carlson & Putnam, 1993). However, it is important to note that some of the adult psychological problems most reliably linked to dissociation are those that tend to emerge during adolescence - eating disorders, suicidal and self-injurious behaviors, and borderline personality disorder. Since adolescence is thought to be a transitional time in the development of dissociation (Armstrong, Putnam, Carlson, Libero, & Smith, 1997), understanding of this defensive processing style might be broadened by placing it in the context of adolescent development. However, there is a dearth of information about dissociation in adolescence. This paper aims to fill this gap in the literature by providing the first detailed review of dissociation in adolescence.

The aim of this review is to explore the role of dissociation in the development of adolescent psychopathology, and to examine the role of adolescent processes in provoking dissociation. To help synthesize recent findings and to offer a developmental psychopathology perspective on dissociation, this paper also provides a review of the concept of dissociation, examining its developmental course and its links with symptomatology. Possible causal influences on pathological dissociation are proposed, and the mechanisms by which these factors lead to dissociation are examined. It is argued that, in some circumstances, the developmental tasks of adolescence can increase

the use of dissociation so that it becomes pathological. The emphasis throughout this review is on dissociation as it relates to psychological problems, rather than on dissociative disorders *per se*. Although recent research indicates that dissociation may have biological underpinnings (Krystal, Bennett, Bremner, Southwick, & Charney, 1996; Griffin, Resick, & Mechanic, 1997), these will not be discussed here as there is no clear developmental picture of those biological factors.

Dissociation

Prior to considering the development of dissociation in adolescence, it is necessary to explain how it has been understood in the adult literature. In this section, the historical context of the study of dissociation is outlined briefly, before dissociation is defined. The construct of dissociation is conceptualized more clearly by briefly reviewing measurement issues and factors that are proposed to constitute dissociation. Finally, the debate about whether dissociation is a continuous or dichotomous variable will be examined.

Historical context of dissociation

Much curiosity surrounded dissociation at the end of the nineteenth century (Janet, 1889/1973; Prince, 1905/1978). Attention then waned, primarily due to the rising prominence of psychoanalysis and then behaviorism, until interest was renewed in the 1980s. The recent proliferation of dissociation research was prompted by an increased awareness that childhood trauma is relatively common (Finkelhor, 1986), and that it has a variety of psychopathological sequelae (Briere, 1992). Research on post-traumatic syndromes and traumatically induced dissociative disorders also stimulated further

interest in dissociation (Spiegel, 1986; Terr, 1991), as did the recognition that dissociation may confer a worse prognosis and impede treatment (Kennerley, 1996; Waller, 1997).

Hitherto, dissociation research has focused predominantly upon the relationships between trauma and dissociation and between dissociation and psychiatric diagnoses. Most studies have used adult samples and correlational designs. Therefore, numerous questions about the development of dissociation remain. For example, what dissociative experiences are normative at different developmental stages? What levels (or types) of dissociation are indicative of pathology? What causes pathological dissociation?

The concept of dissociation

Dissociation is usually described as: "a disruption in the normally integrated functions of consciousness, memory, identity, or perception of the environment" (American Psychiatric Association, 1994, p.477). It is a complex process, consisting of a number of related phenomena (Putnam, 1997; Steinberg, 1994). These include: amnesia (the inability to recall a significant segment of time); absorption and imaginative involvement (the ability to be lost in the task at hand); identity confusion (feeling uncertain or conflict about your identity); passive influence (feeling that you do not have control over your body or sensations); derealization (a sense that your surroundings are unreal); and depersonalization (a sense of detachment from your body or self).

Dissociation remains a controversial construct. It is criticized for being used so broadly (and to describe so many different phenomena) that it has become meaningless (Frankel, 1990). Recent theorists have argued that research should discriminate

pathological dissociation from common benign experiences (Putnam, Carlson, Ross, Anderson, Clark, Torem, Bowman, Coons, Chu, Dill, Loewenstein, & Braun, 1996). Pathological dissociation has been defined as being severe or persistent, and causing demonstrable impairments in social and occupational functioning (Putnam, 1997). Dissociation may manifest itself differently in adolescents and interfere with functioning in distinct ways.

Measuring dissociation in adults

Several questionnaires have been developed to measure dissociative experiences in adults, such as the Dissociative Experiences Scale (DES; Bernstein & Putnam, 1986); the Perceptual Alteration Scale (PAS; Sanders, 1986); and the Dissociation Questionnaire (DIS-Q; Vanderlinden, Van Dyck, Vandereyecken, & Vertommen, 1991). Studies indicate that these measures are closely comparable (Fischer & Elnitsky, 1990; Ray & Faith, 1995; Ray, June, Turaj, & Lundy, 1992), suggesting that they tap into a common core construct. There are also a number of semi-structured interviews designed to diagnose dissociative disorders according to DSM-IV criteria, including the Structured Clinical Interview for Dissociative Disorders (SCID-D; Steinberg, Rounsaville, & Cicchetti, 1990) and the Dissociative Disorders Interview Schedule (DDIS; Ross, Heber, Norton, Anderson, Anderson, & Barchet, 1989).

Despite the number of instruments available, measuring dissociation continues to be problematic. For instance, since amnesia is one of the constituents of dissociation, some individuals may forget their symptoms, whereas others will seek to hide identity problems or episodes of depersonalization (Steinberg, 1996). The lack of clarity about dissociation and its development has limited the utility of measurement tools. Further,

the questionnaire items were developed from clinical features observed in patients, and so measures are essentially symptom checklists, conflating pathological and non-pathological dissociation. Since dissociation involves a constellation of different experiences, it is important to investigate how those constituents relate to one another.

Factors underlying dissociation

Factor analyses of various measures of dissociation have found conflicting results. Taking the DES as an example, the majority of studies (e.g., Carlson & Putnam, 1993; Ross, Joshi, & Currie, 1991; Sanders & Green, 1994; Simeon, Guralnik, Gross, Stein, Schmeidler, & Hollander, 1998) have concluded that a three-factor solution is best, and have labelled these factors: absorption and imaginative involvement (hereafter, absorption); derealization/depersonalization (hereafter, depersonalization); and amnesia. However, other factor analyses of the DES with just non-clinical samples have found four to seven factors (Ray & Faith, 1995; Ray et al., 1992), as well as one-factor solutions (Fischer & Elnitsky, 1990; Holtgraves & Stockdale, 1997; Wright & Loftus, 1999).

There are many problems with these factor analyses. Frequency distributions of dissociation scores are usually highly skewed and clustered at the low end of the scale (e.g., Ray & Faith, 1992; Ross, Joshi, & Currie, 1990), whereas the majority of factor analysis techniques assume a normal distribution of scores. Waller (1995) found only a single factor when he reanalysed Bernstein & Putnam's (1986) data, controlling for skewness. Further, the factors derived are limited by the measurement tools used. The DES covers behavioral, affective and cognitive symptoms of dissociation. Somatic symptoms, identity confusion and passive influence do not emerge as factors, but this

may be because the DES does not tap into them. More sophisticated analyses of the distribution of dissociative symptoms have taken place recently and are considered below.

Is dissociation continuous or typological?

Most theorists (e.g., Bernstein & Putnam, 1986) have conceptualized dissociation as a continuum, with quantitative differences in dissociative experiences between individuals, ranging from minor dissociations of everyday life (such as daydreaming and 'highway hypnosis') to major forms of psychopathology (such as dissociative identity disorder - American Psychiatric Association, 1994). However, this continuum hypothesis has recently been challenged. Contemporary research suggests that a dissociative type of individual exists, whose dissociative experiences are pathological and different in degree and kind from those of others (Putnam et al., 1996; Waller & Ross, 1997; Waller et al., 1996).

Waller et al. (1996) used taxometric statistical methods (Meehl, 1973), which consider patterns of covariance in the items of a scale, to analyse DES scores from a large sample of non-clinical participants, general psychiatric patients and patients with dissociative disorders. Their results strongly support a typological model of pathological dissociation. The key differences between normal and pathological dissociation appear to be amnesia for complex behavior and extreme forms of depersonalization. In contrast, absorption appears to be normally distributed and not significantly related to pathological levels of dissociation (Putnam et al., 1996). The eight DES items that distinguish the dissociative type have been put together in a new screening measure for pathological dissociation - the DES-Taxon (DES-T). Preliminary studies indicate that

the DES-T discriminates between psychopathological groups more effectively than the DES (Simeon et al., 1998; Waller, Ohanian, Everill, Meyer, & Rouse, under consideration). Different origins and developmental course might be expected for these pathological and non-pathological features. In addition, different features may be pathological in adolescents compared with adults. However, it is not just the DES-T items that are related to psychological problems. For example, in non-clinical populations, even mild dissociation is related to higher levels of psychopathological symptoms (Carlson & Putnam, 1993; Rosen & Petty, 1994; Sandberg & Lynn, 1992; Valdiserri & Kihlstrom, 1995).

Summary: What can we conclude about dissociation from the adult literature?

Dissociation is clearly a complex and multifaceted construct. Adult measurement tools have been limited because they were developed without a theoretical understanding of dissociation and how it might relate to psychopathology. Taken together, findings from factor analyses and taxometric analysis indicate that dissociation has different components. Absorption is distributed normally throughout the population, but is more prevalent in extreme cases. Dissociative amnesia and depersonalization exist more prominently in dissociative types of individuals, and are less commonly experienced by other people. These components may develop distinctly, with different implications at different points in the lifespan. Recent moves to improve the conceptual clarity of dissociation represent important steps forward in teasing out the relationships between dissociative phenomena and psychological problems.

Developmental course of dissociation across the lifespan

In this section, the measurement of dissociation in childhood and adolescence is discussed, before the proposed developmental trajectory of dissociation is detailed. The evidence pertaining to normative changes in frequency of dissociative experiences across childhood and adolescence is then examined, before the evidence for dissociation reducing in early adulthood is reviewed.

Measuring dissociation in childhood and adolescence

Several instruments have been designed to assess dissociation in children, including the Child Dissociative Checklist (CDC; Putnam, Helmers, & Trickett, 1993), the Children's Perceptual Alteration Scale (CPAS; Evers-Szostak & Sanders, 1992), and the Child Dissociation Problem Checklist (Peterson, 1991). Of these, the CDC is the most widely used. The CDC is a 20-item adult observer measure, which enquires about the frequency of dissociative behaviors in the child. It has good psychometric properties (Malinosky-Rummell & Hoier, 1991; Putnam et al., 1993). However, since the CDC relies on observer report, it tends to lose sensitivity after about age 12, as it cannot measure those cognitive or emotional aspects of dissociation that lack behavioral indicators (Putnam, 1997). Therefore, the DES has recently been adapted for 11- to 17-year-olds. The Adolescent Dissociative Experiences Scale (A-DES; Armstrong et al., 1997) is a self-report measure with 30 items. Preliminary studies indicate that the A-DES has adequate internal reliability and discriminant validity (Armstrong et al., 1997; Smith & Carlson, 1997). However, like the DES, the A-DES conflates pathological and non-pathological features of dissociation. The SCID-D can also be used with adolescents to assess the severity of dissociative symptoms and to aid diagnosis of dissociative

disorders (Steinberg, 1996).

The developmental trajectory of dissociation in adolescence

It has been widely asserted that dissociation is at its highest during childhood, and declines between early adolescence and young adulthood (Armstrong et al., 1997; Putnam, 1991; Ross et al., 1990). Hence, adolescence is argued to be a transitional time in the development of dissociation. Initial evidence for this assertion came from studies of hypnotizability, showing that hypnotizability peaks between 8 and 13 years and then reduces during mid-adolescence to early adulthood (London & Cooper, 1969; Morgan & Hilgard, 1973). Since hypnosis was thought to be similar to dissociation, an analogous developmental course was presumed for dissociation (Putnam, 1991). However, given recent research indicating discrepancies between hypnotizability and dissociativity (see Whalen & Nash, 1996, for a review), similar trajectories cannot necessarily be assumed.

Two studies have measured dissociation across childhood and adolescence. In a prospective study of 168 high-risk children, the prevalence of dissociation appeared largely stable, changing only at age 19 (Ogawa, Sroufe, Weinfield, Carlson, & Egeland, 1997). However, in a cross-sectional study of 6- to 16-year-olds, dissociation gradually decreased with age in both maltreated and control groups, with a steeper decline in the maltreated group (Putnam, 1996b). Both of these studies are beset with measurement problems. To measure dissociation in childhood, Ogawa et al. (1997) used those items of the Child Behavior Checklist (CBCL; Achenbach, 1991) that they considered similar to items in the CDC. They then employed the DES-T to measure dissociation at age 19. Therefore, rather than reflecting a real shift in dissociation at age 19, it is likely that their results are a consequence of using different measures that tapped different constructs.

Also, the CBCL is an observer rating measure, whereas the DES-T is a self-report instrument and measures only pathological dissociation. Similarly, the reduction in dissociation scores with age in Putnam's (1996b) study might reflect the CDC becoming less sensitive with increasing age.

In contrast, scores on the dissociation subscale of the Trauma Symptom Checklist-Children (TSC-C; Briere, 1989) were lower in 7- to 11-year olds and 12- to 14-year olds, than in 15- to 18-year olds (Friedrich, Jaworski, Huxsahl, & Bengtson, 1997). However, the dissociation subscale of the TSC-C primarily measures depersonalization and the age groups used in this study were small and contained a mixture of non-clinical, clinical, and abused children and adolescents. Hence, the developmental course of the different constituents of dissociation has yet to be adequately investigated.

Two studies have used the A-DES to examine changes in dissociation during adolescence. A study comparing A-DES scores across four age groups of non-clinical adolescents found no significant differences between total or subscale scores across 12- to 17-year- olds, but a reduction amongst 18- to 21-year-olds (Smith & Carlson, 1997). However, the majority of age groups contained approximately twenty-five adolescents and hence small samples limit the reliability of these conclusions. A larger study using a German version of the A-DES with 634 non-clinical adolescents also found no age differences across adolescence (Resch, Brunner, & Parzer, 1998, cited in Brunner, Parzer, Schuld, & Resch, 2000). Ideally, these findings need to be replicated with prospective studies.

Dissociation from adolescence to adulthood

A study comparing DES scores across three age groups found lower scores among college students (mean age = 24 years) than among 12- to 14-year-olds, and even lower scores in older adults. Adolescent DES scores were as high as those of adult clinical groups, suggesting that high scores are normal in adolescence (Ross, Ryan, Anderson, Ross, & Hardy, 1989). DES scores continue declining with age after 18 years and appear to level off in the fourth decade of life (Putnam et al., 1996; Ross et al., 1990). A meta-analysis of 14 studies using the DES indicated a modest, but statistically significant, decline in DES scores in adulthood (van IJzendoorn & Schuengel, 1996). In addition, research using the Dissociation Questionnaire (DIS-Q) with Dutch participants found higher scores in 10- to 30-year-olds than in individuals over 50 years old.

Using the DES and DIS-Q to measure dissociation in adolescents is problematic, as these scales were designed for use with adults and include language that is too complex for some adolescents (Paolo, Ryan, Dunn, & Van Fleet, 1993). They also ask about inappropriate experiences (e.g., the DES asks about driving). Furthermore, cross-sectional studies confound differences in age with cohort differences (Olweus & Alsaker, 1991).

Conclusions

Numerous methodological problems preclude adequate identification of a developmental trajectory of dissociation. From the limited data that are available, it appears that dissociation is highest in childhood and begins to reduce in young adulthood. How this relates to the developmental tasks of adolescence is considered below.

Explaining high levels of dissociation in adolescence

In this section, the relationship between the constituents of dissociation and normal adolescent development is considered. Subsequently, possible differences are examined between dissociation in adolescence from dissociation in childhood and in adulthood.

Are frequent dissociative experiences part of normal adolescence?

Dissociative experiences appear to be more common in adolescence than in adulthood. Non-clinical groups of adolescents appear to manifest the same level of dissociation as many adult clinical groups, with more absorption and depersonalization experiences than older populations (Ross, Ryan, Anderson, Ross, & Hardy, 1989). Since there is a dearth of information about dissociation in adolescents, and none that distinguishes pathological from non-pathological aspects of dissociation, it is difficult to specify what kinds of dissociative experiences are normal at this life stage. The high dissociation observed may be related to adolescent processes.

Adolescence is thought to involve a number of developmental tasks, including: change and consolidation of the self-concept; establishing autonomy whilst maintaining relatedness with parents; adjusting to puberty and emerging sexuality; and forming more mature relationships with peers and members of the opposite sex (Coleman & Hendry, 1999; Daniels, 1990). Although adolescence is not necessarily a time of 'storm and stress' (Feldman & Elliott, 1990), many young people develop psychological problems at this time (Williams & Richardson, 1995). Problems arising from developmental tasks may contribute to the development of dissociation.

Absorption might be expected to be higher in adolescence than in adulthood, as

the increased self-preoccupation and self-consciousness in adolescents (Adams, Markstrom, & Abraham, 1987) might be reflected in the construct of absorption. Further, more absorption relates both conceptually and empirically to daydreaming (Hoyt, Nadon, Register, Chorny, Fleeson, Grigorian, Otto, & Kihlstrom, 1989), and research suggests that daydreaming is at its peak in adolescence (Giambra, 1977; Singer & Kolligan, 1987). In addition, adolescents spend more time fantasizing and imagining than adults (Singer & Singer, 1990). Fantasy proneness, a tendency towards deep, profound and long-lasting involvement in fantasy and imagination (Wilson & Barber, 1983), has been reliably associated with dissociation in adults (e.g., Merckelbach, Muris, Horselenberg, & Stougie, 2000), and there is preliminary evidence that fantasy proneness is associated with dissociation in children (Rhue, Lynn, & Sandberg, 1995). Hence, frequent fantasizing might account for some of the high dissociation scores in adolescents.

Whilst adolescence is a key time for separation from parents, ongoing attachment relationships remain important to adolescents, and the attempt to balance new needs for individuation with ongoing attachment needs may result in intense cognitive and affective reactions (Steinberg, 1989). The specific stresses of adolescence (such as examinations, important educational and career decisions and peer pressure) may also provoke difficult emotions. Hence, an adolescent may be prompted to continue to use dissociation to cope with intense affect. A reliance on dissociation may become pathological (Cole, Alexander, & Anderson, 1996), as it prevents an individual learning other strategies to cope with their emotions and process difficult events.

Transient experiences of depersonalization are also common in typical

adolescents (Putnam, 1994b), and could be prompted by pubertal changes if the individual feels out of control of the bodily maturation process. In normal adolescent development, the acquisition of formal operational thought and metacognitive advances permit a more complex and sophisticated self-concept to develop (Coleman & Hendry, 1999). Further, physical changes and the major decisions taken at this time force alterations to the identity. Although an identity crisis *per se* is not an inevitable part of adolescence, the process of developing a coherent identity involves a certain amount of identity confusion (Waterman, 1985). Hence, some symptoms of dissociation (such as identity confusion and absorption) appear intrinsic to healthy adolescence. In contrast, some facets of dissociation are seen only in dissociative disordered adolescents, such as spontaneous trance-like states and extensive fantasy worlds (Putnam, 1994b). Empirical research is necessary to examine the developmental trajectory of the different constituents of dissociation, and to distinguish what is pathological from what is non-pathological.

How might dissociation be different in childhood?

While it may be common for children to use their natural dissociative capacity to isolate negative and discrepant aspects of their lives (Cole et al., 1996), individuals begin to cope with emotions in more adaptive ways during adolescence (Altschuler & Ruble, 1989; Seiffge-Krenke, 1993). For example, young children engage in a form of dissociation known as 'affective splitting', in which attributes of the self and others are seen either as all good or all bad (Fischer & Ayoub, 1994). Spontaneous trance states, amnesias, rapid shifts in demeanor and imaginary playmates are more common in the preschool years, again allowing the child to isolate and tolerate complex and confusing

emotions (Cramer, 1991; Putnam, 1991).

Why might dissociation reduce in young adulthood?

The frequency of dissociative experiences might normally reduce in young adulthood for a number of reasons. Young adults may: spend less time daydreaming (Singer & Kolligan, 1987); feel more confident and less self-conscious; have come to terms with their physical development; have formed a more coherent integrated identity (Harter, Bresnick, Bouchey, & Whitesell, 1997); be less caught up in competing demands of parental support and independence (Steinberg, 1989); have cultivated a better peer network and be more adept at using peers for support; and have developed a greater repertoire of coping strategies than adolescents (Seiffge-Krenke, 1993). Hence, a reduction may be caused by a combination of young adults having less need for dissociation and normative development reducing absorption.

How might dissociation be different in adulthood?

One of the central tenets of developmental psychopathology is that the same behavior can have a different meaning at different points in the lifespan (Cicchetti, 1993). Some aspects of dissociation may be non-pathological in adolescence, but pathological in adulthood. For example, one of the items included in the DES-T as discriminating between pathological and non-pathological dissociation refers to acting differently in different situations. When compared with older age groups on the DES-T, normal college students obtained higher scores on this item (Waller et al., 1996). This would be expected of adolescents, as developing more role-related selves is a crucial stage in identity development (Harter et al., 1997). Therefore, this item, which indicates pathology in adults, would not necessarily be pathological in adolescents. Alternatively,

even if having multiple selves is a normal stage, it may be associated with psychological distress (Harter et al., 1997). Depersonalization may also be less pathological and more normative in adolescence. Amnesia is likely to always be a pathological factor, as there is no utility in memory being less coherent in adolescents than in adults (Nelson, 1997). Taxometric analyses of A-DES scores are needed to distinguish pathological from non-pathological dissociation in adolescents.

Conclusions

Whilst dissociative experiences are common in adolescence, they may have different implications than in childhood or adulthood. Absorption appears to be related to normal adolescent development, and identity confusion and depersonalization may be common experiences in adolescence (and hence non-pathological). An adolescent may use dissociation as a strategy to cope with the specific difficulties of adolescence. The association between dissociative experiences and psychological problems is considered below.

The link between dissociation and psychological problems

In this section, the psychological problems that have been empirically linked to high levels of dissociation in adults are outlined, followed by the evidence indicating that dissociation is associated with psychological problems in adolescence. Whether dissociation could play a part in the onset of certain psychological problems in adolescence is then explored.

Relationship between dissociation and psychological problems in adults

Between two and twelve percent of the adult population are thought to show pathological levels of dissociation (Mulder, Beautrais, Joyce, & Fergusson, 1998; Ross et al, 1990; Vanderlinden et al., 1991). However, only twenty to forty percent of individuals with pathological levels are likely to merit a diagnosis of a dissociative disorder (Chu & Dill, 1990; Ross, Anderson, Fleisher, & Norton, 1992). High levels of dissociation are related to many psychological problems. These include: eating disorders (Everill, Waller, & MacDonald, 1995; Vanderlinden, Van Dyck, Vandereycken, & Vertommen, 1993); self-injurious behavior (Brodsky et al., 1994; van der Kolk, Perry, & Herman, 1991); borderline personality disorder (Herman, Perry, & van der Kolk, 1989; Shearer, 1994); and post-traumatic stress disorder (Branscomb, 1991; Griffin et al., 1997). Although a few studies have not found the above associations (e.g., Favaro & Santonastaso, 1995), these findings are generally robust.

Within diagnostic categories, increased levels of dissociation have been associated with more severe symptoms and higher rates of self-destructive behaviors (e.g., Branscomb, 1991; Everill et al., 1995; Vanderlinden et al., 1993). Despite this reliable association, it is not possible to specify from these cross-sectional studies whether dissociation is a cause, concomitant, or consequence of psychological problems. Generally, a stress-diathesis model is proposed, where dissociation confers a vulnerability to psychological problems given sufficient environmental stress (Kihlstrom, Glisky, & Angiulo, 1994).

Relationship between dissociation and psychological problems in adolescents

Few studies have examined the relationship between dissociation and psychological problems in childhood and adolescence. A preliminary study indicated that dissociation is related to behavioral problems in children (Trickett, McBride-Chang, & Putnam, 1994). Five studies have investigated dissociation in adolescent psychopathology. Higher Perceptual Alteration Scale scores distinguished suicidal adolescents from depressed and control groups (Orbach, Kedem, Herman, & Apter, 1995). Adolescent inpatients diagnosed with borderline personality disorder had higher DES scores compared with other inpatient adolescents (Atlas & Wolfson, 1996). Higher DES scores were found in inpatient adolescents diagnosed with post-traumatic stress disorder than in inpatients with other diagnoses (Lipschitz, Winegar, Hartnick, Foote, & Southwick, 1999). Dissociation was related to subclinical auditory hallucinations and delusions in a clinical group of adolescents (Altman, Collins, & Mundy, 1997). In a comparison of A-DES scores across diagnostic groups, adolescents diagnosed with dissociative disorder had the highest A-DES scores (Armstrong et al., 1997). The next highest A-DES scores were found in psychotic and impulse control disordered patients, while the lowest scores were found in adolescents diagnosed with affective disorders.

These preliminary studies with adolescents show similar patterns across diagnostic groups to those found in adult clinical samples (i.e., the diagnoses associated with high dissociation scores in adults also seem to be associated with higher dissociation scores in adolescents). Given that studies with adolescents have not quantified symptomatology or used measures of psychological problems (other than diagnoses), the relationship between dissociation and levels of psychopathology remains

to be established. Nonetheless, dissociation appears to be implicated in several disorders that are particularly prominent in adolescence.

Is dissociation related to the onset of psychological problems during adolescence?

Changes in dissociation may contribute to the adolescent onset of psychological problems. The disorders that are most strongly related to dissociation tend to emerge during adolescence. For example, the modal age of onset for anorexia nervosa is 15 years (whilst the mean is 17.4 years), an age that has remained remarkably constant over the past thirty years (Hindler, Crisp, McGuigan, & Joughin, 1994). Bulimia has a peak onset at the age of 18 (Striegel-Moore, 1993) and is thought to affect between four and eight percent of adolescents (Fairburn & Beglin, 1990; Mitchell & Eckert, 1987). Onset by early adulthood is one of the diagnostic criteria for borderline personality disorder in DSM-IV (American Psychiatric Association, 1994). Completed suicide is extremely rare in children under the age of twelve, but its incidence increases in each of the adolescent years, with sharp rises at age 13 to 14 (Moens, 1990). Self-injurious behavior (SIB) is widely reported to occur first in adolescence, with a peak age of onset between 18 and 24 years (Herpertz, 1995). Although it can be hard to define precisely when a disorder started, onset during adolescence appears robust.

There are qualitative differences in the nature of adolescent and adult psychopathology. The same problems have different functions and causes at different stages in the lifespan. For example, adolescent suicide attempts may be more impulsive than those in adulthood, often occurring later in the day of a quarrel with parents or a boyfriend or girlfriend (Kingsbury, 1993). Hence, dissociation may play a different role in problems of adolescence than those of adulthood.

Conclusions

Dissociation is reliably associated with certain psychological problems in adults, and there is initial evidence for a link between frequent dissociation and emotional and behavioral problems in adolescents. Since those dissociation-related conditions commonly start in the teenage years, it is possible that high dissociation in adolescence contributes to their onset. Factors contributing to pathological dissociation will be considered in the next section.

The development of pathological dissociation in childhood and adolescence

Putnam (1997) proposed that, if dissociation is a continuous variable, then pathological dissociation develops either because the individual does not show the normal age-related decline in dissociation or because dissociation increases with development (possibly because of the effects of cumulative life experiences). In contrast, a dissociative type of individual would develop differently from others in terms of memory organization, metacognitive self-monitoring and identity. Since absorption appears to be a continuous variable, whilst extreme depersonalization and amnesia are not (Waller & Ross, 1997), the different components within dissociation are likely to have different developmental trajectories. High levels of dissociation may be caused by absorption not declining as normal in adolescence or by it increasing in adolescence. Negative experiences may cause extreme depersonalization or amnesia to develop, which may then become more apparent and problematic in adolescence.

Although there are many models of dissociation, understanding the processes involved in its development is still at an initial stage. The developmental theories that

have been proposed (Liotti, 1992; Putnam, 1997) have focused primarily on early childhood, not adolescence. This paper focuses on the influences of childhood trauma and disorganized attachment on adolescent dissociation. First, since so much research focuses on trauma as the central causative factor in the development of pathological dissociation, this evidence is reviewed and Putnam's (1997) theory is offered as an explanation. Second, Liotti's (1992) premise that disorganized attachment confers a vulnerability to dissociation is considered, and other contextual and individual factors that may lead to a reliance on a dissociative style are outlined. Third, a multifactorial model is proposed, in which the experience of trauma in childhood, disorganized attachment, and the familial and cultural context can render an individual vulnerable to dissociation. It is argued that factors specific to adolescence lead to a particularly frequent use of dissociation in these vulnerable individuals.

Childhood trauma

In this section, the evidence for a relationship between childhood trauma and dissociation in adulthood is first outlined, followed by the evidence for a similar relationship in adolescence. The limitations of this evidence are noted, before the mechanisms in which trauma may be related to dissociation are considered and expanded to consider adolescent processes.

Relationship between childhood trauma and dissociation in adulthood.

The relationship between childhood trauma and dissociation in adult populations has been extensively investigated and reviewed (see Gershuny & Thayer, 1999; Putnam & Carlson, 1998). Hence, that evidence will not be presented in detail here. Most studies have focused on childhood sexual abuse (CSA) and childhood physical abuse (CPA),

whilst childhood emotional abuse (CEA) has received little attention until recently. In studies of adults, links of CPA and CSA with dissociation scores have been widely reported in clinical groups (Chu & Dill, 1990; Chu, Frey, Ganzel, & Matthews, 1999; Draijer & Langeland, 1999; Kirby, Chu, & Dill, 1993; Lipschitz, Kaplan, Sorkenn, Chorney, & Asnis, 1996), non-clinical groups of undergraduates (DiTomasso & Routh, 1993; Eisen & Carlson, 1999; Sandberg & Lynn, 1992), and general population samples (Mulder et al., 1998; Vanderlinden et al., 1993). Furthermore, a dose-response relationship of dissociation to abuse is a very robust finding. Particularly high rates of dissociation have been found when the abuse involved family members, was more invasive, occurred when the child was younger, involved multiple perpetrators, or was repeated in adulthood (Chu & Dill, 1990; Chu et al., 1999; Kirby et al., 1993; Lipschitz et al., 1996).

Comparing abused and non-abused groups can be problematic, as differences between groups may not be due to the effects of the abuse *per se*, but to non-specific effects of living in an environment in which abuse may occur (or to pre-existing differences between abused and non-abused children). Studies of adults that have compared the effect of different types of childhood abuse have found that dissociation is predicted only by CEA (Kent, Waller, & Dagnan, 1999) or by unhealthy family environments (Nash, Hulsey, Sexton, Harralson, & Lambert, 1993). In contrast, Sandberg and Lynn (1992) found that none of the types of maltreatment accounted for a unique proportion of the variance in dissociation scores, because of the tendency of different types of maltreatment to coexist in families. CSA inevitably involves aspects of CEA and is also likely to involve CPA. In addition, CPA involves CEA. Therefore,

it is difficult, and possibly misguided, to try to separate out different effects. Furthermore, studies have operationalized types of trauma in different ways. The important aspect (in terms of generating dissociation) may be the overwhelming emotions that trauma generates in the child.

It is problematic that these studies assess childhood trauma retrospectively, because this allows recall bias and amnesia to affect responses. Recent studies using undergraduates show that high dissociators are prone to an acquiescence response bias regarding highly diverse life events (Merckelbach et al., 2000) and are suggestible (Eisen & Carlson, 1999). Such findings question the observed link between trauma and dissociation. However, despite many methodological difficulties with this research (see Tillman, Nash, & Lerner, 1994), the positive association between childhood trauma and dissociation is an extremely robust finding. Prospective longitudinal studies are needed to confirm causal relationships.

Relationship between childhood trauma and dissociation in adolescence. As with adults (e.g., Putnam & Carlson, 1998), adolescents with dissociative identity disorder report a very high incidence of childhood trauma (Bowman, Blix, & Coons, 1985; Dell & Eisenhower, 1990; Hornstein & Putnam, 1992). The relationship between trauma and dissociation during childhood and adolescence has only recently been investigated empirically. Significantly higher scores were observed on three measures of dissociation in ten 7- to 12-year-old girls who had experienced CSA than in fifty non-abused girls (Malinosky-Rummell & Hoier, 1991). However, the groups of children also differed in family disruption and income, so it is difficult to disentangle the specific effects of sexual abuse. A longitudinal study, following 54 girls aged between 6 and 15 years who

had been sexually abused by a family member, verified the occurrence of abuse from a variety of sources, and found that the CSA group had significantly higher CDC scores than 51 controls matched for age, race, socioeconomic status, and family constellation (Putnam, Helmers, Horowitz, & Trickett, 1995). However, this study did not control for levels of psychological symptomatology across groups. When a clinical group of children and adolescents who had experienced CSA was compared with a non-abused clinical group (mean age = 12 years), the CSA group did not score significantly higher on the CDC (Friedrich et al., 1997). Hence, further research is required to conclude that abuse leads to increased levels of dissociation in childhood and adolescence. As only a fraction of sexual abuse is ever reported or treated in childhood (Finkelhor, 1986), these studies are limited by using small biased samples of sexually abused children.

Rhue et al., (1995) used the CPAS to measure dissociation in children and young adolescents (mean age = 10 years), and found that nine children who had experienced CPA had higher CPAS scores than twelve children who had experienced CSA or eighteen non-abused children. Although Rhue et al.'s results seem to contradict previous findings, their results were based on small numbers and differences between the samples may explain this discrepancy. Unlike the abused children in Malinosky-Rummell & Hoier (1991) and Putnam et al.'s (1995) samples, the majority of Rhue et al.'s CSA group had not experienced severe, repeated, or familial abuse. In contrast, the abuse in Rhue et al's CPA group was generally severe, prolonged and perpetrated by parents. This provides further evidence that it is not the abusive act *per se* that generates dissociation, but those features of the abuse which make it overwhelming for the child.

Studies of inpatient adolescents have found higher DES scores in those who have

experienced CSA compared with those who had experienced CPA alone (Atlas & Hiott, 1994; Atlas, Wolfson, & Lipschitz, 1995). However, as stated above, the DES may not be suitable for adolescents. Carrion and Steiner (2000) found a relationship between dissociation (assessed using the SCID-D) and childhood trauma (particularly CPA and physical neglect), in sixty-four 11- to 16-year-old juvenile delinquents. A study using the A-DES found the highest dissociation levels in adolescents who had experienced both CSA and CPA (Armstrong et al., 1997). The next highest A-DES scores were found in CSA survivors and then CPA survivors, whilst adolescents who had not been abused obtained the lowest scores. However, only the mean scores of the 'CPA + CSA' group and the 'no abuse' group were significantly different from each other. Only one study has sought to investigate the role of emotional abuse in dissociation in adolescents. Using the German version of the A-DES (Resch et al., 1998, cited in Brunner et al., 2000) with 198 adolescent psychiatric patients in Germany, Brunner et al. (2000) found higher dissociation in patients who had experienced CSA, CPA, neglect, and stressful life events. However, emotional neglect was the best predictor of dissociative symptoms.

These studies have methodological problems, particularly because they attempt to separate out types of trauma and combine individuals abused at different ages. Further, they measured trauma by reviewing medical records or by asking clinicians, both of which may be biased methods. For example, when forty-seven inpatient 13- to 17-year-olds were themselves asked about abuse, higher DES scores were found in those adolescents who reported more CSA, CPA, CEA, or neglect (Sanders & Giolas, 1991). However, dissociation scores were not related to hospital records of abuse. The authors argue that this is because hospital records are less accurate than self-report data.

However, retrospective questioning allows recall biases to confound results.

Only one study has investigated the association between trauma and dissociation in a non-clinical group of children and adolescents, possibly because ethical and legal dilemmas prevent large scale investigation of abuse in this young population. In their longitudinal study of 168 high risk children, Ogawa et al. (1997) found that death of an immediate family member or separation from mother for at least a month in the first five years of life predicted higher levels of dissociation throughout childhood and early adolescence. Surprisingly, CSA did not predict dissociation at age 19. However, Ogawa et al. propose that CSA was underreported in their study, as parents may have denied abuse to avoid the serious repercussions of disclosure.

A dose-response relationship between more severe abuse and more frequent dissociation has been found in children and adolescents (Friedrich et al., 1997; Putnam et al., 1995; Sanders & Giolas, 1991), but not consistently (Brunner et al., 2000; Malinosky-Rummel & Hoier, 1991). Nonetheless, since the relationship between childhood trauma and dissociation has been found with multiple methodologies and samples, and when the abuse is verified from a number of sources, it appears robust. As yet, studies have not been of adequate size to investigate the effect on dissociation of the age or developmental stage at which the abuse occurs.

Is there a causal relationship between childhood trauma and dissociation? It is not possible to conclude from these studies that trauma causes dissociation. For example, high DES scores may indicate higher psychopathology in general, rather than more severe dissociation *per se* (Tillman et al., 1994). However, recent studies employing structural modelling techniques and mediational models suggest that dissociation might

mediate the relationship between adverse events and subsequent symptomatology. In various adult samples, dissociation appears to mediate the relationship between childhood trauma and: eating psychopathology (Kent et al., 1999); negative life experiences (Becker-Lausen, Sanders, & Chinsky, 1995); physical abuse potential (Narang & Contreras, 2000); and level of general psychopathology (Ross-Gower, Waller, Tyson, & Elliott, 1998). Although such statistical techniques cannot prove temporal order, this wealth of evidence (combined with the findings presented above) indicates that trauma might have a significant causal role in the development of dissociation.

How could trauma cause dissociation? Trauma has long been thought to be central to the development of dissociation (Janet, 1889/1973; Putnam, 1985; Spiegel, 1986). For example, Janet (1889/1973) proposed that trauma causes fragmentation of mental cohesion, and that dissociation serves to defend the individual by keeping specific aspects of material out of conscious awareness. Dissociation is thought to be a strategy that is adaptive at first but becomes maladaptive with repeated use, as it becomes an increasingly automatic and involuntary response to stimuli (Spiegel, 1986). Many researchers (e.g., Terr, 1991) posit that children are more likely to dissociate when faced with overwhelming trauma, and that this strategy is perpetuated (or enhanced) by experiencing repeated trauma.

Most accounts of the link between trauma and dissociation have not extended much further than described in the above paragraph (for notable exceptions, see Foa & Hearst-Ikeda, 1996; van der Kolk & Fisler, 1995). Even fewer explanations have included a developmental perspective. An exception is the work of Putnam (1991;

1994b; 1996b; 1997), who has aimed to provide a theory that is embedded in knowledge about normal development. Putnam (1997) bases his model on ideas of behavioral states (Wolff, 1987) and discrete states of consciousness (Tart, 1972), and uses these concepts interchangeably to refer to "a specific and unique configuration of a set of psychological, physiological, and behavioral variables" (Putnam, 1997, p.152).

Putnam (1997) suggests that humans start life with a few highly discrete behavioral states, and that more states are gradually added throughout development. The child's behavior is then organized as a series of states that are triggered by different contexts. There may be relatively abrupt changes between these states in young children but, as they get older, additional states appear and more complicated interconnecting pathways develop. Gradually, with help from caretakers, children learn to modulate states (i.e., to match and maintain a state appropriate to environmental demands, and to move between states smoothly; Wolff, 1987). Hence, dissociation occurs normatively in young children, as they move between states in a disconnected way.

Putnam (1997) proposes that trauma disrupts the capacity to modulate states. Traumatic states of consciousness are widely separated in 'state space' from normal states of consciousness, on many psychological and physiological dimensions. The distance between traumatic states and other states (coupled with avoidance of trauma cues) can mean that few pathways exist between trauma states and other states, and that these pathways are rarely traversed. Hence, transitions between traumatic states and other states are difficult to negotiate, and individuals may dissociate as they get 'stuck' switching states.

Putnam (1997) cites various lines of evidence to support his theory. For example,

memory encoding and recall are state-dependent (Weingartner, Putnam, George, & Ragan, 1995), and different personality 'alters' within individuals with dissociative identity disorder have distinct psychophysiological and behavioral attributes (Putnam, Zahn, & Post, 1990). It would be difficult to falsify Putnam's theory, as it is essentially descriptive rather than explanatory. Nonetheless, it is the first attempt to explain dissociation from a developmental stance, and can integrate key findings.

Links with adolescence. Putnam's theory can be extended to explain why the teenage years should be a transitional time for dissociation. There is considerable evidence that the self becomes increasingly differentiated with age. The number of roles that an adolescent undertakes increases, leading to numerous role-related selves (the self with parents, friends, romantic others, in the classroom, etc.; Harter et al., 1997). This increase in role-related selves may be analogous to more states being added, causing normative dissociation as the individual negotiates switching between these roles. Dissociation then reduces in early adulthood as the individual becomes better able to coordinate, resolve and normalize apparently contradictory attributes (Harter et al., 1997), unless something (such as trauma) prevents their integration.

The developmental tasks of adolescence may be particularly challenging to individuals who have experienced childhood trauma, also prompting dissociation. For example, if the young person experienced CSA, puberty may trigger overwhelming emotions. Developing secondary sexual characteristics might increase feelings of shame, sexual abhorrence, and fear of further abuse. Similarly, hormonal changes might prompt sexual interest and stir memories of abuse. As physical size and strength increase, a fear of seeking revenge may rise (Walsh & Rosen, 1988). In addition, magnified social

comparison with peers during adolescence (Youniss, 1980) may heighten a feeling of difference, as CSA survivors become aware of their age-inappropriate knowledge and experience. Increased self-disclosure, expected in peer relationships in adolescence (Berndt, 1990), may be particularly awkward. Further, identity achievement may be impeded as abused children often develop a sense of inner badness, or a view of themselves as unloveable (Briere, 1992). Hence, painful feelings may be evoked in response to the self-reflection that is characteristic of adolescence (Coleman & Hendry, 1999).

Traumatized adolescents may have particular difficulties negotiating the tasks of adolescence and hence continue to use their dissociative capacity to cope with these challenges. However, not everyone who experiences childhood trauma develops high levels of dissociation and not all those with high dissociation have experienced childhood trauma (Liotti, 1999). Therefore, childhood trauma is not a necessary nor sufficient factor in the development of dissociation. Other factors must be considered. The role of disorganized attachment is examined below.

Disorganized attachment

Barach (1991) first viewed dissociative identity disorder as a disorder of attachment. Liotti (1992, 1999) extended Barach's theory, proposing that early attachment relationships (as well as childhood trauma) can cause pathological dissociation. There are four major recognized types of attachment. Ainsworth, Blehar, Waters, and Wall (1978) categorized these as secure, anxious-avoidant, anxious-ambivalent, and a miscellaneous category. The last category was later reclassified as disoriented/disorganized (Main & Solomon, 1986). Liotti (1992) proposed that

disorganized attachment in particular increases vulnerability to developing dissociation.

Disorganized attachment is defined by an infant displaying conflicting behavior towards the caregiver, such as simultaneous approach and avoidance behaviors (Main & Solomon, 1986). It tends to occur when the parent is both frightened and frightening, possibly because the parent has unresolved loss or trauma experiences (Main & Hesse, 1990; Schuengel, Bakermans-Kranenberg, & van IJzendoorn, 1999). Indeed, parents of children with disorganized attachment may also suffer from dissociation (Schuengel et al., 1999). Disorganized attachment is considered to be a major risk factor for child psychopathology (van IJzendoorn, Schuengel, & Bakermans-Kranenberg, 1999).

According to attachment theory, infants will seek proximity to their caregivers when they perceive a threat (Bowlby, 1969). Disorganized attachment results in the breakdown of the child's strategies for experiencing the security of attachment during stress, as he or she is caught in an unresolvable dilemma about whether to flee from the parent as a source of danger or to approach the parent as a safe haven. In consequence, the child may develop multiple incompatible models of self and the attachment figure. For example, the parent may be seen as both threatening and vulnerable (Liotti, 1992). When the child is stressed, the attachment system is triggered and the individual rapidly switches back and forth between models of self and other. This may overwhelm normal conscious processing and leave the infant in a primitive conscious state, akin to dissociation. Over time, this crystallizes into dissociative patterns, particularly if the individual remains unable to resolve contradictory internal working models and also experiences trauma.

Empirical evidence for a causal role for attachment in dissociation. Liotti's (1992) theory has some empirical support. Children with disorganized attachment exhibited behaviors that are similar to dissociation, such as freezing and dazed expressions (Main & Hesse, 1990), and had high absorption in young adulthood (Hesse & van IJzendoorn, 1998). Further, higher levels of dissociation were found in adults with a fearful attachment style, which is thought to stem from disorganized attachment in childhood (Coe, Dalenberg, Aransky, & Reto, 1995). However, disorganized attachment is very common in maltreated children, with prevalence rates at over 80% (Carlson, Cicchetti, Barnett, & Braunwald, 1989), making it difficult to specify whether it is the attachment style or the trauma that is causally related to dissociation.

Initial evidence indicates that both attachment and trauma may play a causal role. Attachment explained 14% of the variance in dissociation scores in a non-clinical sample of abuse survivors (Anderson & Alexander, 1996), above and beyond the 7% accounted for by abuse variables. Fearful attachment was more correlated with dissociation than were other attachment styles. Draijer and Langeland (1999) found that both abuse variables and maternal dysfunction contributed independently to the variance in dissociation scores. Again, it may be difficult to separate the effects of attachment and abuse, as the two variables may be integrally related.

Ogawa et al. (1997) found that different variables were associated with frequent dissociation in different developmental periods. For example, having a mother who was abused as a child or was single when her child was born was associated with the child's dissociative symptoms in elementary school. In contrast, an avoidant or disorganized attachment and witnessing interparental violence were associated with higher

dissociation in adolescence. The parent's psychological unavailability during infancy accounted for 19% of the variance in DES-T scores at age 19. Carlson (1998) analysed the data in Ogawa et al.'s longitudinal study using structural equation modelling. She showed that early caregiving was directly related to later dissociation, as well as being mediated by disorganized attachment. Hence, it appears that disorganized attachment may be causally related to dissociation.

Limitations of attachment theory in explaining dissociation. A strength of Liotti's (1992) theory is that it is falsifiable and has been supported by empirical evidence to date. However, the category of disorganized attachment is relatively recently developed, and requires further refinement. For example, the measurement of disorganized attachment is not adequately stable over time (van IJzendoorn et al., 1999). Although depersonalization could relate to switching between incompatible models of self and other, and absorption may reflect the attachment system being overwhelmed, it is difficult to see how Liotti's (1992) theory could conceptualize amnesia. Liotti does not seek to explain the developmental trajectory of normative dissociation, nor does he specify how disorganized attachment might combine with trauma to lead to dissociation. Disorganized attachment may contribute to a lack of ability to self-soothe, making the child more vulnerable to overwhelming feelings and hence more likely to use dissociation to cope with trauma (Draijer & Langeland, 1999).

What does attachment mean for adolescents? The task of separating from parents in adolescence is thought to activate the attachment system (Blos, 1967), and hence would provoke dissociation in adolescents with disorganized attachments as they oscillate between multiple incompatible models of self and other. Further, identity

development and forming closer peer and romantic relationships would be impeded by the lack of a secure or workable model of the self or of others. Compared with securely attached adolescents, insecurely attached adolescents have been found to have poorer self-concepts, relationship difficulties, and problems regulating affect (Cooper, Shaver, & Collins, 1998; Rice, 1990), and hence may also rely more on dissociation. Prospective studies are needed to investigate the effect of disorganized attachment on adolescent development.

The role of other contextual and individual factors in generating dissociation. Certain environments might facilitate a reliance on a dissociative style of managing emotions. Parental behaviors may encourage dissociation. These behaviors might include: continually reassuring children that everything is all right, when something is clearly wrong; telling children they are loved and then harming them; telling children that they have not been abused after abusing them; creating an environment of secrecy and isolation; and punishing emotional expression (Cole et al., 1996; Putnam, 1997). Parents may demand and reinforce dissociative reactions in their child, perpetuating dissociation (Silberg, 1998).

Children may also learn dissociative responses from their parents. Links have been found between parental dissociation, parental inconsistency and rejection, and child dissociation (Mann & Sanders, 1994). Cole et al. (1996, p.85) call these "dissociation-generating families". Further, Cole et al. argue that dissociative styles can create a climate in which CSA can occur and be tolerated. Cultural variables are also likely to have an effect (see Kirmayer, 1994). For example, different cultures vary in how far they encourage emotional expression. Whether familial and social environmental factors

contribute to the development of pathological dissociation has yet to be empirically investigated.

Being high in fantasy proneness has been proposed as a developmental risk factor for dissociation (Kihlstrom et al., 1994; Putnam, 1996a) and has been linked with childhood trauma, such as CPA (Bryant, 1995). An individual who has used fantasy to cope with difficult feelings as a child may continue to do so during adolescence if faced with overwhelming experiences. Hence, rather than reducing (as would normally occur during adolescence), reliance on fantasy could continue, becoming abnormal for the developmental stage and dissociative in nature.

Summary: A proposed trajectory of pathological dissociation

Many studies have found a positive association between the experience of trauma in childhood and dissociation in adulthood. Despite various methodological limitations, this is a very consistent finding. Preliminary findings indicate that childhood trauma can also lead to elevated levels of dissociation during adolescence. It is possible that trauma leads to dissociation by interfering with both the integration and modulation of states, thus generating depersonalization and amnesia. Disorganized attachment may play a causal role in the development of pathological dissociation by creating incompatible models of self and other, and by impeding the development of the ability to self-soothe (making the individual more easily overwhelmed by emotions). Both childhood trauma and disorganized attachment may make a unique contribution to dissociation. There are also likely to be additive effects, as children who are unable to self-soothe, or who lack emotional support, may be more likely to use dissociation to cope with trauma. Dissociation may also be encouraged by other parental behaviors and cultural factors.

Prospective research is needed to investigate whether trauma, disorganized attachment, dissociation and psychological problems are related in a specific causal way or whether a general relationship exists between these phenomena.

The challenges of adolescence (puberty, changes in relationships with peers and parents, and the task of achieving an identity) may promote pathological dissociation in vulnerable individuals. It is possible that the overwhelming feelings generated lead an individual to dissociate further. Those feelings might also result in the development of other behaviors that serve the same 'blocking' function as dissociation, such as bingeing, self-injury and substance abuse (see Everill & Waller, 1995; Himber, 1994).

There is little likelihood that a dissociative adolescent will integrate the multiple and changing aspects of self into a coherent whole (Cole et al., 1996). Dissociation would disrupt a sense of ownership over one's actions and preclude a sense of coherence. Loss of significant chunks of childhood and adolescent memories deprives the individual of the autobiographical memory upon which a sense of self is based (Putnam, 1994a). In Putnam's (1997) and Liotti's (1992) theories, it is this lack of integration that drives dissociation. Hence, pathological dissociation is self-maintaining and self-elaborating.

Clinical and research implications

There are many clinical implications of identifying the role of dissociation in adolescent psychopathology. Implications for assessment will be outlined first, before considerations for treatment are described. Subsequently, research questions that have been raised throughout this paper will be brought together.

Implications for assessment

Since dissociation is implicated in a variety of disorders that are common in adolescence, clinicians need to be aware of dissociation in assessment and formulation. Clinicians may need specific training to develop the skills to observe and detect problematic dissociative experiences (for assessment guidelines see Chu, 1998; Putnam, 1997; Silberg, 1998). Increased knowledge about both normal development and dissociation in adolescence is needed to enable clinicians to distinguish problematic dissociative symptoms from normal experiences during this life stage.

Further investigation of the development of dissociation in adolescence should improve the diagnosis of dissociative disorders in adolescents, as diagnostic criteria can be made more developmentally appropriate (Putnam, 1994b). However, large scale surveys are needed to establish what is normative. Where dissociation is present, it is important to understand its functions when formulating the broad range of adolescent disorders. At the moment, functional analyses in adults suggest that dissociation is a mechanism that allows the individual to cope with traumatic experiences by reducing awareness of those experiences and their consequences (e.g., Everill et al., 1995). It is only by adopting a developmental perspective that one can understand the origins and maintenance of this defensive processing style, and hence develop effective treatments.

Implications for treatment

Despite a recent proliferation in the treatment literature on dissociative disorders in adults (e.g., Chu, 1998; Kluft, 1999; van der Hart, van der Kolk, & Boon, 1996), the treatment of dissociation in adolescents remains largely undeveloped. The most commonly used treatment of dissociative identity disorder in adults is individual

intensive psychotherapy facilitated by hypnosis (Putnam & Loewenstein, 1993). Attempts have been made to investigate the effectiveness of this treatment (e.g., Ellason & Ross, 1997), but methodological problems preclude reliable conclusions (Powell & Howell, 1998). There are also reports of other treatment methods, such as cognitive therapy (Fine, 1992), family therapy (Benjamin & Benjamin, 1992), group therapy (Coons & Bradley, 1985), and expressive therapies (Baum, 1991). Since a clearly defined treatment model is currently lacking, increased understanding of the development of pathological dissociation should inform and improve interventions for adults.

Recently, detailed accounts of treatment of dissociative children and adolescents have been published (Putnam, 1997; Kluft, 1996; Silberg, 1998), but these focus primarily on children. Whilst many clinicians conclude that dissociative disorders in adolescence are very difficult to treat successfully (e.g., Dell & Eisenhower, 1990), little outcome research has been completed. Increased understanding of the development of pathological dissociation could improve the treatment of adolescents with dissociative disorders. From the theories presented above, it appears that a useful starting point would be to target affect regulation skills, and then the integration of different states.

In adolescents without a dissociative disorder *per se*, but with a disorder in which dissociation plays a part, understanding which facets of dissociation are experienced by the client can help clinicians to target problem areas. Kennerley (1996) describes various techniques to help adults to overcome dissociative experiences, which include identifying and managing triggers and dissociative reactions. These strategies might be adapted for use with younger clients. It is also essential that clinicians consider the

implications of dissociation for the process of therapy, as dissociation may be triggered by talking about trauma (Carrion & Steiner, 2000).

Given the relationship between the nature of normal adolescence and dissociation, interventions need to be modified for teenagers. In particular, treatment should facilitate the development of a coherent and integrated identity in a way that is appropriate for the developmental stage of the individual concerned. Narrative techniques may be useful here (Hicks, 1997; Madigan, 1997). Education about physical changes may encourage a feeling of control over (and connection with) bodily maturation. Since adolescence is the crucial time for integration of self, intervention before or during the teenage years may have the highest chance of success in treating dissociative disorders. Family participation in treatment is essential, in particular, to interrupt interactional patterns that may sustain dissociative strategies and to address attachment issues. Treating family members themselves may be advisable, given the amount of dissociation found in relatives (Mann & Sanders, 1994).

Questions for further research

As we have seen, there is a dearth of literature on dissociation in adolescence. Hence, many questions remain about normative development and the nature of dissociation in adolescence. For example, is it a more homogeneous and a less differentiated experience than in adulthood? It remains to be seen what levels of dissociation are normative for adolescents, or whether the aspects of dissociation identified as pathological in adults are equally linked with psychopathology in adolescents. Further research is required to confirm the developmental trajectory proposed, where dissociation is highest in childhood and adolescence and reduces in

early adulthood. Research has yet to address whether the different constituents of dissociation have different developmental trajectories.

Further research is required to establish which adolescent psychological problems dissociation is related to, and whether dissociation in adolescents is related to their level of general psychopathology. Whether dissociation is causally related to adolescent-onset disorders (e.g., eating disorders, self-injurious and suicidal behaviors, and borderline personality disorders) requires investigation. In addition, longitudinal studies are needed to examine whether frequent and severe dissociation in adolescence predicts frequent and severe dissociation or psychological problems in adulthood.

Given the model outlined here, more conclusive studies are required to show that childhood trauma and disorganized attachment are causally related to dissociation in adolescents. In particular, further empirical research should aim to specify the way that trauma and disorganized attachment might generate dissociation. It will be necessary to determine whether parental behaviors or cultural norms can act as risk or protective factors in the development of dissociation. Finally, since adolescence is a key stage in the development of dissociation, it would be valuable to determine whether the specific developmental tasks of adolescence provoke dissociation, as proposed.

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Dissociation and adolescent psychopathology

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Dissociation in Adolescence and its Relationship to Psychological Symptoms: A Study of Non-clinical, Mixed Clinical, and Anorexic Teenagers

This paper has been prepared for submission to

'The Journal of Nervous and Mental Disease'

(see Appendix B).

Alice Farrington, BSc [1]

Dissociation in Adolescence and its Relationship to Psychological Symptoms: A Study of Non-clinical, Mixed Clinical, and Anorexic Teenagers

Abstract

This paper reports the results of two studies. Study 1 (N = 768) investigated the psychometric properties of the Adolescent Dissociative Experiences Scale (A-DES; Armstrong et al., 1997) and changes in dissociation during adolescence. The A-DES had good internal consistency and a one-factor solution. No significant age or gender differences in A-DES scores were found. Study 2 (N = 181) replicated the results of Study 1 and demonstrated convergent validity for the A-DES with a measure of fantasy proneness. Study 2 also investigated the relationship between dissociation and psychological symptoms in adolescent females with anorexia (N = 20), comparing them with non-clinical females (N = 86) and mixed clinical females (N = 19). Dissociation was highly correlated with psychological symptomatology in all groups and was related to symptoms of an obsessive-compulsive, interpersonally sensitive, and paranoid nature in anorexic girls. Clinical and research implications of these findings are outlined.

Dissociation in Adolescence and its Relationship to Psychological Symptoms: A Study of Non-clinical, Mixed Clinical, and Anorexic Teenagers

Dissociation refers to "a disruption in the normally integrated functions of consciousness, memory, identity, or perception of the environment" (American Psychiatric Association, 1994, p.477). The frequency of dissociative experiences is thought to be at its highest during childhood, and to decline between early adolescence and young adulthood (Putnam, 1996a; Sanders et al., 1989). Non-clinical groups of adolescents have as high a level of dissociation as adult clinical groups (Ross et al., 1989). Therefore, having frequent dissociative experiences in adolescence may not necessarily indicate psychopathology, but could relate to normal adolescent processes, such as identity confusion and achievement (Waterman, 1985) and heightened self-preoccupation and self-consciousness (Adams et al., 1987). The nature of dissociation in adolescence and its role in adolescent psychopathology are important questions for research and clinical practice.

Eating disorders are among the disorders most reliably related to dissociation in adult samples. The majority of studies investigating the relationship between dissociation and eating disorders have focused on bulimia nervosa (Covino et al., 1994; Everill et al., 1995; Miller et al., 1993; Vanderlinden et al., 1993), and a fairly comprehensive model of the role of dissociation in bulimia has been proposed (Everill & Waller, 1995). However, there is also evidence that dissociation is linked with anorexia nervosa in adult clinical groups (Demitrack et al., 1990; Favaro et al., 1998; Schumaker et al., 1994; Vanderlinden et al., 1995) and with disordered eating attitudes

(such as drive for thinness) in non-clinical adult groups (Kent et al., 1999; Meyer & Waller, 1998; Rosen & Petty, 1994; Valdiserri & Kihlstrom, 1995).

Eating disorders typically have their onset during adolescence, coinciding with this peak level of dissociation. For example, the modal age of onset is 15 years for anorexia (Hindler et al., 1994) and 18 years for bulimia (Striegel-Moore, 1993). Since there are many qualitative differences between adolescent and adult psychopathology, similar underlying factors cannot be assumed. Nonetheless, high dissociation might be related to anorexia in adolescence, and may contribute to its onset at this time. Understanding the role of dissociation in anorexia is important, since this eating disorder it is the third most common psychiatric condition in adolescents (Lucas et al., 1991). Furthermore, in adults with eating disorders, increased levels of dissociation are associated with more severe symptoms (Demitrack et al., 1990; Everill et al., 1995; Vanderlinden et al., 1993) and with drop out from treatment (Waller, 1997). Therefore, if dissociation is associated with anorexia in adolescents, it should be taken into account in assessment, formulation, and treatment.

Although there is no empirical evidence about the link between dissociation and anorexia in adolescence, a few studies have found that high dissociation is related to other psychological problems in this age group. Relationships have been found with borderline personality disorder (Atlas & Wolfson, 1996), suicidal behavior (Orbach et al., 1995), post-traumatic stress disorder (Lipschitz et al., 1999), and auditory hallucinations (Altman et al., 1997). However, these studies are problematic, since they used measures of dissociation that were designed for use with adults. Adult measures (such as the Dissociative Experiences Scale; DES - Bernstein & Putnam, 1986), include

language that is too complex for some adolescents (Paolo et al., 1993). They also ask about experiences that do not apply to younger adolescents (e.g., the DES asks about driving). Another difficulty with these studies is that they compare diagnostic groups without controlling for level of symptomatology (e.g., the groups higher in dissociation might also have more distressing symptoms).

A measure of dissociation has recently been devised specifically for adolescents - the Adolescent Dissociative Experiences Scale (A-DES - Armstrong et al., 1997). Preliminary studies indicate that the A-DES has good discriminant validity, high internal reliability, adequate test-retest reliability, and excellent convergent validity with the DES (Armstrong et al., 1997; Brunner et al., 2000; Smith & Carlson, 1997). Hence, the A-DES represents an important step forward for researchers who wish to investigate dissociation in adolescence, and would benefit from validation with a larger sample.

Only one study has been published investigating dissociation in a clinical sample of adolescents using such a developmentally appropriate measure. Armstrong et al. (1997) showed that adolescents with dissociative and psychotic disorders have significantly higher A-DES scores than other clinical and non-psychiatric adolescents. However, given that Armstrong et al. did not quantify symptomatology or use any indices of psychological problems other than diagnosis, the relationship between dissociation and psychopathology remains to be adequately addressed. In particular, the A-DES might be used to study the level of dissociation in anorexic adolescents.

Previous studies have produced conflicting results regarding the age when dissociation begins to reduce. A cross-sectional study indicated that dissociation begins to decline gradually before 16 years (Putnam, 1996b), whereas a prospective study found

little reduction before 19 years (Ogawa et al, 1997). However, neither of these studies used measures of dissociation that were appropriate for adolescents. To date, one such study has been published using the A-DES (Smith & Carlson, 1997), and one using a German version (Resch et al., 1998, cited in Brunner et al., 2000). These studies have examined the frequency of dissociative experiences across the teenage years. No differences were found in A-DES total or subscale scores from 12 to 17 years of age, but lower scores were found in 18- to 21-year-olds (Smith & Carlson, 1997). However, most of the age groups contained fewer than twenty-five teenagers, and these small numbers limit the reliability of these data. Hence, replication with other samples is needed to confirm that A-DES scores do not change during adolescence. In an initial study of this kind, Resch et al. (1998, cited in Brunner et al., 2000) included 634 non-clinical adolescents, and also found no age differences.

Although the A-DES was created with four subscales (amnesia, absorption and imaginative involvement, passive influence, and depersonalization and derealization - Armstrong et al., 1997), its factor structure has not previously been investigated. Factor analyses of adult measures of dissociation have obtained conflicting results. For example, studies of the DES (Carlson & Putnam, 1993; Ross et al., 1991; Sanders & Green, 1994; Simeon et al., 1998) have concluded that a three-factor solution was best. In contrast, other studies have found four to seven factors (Ray & Faith, 1995; Ray et al., 1992), while a one-factor solution has also been found (Fischer & Elnitsky, 1990; Holtgraves & Stockdale, 1997; Waller, 1995; Wright & Loftus, 1999).

It will also be important to determine the convergent validity of the A-DES. Fantasy proneness (a tendency towards a deep, profound, and long-lasting involvement

in fantasy and imagination - Wilson & Barber, 1983) is positively associated with various measures of dissociation in adults (Merckelbach et al., 2000; Merckelbach et al., 1999; Rauschenberger & Lynn, 1995; Silva & Kirsch, 1992). It also correlates with the Child Perceptual Alteration Scale (Evers-Szostak & Sanders, 1992) in children (Rhue et al., 1995). Therefore, convergent validity for the A-DES could be provided by investigating its association with a measure of fantasy proneness in adolescents.

To summarise, it can be hypothesized that anorexic adolescents will have particularly high levels of dissociation, relative to both non-clinical adolescents and other clinical groups. However, it is first important to demonstrate the psychometric properties, developmental pattern, and clinical utility of this recently developed measure of dissociation. Therefore, the first aim of the present research is to validate the A-DES and examine its factor structure and developmental course (Study 1). The second aim is to explore the relationship between dissociation and psychological symptoms in anorexic adolescent females, comparing them with non-clinical girls and a mixed clinical group (Study 2).

STUDY 1: FACTOR STRUCTURE OF THE A-DES

Study 1 investigates the psychometric properties of the A-DES among a non-clinical group, including its factor structure, its internal consistency, and differences in dissociation across adolescence. From previous studies (Resch et al., 1998, cited in Brunner et al., 2000; Smith & Carlson, 1997), it can be predicted that scores on the A-DES will not differ across the adolescent age range. However, it remains to be determined whether the A-DES factor structure will map onto the one that was proposed

in its development (Armstrong et al., 1997), or whether it will show the same single-factor structure found in non-clinical groups completing the DES (e.g., Wright & Loftus, 1999).

Method

Participants

The sample consisted of 810 teenagers (414 boys and 396 girls). They were aged 11 to 16 years, and were recruited from a secondary school in Gosport, UK. The A-DES was fully completed by 768 participants. Of these, 207 were in year 7 (aged 11-12 years), 133 were in year 8 (12-13 years), 171 were in year 9 (13-14 years), 166 were in year 10 (14-15 years), and 91 in year 11 (15-16 years).

Measures

Adolescent Dissociative Experiences Scale (A-DES; Armstrong et al., 1997). The A-DES contains thirty statements (see Table 1). Respondents indicate how much each experience happens to them on an 0-10 scale ("never" - "always"). The A-DES is scored by summing item scores and dividing by 30, giving an overall score out of ten. Higher scores indicate greater levels of dissociation. Two studies investigating the psychometric properties of the A-DES (Armstrong et al., 1997; Smith & Carlson, 1997) calculated Cronbach's alpha at .92 or .93 for the whole scale, yielded adequate subscale reliabilities, found Spearman Brown split-half reliability of .92 or .94, and showed a two week test-retest reliability of .77. (See Appendix C).

Procedure

Following ethical clearance, information about the study was sent to participants' parents (see Appendix D), and participants received both verbal and written information about the study. It was emphasized that they did not have to take part in the research. Participants completed the A-DES in the classroom, and were not allowed to confer with their classmates about their answers.

Data analysis

To investigate the factor structure of the A-DES, a principal components analysis was completed. The number of factors was determined by a scree test, in which the proportion of variance accounted for by each factor was compared with previous and subsequent factors. To control for non-normally distributed scores, the factor analysis was also repeated after normalizing the data by taking the square root of each A-DES item score. Cronbach's alpha, split-half reliability, and item-total correlations were calculated to investigate the internal reliability and consistency of the A-DES. The A-DES scores were compared across age groups using one-way ANOVA, and t-tests were used to investigate gender differences in A-DES scores for each age group. Parametric analyses were used here (despite the data not being normally distributed in all cases) because Levene's statistic indicated that the variances were not significantly different across groups. Furthermore, there is a growing body of evidence that parametric tests are valid even for small samples and for data that departs widely from the normal distribution (Hays, 1988). All calculations were carried out using the SPSS software package (version 8.0).

Results

Factor structure of the A-DES

A principal components analysis of the A-DES scores (N = 768) yielded six factors with eigenvalues greater than 1 (see Table 1). However, 39.1% of the variance was explained by the first factor, and the next two factors explained only 5.4% and 4.1% of the variance, respectively. The scree analysis also indicated one factor, so a one-factor solution was accepted. All items had a loading of at least 0.4 on this factor and in most cases their loadings on factor 1 was greater than on any other factor. Therefore, all items were included in the final additive scale. Varimax and oblimin rotation did not produce meaningful groupings of items, and so were not used further.

Insert Table 1 about here

To remove the skewness in the distributions of A-DES item scores, the data were transformed by taking the square root of each A-DES item score, making the distribution normal (Kolmogorov-Smirnov test Z = 1.25, p > .05). The factor analysis was repeated using the transformed data and a similar one-factor solution emerged. Again, one factor explained 40.3% of the variance, and again all items had a loading on this factor of at least 0.4. Therefore, the original solution was accepted, showing no factor structure that would support the use of subscales.

Internal reliability

Cronbach's alpha for the A-DES was 0.94 (N = 768), and was the same for both boys (N = 391) and girls (N = 377) when their answers were considered separately. The

Spearman Brown split-half reliability was .90, and again was the same when boys' and girls' scores were considered separately.

Developmental and gender differences in scores on the A-DES

As can be seen in Table 2, the mean A-DES score for the whole sample was 2.66, and it was 2.73 for boys and 2.59 for girls. Since the subscales that were proposed to make up the A-DES failed to emerge from the factor analysis, subscale scores will not be presented here. There were no significant age differences in mean A-DES scores for the total sample, or for boys or girls separately. Nor were there any significant gender differences for any age group.

Insert Table 2 about here

Discussion

Study 1 aimed to provide further psychometric support for the A-DES as a measure of adolescent dissociative experiences. The A-DES had only one underlying factor, and none of the subscales proposed by Armstrong et al. (1997). It was internally reliable (high Cronbach's alpha) and had high split-half reliability (as also shown by previous studies - Armstrong et al., 1997; Smith & Carlson, 1997). Consistent with previous results (Resch et al., 1998, cited in Brunner et al., 2000; Smith & Carlson, 1997), there were no significant age or gender differences in mean A-DES scores.

This is the first study to administer the A-DES to a large sample of adolescents and the first to examine its factor structure. To determine if these findings are reliable,

replication with a different sample is necessary, and older participants are required to investigate possible changes in dissociation after 16 years of age. Additional tests of the measures psychometric properties are needed - particularly its convergent validity. Finally, for the A-DES to be clinically useful, it needs to advance understanding of the role of dissociation in psychological problems. These issues were examined in Study 2.

STUDY 2: CLINICAL UTILITY OF THE A-DES

Following the needs outlined above, Study 2 contained a further factor analysis, tests of internal validity and convergent validity, and an investigation of age and gender differences in A-DES scores. These tests were designed to determine the reliability of Study 1. The clinical utility of the A-DES was then examined, by exploring the relationships between dissociation and levels of psychological symptomatology in anorexics, a mixed clinical group and a large non-clinical group of adolescents. It was expected that dissociation would be higher in the anorexic group than in the mixed clinical or non-clinical groups, and that levels of dissociation would be positively correlated with levels of symptomatology across all groups. It was also hypothesized that dissociation might explain some of the differences in levels of symptomatology between groups.

Method

Participants

Non-clinical group. The sample comprised 210 teenagers (104 boys and 106 girls), aged 12 to 17 years. They were recruited from a secondary school and a sixth

form college in Southampton, UK. Of these participants, 181 fully completed the A-DES (mean age = 15.6, SD = 1.69), 158 participants fully completed both the A-DES and the Inventory of Childhood Memories and Imaginings for Children, and 156 fully completed both the A-DES and the Brief Symptom Inventory. Thus, the numbers in some of the analyses (below) vary slightly.

Mixed clinical group. The questionnaires were given to 50 adolescent girls who were current clients of a clinical service in the south-west of England. The questionnaires were completed by 19 girls, aged 12 to 17 years (mean age = 16.0, SD = 1.40). This group had been referred for a variety of reasons, including bulimia, depression, anxiety, psychosis, having taken an overdose, and included girls who had previously suffered from anorexia and were being treated for other problems. None currently met diagnostic criteria for anorexia nervosa.

Anorexia nervosa group. Twenty girls who met the DSM-IV diagnosis of anorexia nervosa were recruited from two eating disorder services in the south-east of England. They were aged 11 to 17 years (mean = 16.2, SD = 1.31). A further three girls declined to take part.

Measures

The order of the administration of the measures was counterbalanced within each clinical group.

Adolescent Dissociative Experiences Scale (A-DES; Armstrong et al., 1997). As in Study 1, the A-DES was used to measure the frequency of dissociative experiences.

Brief Symptom Inventory (BSI; Derogatis, 1993). The BSI was used to provide a general measure of psychopathology. It contains 53 items, each of which is rated on

a five-point scale of distress. It is scored to give a profile in terms of nine primary symptom dimensions, as well as giving a Global Symptom Index (GSI; mean score across all items). Higher scores indicate greater symptomatology. Although originally designed for use with adults, the BSI has been widely used in research with adolescents (e.g. McCaskill et al., 1998), and separate norms have been developed for teenagers (Derogatis, 1993).

Inventory of Childhood Memories and Imaginings for Children (ICMIC; Myers, 1983). The ICMIC was used as a measure of fantasy proneness. It contains 48 statements about fantasizing and imaginative play, alongside which the respondent places a cross if the item applies to them. It is scored by adding up the number of crosses, excluding the first four items, to give a maximum score of 44. Higher scores indicate increased fantasy proneness. The ICMIC was developed from the adult version for use with 8- to 18-year-olds and was investigated with 1337 school children. Test-retest reliability was .87. The ICMIC also has adequate internal consistency (Kuder-Richardson coefficient = .89). Three words within the ICMIC were changed for UK use: 'check' became 'tick'; 'checkers' became 'draughts'; and 'poison ivy' became 'nettles'. Prior to the main study, the ICMIC was piloted with ten UK 12- to 14-year-olds, who stated that they found the questionnaire easy to understand and straightforward to complete. (See Appendix E).

Procedure

Following ethical approval (see Appendix F), information about the study was sent to parents of secondary school pupils in the non-clinical group. Parents were asked to reply if they did not give consent to their child taking part. All participants in the non-clinical group received both verbal and written information about the study, emphasizing

that they did not have to take part in the research. Participants completed the measures in the classroom, and were not allowed to confer with their classmates about their answers.

In the clinical groups, clinicians asked their clients to consider taking part if they met the inclusion criteria (i.e., were female and between the ages of 12 and 17). It was again emphasized that clients were under no obligation to take part. Clients who agreed to think more about the study were given written information and the questionnaires to complete in their own time. Informed consent was obtained from participants (and from parents if the participant was under 16 years old). Participants returned their questionnaires in a sealed envelope. (See Appendix D).

Data analysis

A principal components analysis was performed on A-DES scores obtained in the non-clinical sample. Pearson correlation coefficients were calculated to investigate whether A-DES scores correlated significantly with scores on the ICMIC, GSI and nine BSI dimensions. Bonferroni's correction was used to reduce the likelihood of Type I errors, since 30 exploratory correlations were being completed ($p = .05/30 = .0017$). Multivariate analysis of variance (MANOVA) was used to examine whether A-DES and BSI scores were significantly different in the non-clinical group compared with the two clinical groups. Multivariate analysis of covariance (MANCOVA) was then used to determine the role of dissociation in the psychopathology levels across the three groups, by investigating whether differences in BSI scores were accounted for by differences in A-DES scores.

Results

Factor analysis

Using the A-DES data from the non-clinical sample (N = 181), a principal components analysis found one main factor, explaining 38.7% of the variance. Again, six factors had eigenvalues of more than 1, but inspection of the scree plot clearly showed that a one-factor solution was optimal. Therefore, as in Study 1, the A-DES score used consisted of the mean score across all 30 items.

Internal reliability

Cronbach's alpha for A-DES in the non-clinical sample was .94, and Spearman-Brown split-half reliability was .91. These scores were similar to those obtained in Study 1, and support the psychometric robustness of the A-DES.

Developmental and gender differences

As shown in Table 3, there were no significant age differences in A-DES scores. However, boys aged 12 to 13 had significantly lower scores than girls of the same age (t=2.48, p<.05) and lower scores than boys of the same age in Study 1 (t = 2.76, p < .01).

Insert Table 3 about here

Convergent validity

One-tailed Pearson correlation coefficients indicated that ICMIC scores (mean scores given in Table 5) were significantly correlated with mean A-DES scores for the non-clinical boys (r = .41, p < .001), the non-clinical girls (r = .48, p < .001), the mixed clinical girls (r = .78, p < .001), and the anorexic girls (r = .61, p < .01). While these

associations were all in the expected direction, they tended to be moderate rather than strong. Thus, the ICMIC scores provide a moderate degree of convergent validity for the A-DES (as shown in adults - e.g., Silva & Kirsch, 1992).

Clinical validation of the A-DES

Dimensional associations of dissociation and psychopathology. An ANOVA confirmed that the three groups were not significantly different in age composition ($F = 1.21$, NS), and that the order in which the measures were completed did not affect A-DES scores ($F = 0.92$, NS). Given the lack of such differences, it is important to consider the links between dissociation (A-DES scores) and psychopathology (BSI scales) for each of the three groups of females. Males were not considered here, due to the all-female composition of the clinical groups.

Table 4 shows that the general level of psychopathology (GSI) was significantly positively correlated with A-DES scores for all groups. The A-DES score was associated with all of the symptom dimensions in the non-clinical females. However, there were more specific patterns of association in the other two groups. In the mixed clinical group, high dissociation scores were linked to high levels of somatization, depression, anxiety, and psychoticism. In contrast, high A-DES scores in the anorexics were associated with high levels of obsessive-compulsive pathology, interpersonal sensitivity, and paranoid ideation.

Insert Table 4 about here

Categorical differences in dissociation and psychopathology. Table 5 shows that although the A-DES scores in both clinical groups appear higher than in the non-clinical group, the differences between the groups' mean scores were not significant. Therefore, the hypothesis that anorexics would be more dissociative than the other two groups was not supported.

Insert Table 5 about here

The same MANOVA showed significant differences between the groups on several of the BSI scales: GSI; interpersonal sensitivity; depression; anxiety; phobic anxiety; paranoid ideation; and psychoticism. However, as it had already been demonstrated that A-DES scores are associated broadly with BSI scores (Table 4), it was important to determine whether removal of any impact of the (non-significant) difference in A-DES scores across groups would have any effect on this difference in levels of psychopathology. Table 5 also shows the results of the MANCOVA, where BSI scores were compared after controlling for dissociation (A-DES scores).

The results of the MANCOVA indicated that, when A-DES score was considered as a covariate, the differences between groups became non-significant on four of the scales (GSI; interpersonal sensitivity; phobic anxiety; paranoid ideation) and were reduced on the remaining scales that had previously shown significant differences (depression; anxiety; psychoticism). In all cases, the covariate effect of the A-DES scores was significant. Thus, the apparent differences between groups on the measures of psychopathology could be explained either in part or wholly as a result of their

different levels of dissociation.

Discussion

Study 2 aimed to provide further validation for the A-DES, as well as examining the relationship between dissociation scores and psychological symptoms. The one-factor solution and internal reliability for the A-DES (as found in Study 1) were replicated, and convergent validity was indicated (with a measure of fantasy proneness). As expected, A-DES scores were not significantly different across age groups and genders.

This study is the first to relate A-DES scores to the level and type of psychological symptoms experienced in adolescence. Contrary to the hypothesis, the anorexics did not have higher levels of dissociation than the other two groups. However, dissociation was associated with level of symptomatology in non-clinical and clinical groups of adolescent females, as hypothesized. Although there was no significant difference between the clinical groups in terms of overall levels of dissociation, there were differences in the way in which dissociation was related to specific aspects of psychopathology. In the anorexics, dissociation was related to obsessive-compulsive features, interpersonal sensitivity, and paranoid ideation, while this was not the case in the mixed clinical group.

GENERAL DISCUSSION

These studies have investigated the psychometric properties of the A-DES, the change in levels of dissociation across adolescence, and the relationship between dissociation and anorexia in adolescence. The findings indicate that the A-DES has good internal reliability and moderate convergent validity. Taken together with findings from previous studies with the A-DES (Armstrong et al., 1997; Smith & Carlson, 1997), indicating adequate discriminant validity and test-retest reliability, these psychometric findings support the A-DES as a satisfactory measure of dissociative experiences in adolescence.

Using independent data sets, a single underlying factor solution was replicated. This solution contrasts with previous research into adult measures, which has uncovered multiple factors in dissociation (e.g., Ray & Faith, 1992). This contrast may reflect different criteria used to determine the number of factors extracted, but there was no indication that using a different analytic approach in the present studies would have even approximated to the factor structures proposed for adult measures. Alternatively, dissociation in adolescence may be a more homogeneous experience than in adulthood. However, it is also possible that the failure to find separate factors here reflects the pattern that is found in non-clinical adults or in clinical adults when the skewness of data are controlled for (Waller, 1995; Wright & Loftus, 1999), and that the true pattern is that dissociation is a unitary construct across the lifespan.

In general, the A-DES scores in the non-clinical samples reported here were higher than those reported by Smith and Carlson (1997). This could represent a cultural difference between this British sample and Smith and Carlson's American group. It is

difficult to explain why the boys aged 12-13 in Study 2 obtained lower scores than boys of the same age in Study 1. Given the larger sample, it is likely that the scores in Study 1 are more reliable. Although care was taken to ensure that the two groups had similar testing conditions, it is possible that the characteristics of the teacher or school atmosphere made it more difficult for boys in Study 2 to admit dissociative experiences.

The findings suggest that dissociation is associated with a wide range of adolescent symptomatology, and to different symptomatology in different disorders. Compared with the results of Armstrong et al. (1997), the A-DES results for the anorexic group would make them the third highest clinical group in terms of dissociation (after the dissociative disorders and psychotic disorders). Although such a comparison is problematic because of the previously noted difference in scores across countries, this finding indicates that dissociation is important among adolescent females with anorexia.

Dissociation is thought to function to protect the individual from unpleasant emotions and memories, but repeated use prevents adaptive coping strategies from developing (Spiegel, 1986). Previous studies (e.g., Serpell et al., 1999) have found that restricting food intake provides anorexics with a method of blocking feelings and restoring control. Hence, food restriction might function as another mechanism to block feelings once a dissociative style has already developed. Dissociation might also facilitate weight reduction by cutting off feelings of hunger, enabling the anorexic to tolerate starvation. The affective state to be blocked might centre on the issues of interpersonal distrust that are important in anorexia (e.g., Flechtner et al., 1995), thus explaining why those anorexics with high levels of interpersonal distrust and paranoid ideation have the highest levels of dissociation. Obsessional-compulsive pathology,

often linked with anorexia (Halmi et al., 1991), might serve the same blocking function, potentially explaining its specific pattern of association with dissociation among anorexics.

In research terms, a major limitation of this study is its cross-sectional design, which makes it impossible to determine whether dissociation is a cause, concomitant or consequence of psychopathology. For example, dissociation may be a cognitive consequence of starvation in the anorexic group, rather than being associated with the genesis of anorexia. This cross-sectional design also limited the ability to conclude that dissociation is stable over time in adolescence. The comparison of different age groups might mask within-individual fluctuations in the frequency of dissociative experiences over time, or might reflect cohort effects rather than a true developmental profile. Prospective longitudinal research is desirable and should be able to establish causality in the relationship between dissociation and psychological symptoms. Future studies should also include older adolescents, to determine whether A-DES scores can demonstrate the expected reduction in levels of dissociation in late adolescence/early adulthood (and to suggest which developmental tasks might need to be resolved before such a reduction can take place). Such research could also provide further convergent validity for the A-DES in younger adolescents by validating it against parental ratings on the Child Dissociative Checklist (Putnam et al., 1993). While cut-off points on measures of dissociation have limited clinical utility, taxometric analyses of A-DES might yield a similar index of particularly pathological dissociation in adolescents, as has been found for the DES with adults (Waller et al., 1996). Finally, there is a need to extend this investigation into other clinical groups, to determine if dissociation levels

vary across more discrete diagnoses.

These findings have a number of clinical implications. Since dissociation is related to psychopathology in adolescents, it should be considered in the assessment, formulation, and treatment of this age group. The A-DES is psychometrically robust and has clinical utility. Thus, the mean scores for these samples serve as normative data, against which clinicians can compare their clients. Where dissociation is present, functional analysis is needed to understand the role of dissociation in the individual's problems. As well as being part of the underlying problem, dissociation may be triggered in therapy, impeding the adolescent from recognizing and revising painful beliefs. Although much has been written recently about treating dissociative disorders in adults (Chu, 1998; van der Hart et al., 1996) and children and adolescents (Putnam, 1997; Silberg, 1998), little is known about targeting dissociation in other disorders. Cognitive-behavioral (Kennerley, 1996) and psychodynamic (Mollon, 1996) approaches to reduce dissociation in adults have been proposed, but might need to be modified if they are to be of use with adolescents.

Conclusions

The A-DES has high internal validity and convergent validity and has a one-factor solution. The frequencies of dissociative experiences are similar for boys and girls, and are stable across adolescence. A-DES scores are correlated with a wide range of psychological symptoms in adolescents. Dissociation is particularly related to symptoms of obsessive-compulsive, interpersonal sensitivity, and paranoid ideation in adolescent girls with anorexia.

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Footnotes

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Table 1: Factor loadings and item-total correlations for each A-DES item

A-DES items	Factor loadings 1	2	3	4	5	6	Item-total correlation
1. I get so wrapped up in watching TV, reading, or playing video games that I don't have any idea what's going on around me.	.40	.42	.29	.16	.40	-.02	.39
2. I get back tests or homework that I don't remember doing.	.50	.27	.20	.25	.38	.14	.48
3. I have strong feelings that don't seem like they are mine.	.52	.13	.06	-.24	.11	.56	.49
4. I can do something really well one time and then I can't do it at all another time.	.44	.44	-.15	-.25	-.07	.09	.41
5. People tell me I do or say things that I don't remember doing or saying.	.53	.40	-.08	-.15	.10	-.20	.51
6. I feel like I'm in a fog or spaced out and things around me seem unreal.	.64	.02	.15	-.27	-.15	.24	.60
7. I get confused about whether I have done something or only thought about doing it.	.65	.30	.08	-.25	-.17	.10	.62
8. I look at the clock and realize that time has gone by and I can't remember what happened.	.60	.25	.27	-.01	.04	-.28	.58
9. I hear voices in my head that are not mine.	.71	-.11	.12	-.06	-.03	-.07	.67
10. When I am somewhere that I don't want to be, I can go away in my mind.	.55	.01	.21	.20	-.32	.21	.52
11. I am so good at lying and acting that I believe it myself.	.46	.30	-.16	.47	.17	.19	.44
12. I catch myself "waking up" in the middle of doing something.	.65	-.02	.26	.18	-.15	-.05	.61
13. I don't recognise myself in the mirror.	.54	-.16	.35	-.09	-.14	.13	.49
14. I find myself going somewhere or doing something and I don't know why.	.72	.07	.10	.08	-.21	-.25	.68
15. I find myself someplace and don't remember how I got there.	.69	-.11	.26	.01	-.03	-.26	.65

Table 1: (continued)

A-DES items	Factor loadings	1	2	3	4	5	6	I-T correlation
16. I have thoughts that don't really seem to belong to me.		.73	-.17	.11	-.06	-.16	.20	.69
17. I find that I can make physical pain go away.		.41	.18	.04	.62	-.01	.23	.39
18. I can't figure out if things really happened or if I only dreamed or thought about them.		.66	.05	.06	.04	-.19	-.15	.62
19. I find myself doing something that I know is wrong, even when I really don't want to do it.		.62	.25	-.28	.05	-.16	-.04	.59
20. People tell me that I sometimes act so differently that I seem like a different person.		.64	.14	-.38	-.03	-.06	-.08	.61
21. It feels like there are walls inside my mind.		.73	-.27	-.10	-.12	.04	.08	.69
22. I find writings, drawings, or letters that I must have done but I can't remember doing.		.69	-.05	-.10	-.01	.11	-.24	.65
23. Something inside of me seems to make me do things that I don't want to do.		.72	.02	-.28	.06	-.09	-.08	.69
24. I find that I can't tell whether I am just remembering something or if it is actually happening to me.		.74	-.15	-.12	.03	-.03	-.08	.70
25. I find myself standing outside of my body, watching myself as I were another person.		.67	-.33	.08	.15	-.04	.11	.62
26. My relationships with my family and friends change suddenly and I don't know why.		.64	.03	-.41	-.02	.06	.13	.61
27. I feel like my past is a puzzle and some of the pieces are missing.		.71	-.20	-.26	.01	-.05	.02	.67
28. I get so wrapped up in my toys or stuffed animals that they seem alive.		.52	-.25	.08	.11	.44	-.16	.48
29. I feel like there are different people inside of me.		.73	-.36	-.05	-.05	.24	-.01	.68
30. My body feels as if it doesn't belong to me.		.69	-.35	-.12	-.05	.29	.04	.65
	eigenvalue	11.7	1.63	1.22	1.13	1.06	1.03	
	% of variance	39.1	5.44	4.06	3.76	3.52	3.42	

Table 2: Age and gender differences on mean A-DES score (Study 1)

			Gender		t-test	
		All	Female	Male	t	p
Age group						
11-12	N	207	100	107		
	Mean (SD)	2.78 (2.06)	2.55 (1.93)	3.00 (2.17)	1.58	NS
12-13	N	133	61	72		
	Mean (SD)	2.90 (1.77)	2.87 (1.72)	2.93 (1.82)	-0.21	NS
13-14	N	171	78	93		
	Mean (SD)	2.60 (1.58)	2.65 (1.51)	2.57 (1.64)	0.33	NS
14-15	N	166	94	72		
	Mean (SD)	2.63 (1.77)	2.51 (1.62)	2.78 (1.95)	-0.97	NS
15-16	N	91	44	47		
	Mean (SD)	2.22 (1.65)	2.35 (1.75)	2.09 (1.56)	0.73	NS
Total	N	768	377	391		
	Mean (SD)	2.66 (1.81)	2.59 (1.72)	2.73 (1.89)	-1.13	NS
ANOVA	F	2.27	0.71	2.29		
	p	NS	NS	NS		

Table 3: Age and gender differences on mean A-DES score (Study 2)

			Gender		t-test	
Age group		All	Female	Male	t	p
12-13	N	59	29	30		
	Mean (SD)	2.45 (1.86)	3.03 (2.02)	1.89 (1.52)	2.48	.05
14-15	N	37	21	16		
	Mean (SD)	2.43 (1.78)	2.25 (1.41)	2.65 (2.20)	-.68	NS
16-17	N	85	47	38		
	Mean (SD)	2.64 (1.70)	2.63 (1.67)	2.64 (1.76)	-.37	NS
Total	N	181	97	84		
	Mean (SD)	2.53 (1.76)	2.67 (1.74)	2.38 (1.79)	1.12	NS
ANOVA	F	.27	1.28	1.76		
	p	NS	NS	NS		

Table 4: Pearson correlation coefficient (one-tailed) between mean A-DES score and BSI scales across groups

	Group		
	Non-clinical (N = 86)	Mixed clinical (N = 19)	Anorexia nervosa (N = 20)
BSI scale			
GSI	.47*	.83*	.66*
Somatization	.35*	.71*	.62
Obsessive-compulsive	.54*	.64	.77*
Interpersonal sensitivity	.37*	.57	.73*
Depression	.40*	.65*	.34
Anxiety	.38*	.68*	.41
Hostility	.34*	.19	.62
Phobic anxiety	.33*	.60	.45
Paranoid ideation	.33*	.38	.75*
Psychoticism	.41*	.73*	.48

* $p < .0017$

Table 5: Differences between groups on A-DES, ICMIC, and BSI scales, compared using MANOVA and MANCOVA (controlling for dissociation levels).

	Group								MANOVA	MANCOVA	
	Non-clinical		Mixed clinical		Anorexia nervosa						
	M	(SD)	M	(SD)	M	(SD)			F	Group F	A-DES F
A-DES	2.67	(1.74)	3.28	(1.89)	3.21	(2.03)			1.40	-	-
ICMIC	17.8	(8.01)	18.2	(10.1)	15.4	(7.60)			.79	-	-
GSI	1.20	(.66)	1.56	(.69)	1.62	(.83)			4.42*	1.64	54.7***
Somatization	1.11	(.78)	1.02	(.68)	0.99	(.83)			.25	1.85	31.5***
Obsess.	1.41	(.80)	1.65	(.95)	1.61	(.86)			.91	.02	68.8***
Interpersonal	1.51	(.85)	1.95	(1.22)	2.23	(1.18)			5.23**	2.80	38.9***
Depression	1.26	(.95)	1.71	(.98)	2.08	(1.17)			6.37*	3.82*	27.1***
Anxiety	1.11	(.80)	1.64	(.92)	1.79	(1.13)			6.72*	3.78*	29.1***
Hostility	1.43	(1.05)	1.57	(1.24)	1.32	(1.04)			.26	.70	18.2***
Phobic anxiety	.75	(.70)	1.39	(1.24)	1.05	(1.12)			4.60*	2.47	25.6***
Paranoid ideation	1.27	(.67)	1.67	(.94)	1.61	(.88)			3.37*	1.34	27.5***
Psychoticism	0.98	(.80)	1.65	(1.16)	1.84	(1.03)			10.3***	6.78**	38.2***

* $p < .05$; ** $p < .01$; *** $p < .001$

Critical Review

This study was a good attempt to investigate the psychometric properties of the Adolescent Dissociative Experiences Scale (A-DES), to explore potential changes in dissociation across adolescence and to examine the role of dissociation in adolescent psychopathology. Particular strengths were: the number of non-clinical teenagers who took part; the measurement of level and type of psychological symptomatology; and the comparison of anorexic girls with both non-clinical girls and other clinical girls.

It is important to acknowledge that the study has many limitations. First, it has been argued that factor analyses cannot be generalized to other samples if they are based on data that are not normally distributed (Field, 2000), as was the case here. Dissociation scores in non-clinical populations are highly skewed and clustered at the low end of the scale, as dissociation measures reflect experiences that are relatively rare in order to be meaningful and clinically useful (Frankel, 1990). Nonetheless, the skew and the floor effect may reduce differences between items, leading to an apparently more homogeneous factor structure. Although a one-factor solution also emerged when the data was transformed to approximate a normal distribution, transforming the data does not overcome the problem of floor effects (Wright & Loftus, 1999). Furthermore, small differences between people with very low dissociation scores may not be meaningful (Carlson & Putnam, 1993).

The second principal limitation of this study is the cross-sectional design. This limits the identification of the developmental course of dissociation, because similar mean scores across age groups might mask within-individual developmental changes. Furthermore, it cannot necessarily be concluded from cross-sectional data that

dissociation has a causal role in psychological problems in adolescence, since it may be a concomitant or a consequence. A prospective longitudinal study would have been preferable to tease out causal relationships, but this was not possible in the time available.

A further weakness is that all of the measures used were positively scored. Hence, the observed association between the A-DES, ICMIC and BSI could reflect an acquiescence response bias. The inclusion of a lie scale, or wording some items in the reverse direction, could have ruled out this possibility.

At a practical level, the various pressures on the school timetable impeded the collection of data in the non-clinical group in Study 2. Those pressures were added to by Standard Assessment Tests (SATS) and an Office for Standards in Education (OFSTED) inspection. Having three measures meant that the assessment took approximately thirty minutes for younger participants. Therefore, only 150 out of 210 completed all the measures, and the sample was smaller (particularly amongst 14- to 15-year-olds) than that originally agreed with staff. This may have biased the sample to include more adolescents with better reading ability, as they were more likely to complete the measures in the time available. If this study was to be repeated, it would be preferable to spend more time with staff discussing possible ways that sufficient time could be made available for all participants to complete all of the measures.

If this study was repeated, it should include the collection of data from older adolescents, in order to investigate when (or if) dissociation reduces to adult levels. However, this would be problematic, because certain items on the A-DES may be inappropriate for young adults. In addition, it is more difficult to find samples of

individuals who are over 18 years old which are representative of the broader population.

Small clinical samples limit the ability to generalize from this research, and hence replication with larger samples are necessary before concluding that the clinical findings are reliable. It is also difficult to know the effect on the findings of all participants in the clinical groups being in treatment. Assessing participants when they are first referred to services would have been problematic, as referrals often occur during times of crisis and artificially high symptomatology can be observed.

Excluding boys from the clinical samples meant that the findings about the role of dissociation cannot be generalized to male adolescents with other clinical problems. However, boys constitute only approximately ten percent of teenagers with anorexia (e.g., Lucas & Holub, 1995), and so it would have been difficult to obtain sufficient participants for adequate study.

The representativeness of the mixed clinical group is limited. Although clinicians agreed to ask all girls aged 11 to 17 to take part in the study (except if it was deemed to impede their treatment), recruitment did depend on the clinicians' memory and actual willingness to participate. Various methods were used to remind the clinicians to distribute the questionnaires, such as visual reminders in the team offices, putting the questionnaires in suitable clients' files, and giving a presentation about the project to provoke interest. However, some clinicians responded more than others, limiting the representativeness of the sample. Although the three groups did not differ significantly in age or gender composition, it would have been preferable to have matched the groups on these and other variables, such as socioeconomic status, ethnic group and treatment setting.

A further weakness with this design was the differences in the administration of the measures between the groups. The non-clinical group completed the measures in the presence of other children. Hence, it is possible that these children 'faked good', accounting for their lower dissociation and symptomatology scores. However, care was taken to ensure that the adolescents could not see each other's responses, and participants were given an envelope in which to place their completed measures to ensure anonymity. In addition, they were given instructions that emphasized that they should complete the questionnaires honestly and that all responses were anonymous.

The non-clinical and anorexic groups completed the measures in the presence of teachers or clinical staff, whereas the mixed clinical sample completed the measures alone. Since staff did not look at responses in any of the conditions, it is unlikely that this factor affected the responses. However, this difference may have caused a high attrition rate in the mixed clinical group, as these girls received less encouragement to take part and were more likely to forget to return the questionnaires. This further limits the representativeness of the mixed clinical group. Due to the anonymous return of questionnaires, it was not possible to investigate the characteristics of teenagers who did not take part, so it is difficult to know how this affected results. It might have been preferable for the researcher to have met with the mixed clinical group, to help them to complete the measures. However, this procedure would have taken up more time for both the researcher and the participants.

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Appendices

Appendix A: Instructions for Contributors to 'Development and Psychopathology'

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– Listed by Subject
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Rochester, NY 14608, U.S.A.

Manuscript Preparation and Style

General. All manuscripts must be typed on 8.5 x 11" or A4 white bond paper with ample margins on all sides. The entire manuscript--including abstract, tables, and references--must be double-spaced. Manuscript pages must be numbered consecutively. Language of publication: English.

Style and Manuscript Order. Follow the general style guidelines set forth in the *Publication Manual of the American Psychological Association* (3rd ed.). The Editor may find it necessary to return manuscripts for reworking or retyping that do not conform to requirements. Manuscripts must be arranged in the following order:

Title Page (page 1). To facilitate blind review, all indication of authorship must be limited to this page; other pages must only show the short title plus page number at the top right. On the title page include (a) full article title; (b) name and affiliations of all authors;

include (a) full article title; (b) name and affiliations of all authors; (c) mailing address and telephone number of the lead author; (d) address of where to send offprints, if different from the lead author; (e) short title of less than 50 characters.

Abstract Page (page 2). Include (a) full article title; (b) abstract of no more than 200 words; (c) up to 5 keywords for indexing and information retrieval.

Acknowledgments (page 2). These should be placed below the abstract. Use this section to indicate grant support, substantial assistance in the preparation of the article, or other author notes.

Text (page 3). Use a 5-character paragraph indent. Do not hyphenate words at the end of lines. Do not justify right margins.

References. Bibliographic citations in the text must include the author's last name and date of publication, and may include page references. Examples of in-text citation styling are: Brown (1983), Ingram (1976, 54-55), Smith and Miller (1966), (Smith & Miller, 1966), (Peterson, Danner, & Flavell, 1972), and subsequently (Peterson et al., 1972). If more than one, citations must be in *alphabetical* order. Every in-text citation must be included in the reference section; every reference must be cited in the text. Examples of reference styling are:

Journal Article

Sroufe, L. A., & Rutter, M. (1984). The domain of developmental psychopathology. *Child Development, 55*, 17-29.

Book

Piaget, J. (1962). *Play, dreams, and imitation in childhood.* New York: Norton.

Chapter in an Edited Book

Cicchetti, D., & Pogge-Hesse, P. (1982). Possible contributions of the study of organically retarded persons to developmental theory. In E. Zigler & D. Balla (Eds.), *Mental retardation: The developmental-difference controversy* (pp. 277-318). Hillsdale, NJ: Erlbaum.

Appendix (optional). Use only if needed. May be useful for review, but not appropriate for publication.

Tables. Tables must appear as a unit following the reference section. Each table should be typed double-spaced on a separate sheet, numbered consecutively with an Arabic numeral, and given a short title. (Example: Table 5. Comparisons on language variables.) All tables must be cited in the text.

Figures. Figures must appear as a unit following the tables. Each figure must be numbered consecutively with an Arabic numeral and a descriptive legend. Legends must be typed together, double-spaced, on a separate sheet preceding the artwork. (Example: Figure 3. Progress in language development.) Figures must be supplied no larger than 8 x 10", be black and white, and be ready for photographic reproduction. Diagrams must be professionally rendered or computer generated. All labels and details must be clearly printed and large enough to remain legible at a 50%

clearly printed and large enough to remain legible at a 50% reduction. Artwork should be identified by figure number and short title and be carefully packaged in a protective envelope. All figures must be cited in the text.

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Appendix B:

Instructions for Contributors to 'The Journal of Nervous and Mental Disease'

INSTRUCTIONS TO CONTRIBUTORS

Editorial Policies

The Journal publishes articles containing new data or ways of reorganizing established knowledge relevant to understanding and modifying human behavior, especially that called "sick" or "deviant." Our policy is summarized by the slogan, "Behavioral science for clinical practice." Articles should include at least one behavioral variable, clear definition of study populations, and replicable research designs. Authors should use the active voice and first person whenever possible. Preference is given to research reports of no more than 15-18 double-spaced typewritten pages; authors wishing to submit longer evaluative review papers should query the Editor in advance. Brief reports (10 typewritten pages) are considered if they have heuristic value. Book reviews are solicited.

Neither a submitted article nor the data it contains may have been published previously or be currently under review for publication elsewhere. Reprint permission for all materials printed in or adapted from other publications must be submitted immediately after formal acceptance. Listed authors should include only primary researchers and writers; other contributors should be acknowledged in a footnote.

Reports of studies involving human subjects must indicate a) the social context from which subjects were drawn and their relationship to the investigator, and b) that informed consent was obtained. Patient anonymity must be protected in all instances.

Manuscripts are usually subjected to blind review by at least two referees for significance, originality, and verifiability. Every effort is made to inform authors of publication decisions within 3 months. All authors must assign copyright in writing to Lippincott Williams & Wilkins when an article is accepted. All accepted manuscripts are edited for adherence to scientific and Journal format and style, internal consistency, succinctness, nonsexist language, grammar, syntax, and punctuation. Rejected manuscripts will be returned to authors only if the original submission is accompanied by a postage-paid, self-addressed envelope. Manuscripts should be submitted in the final, revised format. Extensive re-writing and editorial changes made by the corresponding author after the article is typeset will be charged to the respective author.

Manuscript Submission

Three clear copies of the manuscript, accompanied by a cover letter stating the complete title of the paper and the name, mailing address and telephone number of the corresponding author, should be addressed to **Eugene B. Brody, M.D., Editor-in-Chief, The Journal of Nervous and Mental Disease, The Sheppard and Enoch Pratt Hospital, 6501 N. Charles Street, Baltimore, Maryland 21285-6815.** The manuscript must be typed, double-spaced, with 1-inch margins on all sides, paginated, and organized in accordance with the Journal guidelines. **Do not** indicate authors' names on manuscript pages. **Do not** submit glossy photos of figures or computer disks. If the manuscript is accepted for publication, the corresponding author will be notified of additional requirements, including camera-ready prints or laser printouts of figures and a computer disk with the final, formally accepted version of the manuscript, references, and figure legends. Identify the disk with the name of the senior author, article title, hardware, software, and version. IBM-compatible disks are preferred in WordPerfect, but other programs will be accepted. For additional information, call the Editorial Office at (410) 938-3182.

Notify the Editorial Offices promptly of any address change for the corresponding author. The Journal is not responsible for loss.

Organization of Manuscripts

In most cases, manuscripts should contain the following sections and materials, in the order listed:

1) *Running title page:* An abbreviated title (not more than 45 characters, including spaces and punctuation) and the name and address of the person to whom proofs should be sent.

2) *Complete title page:* A full, informative title (no more than two lines) and the names and highest degrees of all authors.

3) *Abstract:* Full title and a one page description (150 words or less) of the general purpose, methodology, results, and conclusions of the research.

4) *Introduction:* A clear statement of the purpose of the study, a brief survey of salient literature, a description of the research setting if relevant, and the rationale for the general methodology chosen.

5) *Methods:* A precise description of subjects, procedures, apparatus, and methods of data analysis, all sufficiently detailed to allow other competent researchers to evaluate or replicate the study.

6) *Results:* A succinct presentation of significant data obtained, including tables or figures only to supplement — not repeat — the text.

7) *Discussion:* An extension (not reiteration) of the Results, emphasizing significant principles, relationships, generalizations and implications, relevance to previous studies, limitations, and suggestions for further research.

8) *Conclusions:* a clear statement of all conclusions, briefly summarizing evidence for each.

9) *References:* An unnumbered list of cited sources arranged in alphabetical order, using the style shown in the examples below. Note that all authors' names are listed: "et al." is used only in the text. Accuracy of the references is the authors' responsibility. If a manuscript has been accepted for publication, list it as "in press" and give the journal name. Unpublished or privately published materials and personal communications are not references but should be cited as footnotes.

Within the text, citations should show the authors' last names and year of publication (*e.g.* , Mills and Smith, 1956); multiple sources should be cited alphabetically by author. If there are more than two authors, give only the name of the first author, followed by "et al.," (*e.g.* , Mills et al., 1956). If more than one publication by the same author in the same year is cited, suffixes (a, b, c, etc.) should be added to the year in both the text and list citations (*e.g.* , Mills, 1956a). In the text, show page numbers from the original source for any quoted material (*e.g.* , Mills, 1956, p. 12). Except in extraordinary circumstances, no more than four references should be cited in support of any given point. Examples of reference style:

> Lewis SW, Reveley A, Reveley M, Chitkara B, Murray RM (1987) The familial/sporadic distinction as a strategy in schizophrenia research. *Br J Psychiatry* 151:306-313.
>
> Gottlieb BH (Ed) (1981) *Social networks and social support* . Beverly Hills, CA: Sage.
>
> Weissman MM, Boyd JH (1985) Affective disorders: Epidemiology. In HI Kaplan, BJ Sadock (Eds), *Comprehensive textbook of psychiatry/ IV* (4th ed, Vol 1, pp 764-769). Baltimore: Williams & Wilkins.

10) *Footnotes:* A listing of all footnotes in the order in which they appear in the text. Footnote 1 should identify the primary institutional affiliation of the first author (and others who share that setting); it should also give the name and address of the author to whom reprint requests should be sent. Subsequent footnotes identify the affiliations of authors at other institutions, followed by an

unnumbered footnote describing grant support and other essential acknowledgments. Final numbered notes provide information on citations in the text which do not qualify as references.

11) *Figure Legends:* A consecutively numbered (arabic) listing of all figure legends, each sufficiently explanatory to make reference to the text unnecessary.

12) *Figures:* Photocopies of professionally prepared figures. Camera-ready glossy or laser prints to be sent only upon acceptance of the paper; a typed label on the back of each should include figure number, name of lead author, and title of manuscript.

13) *Tables:* A consecutively numbered presentation of all tables, each typed double spaced on a separate page, and headed by a brief but descriptive title.

Appendix C: Adolescent Dissociative Experiences Scale

(NB: The authors state that the A-DES is a public domain document and may be used and reproduced without copyright restrictions.)

A-DES

These questions ask about different kinds of experiences that happen to people. For each question, circle the number that tells how much that experience happens to you. Circle a "0" if it never happens to you, circle a "10" if it is always happening to you. If it happens sometimes but not all of the time, circle a number between 1 and 9 that best describes how often it happens to you. When you answer, only tell how much these things happen when you HAVE NOT had any alcohol or drugs.

1. I get so wrapped up in watching T.V., reading, or playing video games that I don't have any idea what's going on around me.

   0 1 2 3 4 5 6 7 8 9 10

2. I get back tests or homework that I don't remember doing.

   0 1 2 3 4 5 6 7 8 9 10

3. I have strong feelings that don't seem like they are mine.

   0 1 2 3 4 5 6 7 8 9 10

4. I can do something really well one time and then I can't do it at all another time.

   0 1 2 3 4 5 6 7 8 9 10

5. People tell me I do or say things that I don't remember doing or saying.

   0 1 2 3 4 5 6 7 8 9 10

6. I feel like I'm in a fog or spaced out and things around me seem unreal.

   0 1 2 3 4 5 6 7 8 9 10

7. I get confused about whether I have done something or only thought about doing it.

   0 1 2 3 4 5 6 7 8 9 10

8. I look at the clock and realize that time has gone by and I can't remember what has happened.

   0 1 2 3 4 5 6 7 8 9 10

9. I hear voices in my head that are not mine.

   0 1 2 3 4 5 6 7 8 9 10

10. When I am somewhere that I don't want to be, I can go away in my mind.

    0 1 2 3 4 5 6 7 8 9 10

11. I am so good at lying and acting that I believe it myself.

    0 1 2 3 4 5 6 7 8 9 10

12. I catch myself "waking up" in the middle of doing something.

    0 1 2 3 4 5 6 7 8 9 10

13. I don't recognize myself in the mirror.

    0 1 2 3 4 5 6 7 8 9 10

14. I find myself going somewhere or doing something and I don't know why.

    0 1 2 3 4 5 6 7 8 9 10

15. I find myself someplace and don't remember how I got there.

    0 1 2 3 4 5 6 7 8 9 10

16. I have thoughts that don't really seem to belong to me.

    0 1 2 3 4 5 6 7 8 9 10

17. I find that I can make physical pain go away.

    0 1 2 3 4 5 6 7 8 9 10

18. I can't figure out if things really happened or if I only dreamed or thought about them.

    0 1 2 3 4 5 6 7 8 9 10

19. I find myself doing something that I know is wrong, even when I really don't want to do it.

    0 1 2 3 4 5 6 7 8 9 10

20. People tell me that I sometimes act so differently that I seem like a different person.

    0 1 2 3 4 5 6 7 8 9 10

21. It feels like there are walls inside of my mind.

    0 1 2 3 4 5 6 7 8 9 10

22. I find writings, drawings, or letters that I must have done but I can't remember doing.

    0 1 2 3 4 5 6 7 8 9 10

3. Something inside of me seems to make me do things that I don't want to do.

0 1 2 3 4 5 6 7 8 9 10

4. I find that I can't tell whether I am just remembering something or if it is actually happening to me.

0 1 2 3 4 5 6 7 8 9 10

5. I find myself standing outside of my body, watching myself as if I were another person.

0 1 2 3 4 5 6 7 8 9 10

6. My relationships with my family and friends change suddenly and I don't know why.

0 1 2 3 4 5 6 7 8 9 10

27. I feel like my past is a puzzle and some of the pieces are missing.

0 1 2 3 4 5 6 7 8 9 10

28. I get so wrapped up in my toys or stuffed animals that they seem alive.

0 1 2 3 4 5 6 7 8 9 10

29. I feel like there are different people inside of me.

0 1 2 3 4 5 6 7 8 9 10

30. My body feels as if it doesn't belong to me.

0 1 2 3 4 5 6 7 8 9 10

Appendix D:

Participant Information Sheets, Parental Information Sheets and Consent Forms

1. Letter to parents of pupils at Bridgemary Community School, Gosport.
2. Letter to parents of pupils at Cantell School, Southampton.
3. Participant information given to the non-clinical sample.
4. Child and Family Therapy Teams in Bath and Trowbridge, and the Young People's Service in Bath.
5. Eating Disorders Service, Springfield University Hospital, London.
6. Eating Disorders Service, Huntercombe Manor, Berkshire.

Bridgemary Community School
Wych Lane, Gosport, Hampshire PO13 0JN
Tel: 01329 319966 Fax: 01329 512660
Headteacher: Mr A W J Cottrell BSc

22 November 1999

Dear Parent/Carer

ANTI-BULLYING INITIATIVE

We want Bridgemary School to be a safe place where people care for each other. Bullying is the very opposite of this. We are conducting a project for the whole school with a Senior Educational Psychologist and Trainee Clinical Psychologist from Southampton University, looking at how bullying can affect some people. Over two PSHE periods (on the 19th and 26th November) four questionnaires will be given to all pupils. These questionnaires will ask about:

1. Pupils' experiences of bullying.
2. How supportive or helpful they find their friends, family or teachers.
3. Some different kinds of experiences that happen to people.
4. How stressful events affect them.

The pupils will be told very clearly both by the teacher and in writing that they do NOT have to take part in the project and that they can leave any questions that they do not want to answer. After they have finished filling the questionnaires in they will be asked to put them into envelopes and seal them. This will mean no one from school will be able to look at their answers. They will not put their names on the questionnaires so it will not be possible to identify who has filled in what. Any coding system used is purely administrative on the part of the University Team and will be destroyed once the questionnaires have been processed. We do not anticipate pupils finding the questionnaires difficult. However, should they do so, arrangements have been made for pupils to visit members of staff or the school nurse.

A report with recommendations will be written to the school on the results of this study that will be made available for you to read if you would like to. It is hoped that the results of this will give us more information on how to help young people who are bullied.

Should you have any questions about the project, please do not hesitate to contact either Jenny Smerdon (Trainee Clinical Psychologist, Clinical Psychology Training Course, Southampton University, tel. 01703 595321) or Adrian Faupel (Senior Education Psychologist, Psychology Department, Southampton University, Tel. 01703 592609).

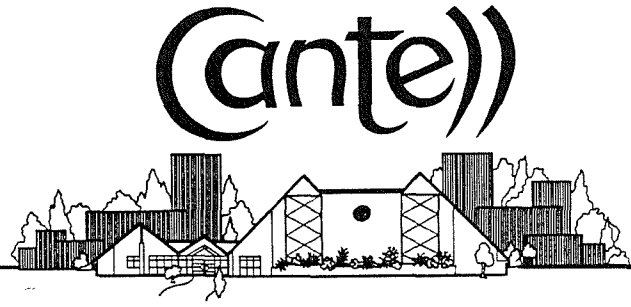
Yours sincerely

David Fordham

Coordinator of PSHE/CAREERS

HEALTHY SCHOOLS AWARD 1997-99

HEADTEACHER
D.J. Burge B.Sc.



Cantell School,
Violet Road,
Southampton,
SO16 3GJ

Tel: (01703) 323111
Fax: (01703) 322433

3 April 2000

Dear Parent/Carer

We are writing to parents/carers to inform you that the school, along with other establishments, has been invited to take part in a research project in conjunction with Southampton University psychology department.

The project is about childhood play, imagination and 'cutting off' in teenagers. The research is investigating the difficulties faced by teenagers and how this might relate to pretend play and imaginings in early childhood.

During tutor time your son/daughter will be asked to fill in three questionnaires, which will take about twenty minutes to complete. Pupils do not have to take part in the project. The questionnaires are anonymous and pupils leave any questions blank they do not want to answer. After the questionnaires have been completed the pupils will place them in envelopes and seal them.

We do not anticipate pupils finding the questionnaires difficult. However, the School Nurse, Pam Please and the School Welfare Assistant, Rona Pickering will be on hand to offer assistance.

The overall results of the study will be written up as a thesis. A shorter report will be written for the school and will be available for you to read if you would like. It is hoped the results of this research will help us to understand better the difficulties that teenagers may face.

Unless we hear from you we will assume you have no objection to your child taking part in this project.

Yours sincerely

D Burge

D Burge
Headteacher

Information for Participants

Title: Childhood Play, Imagination and Cutting Off in Teenagers

Researcher: Alice Farrington

This study aims to investigate how two things relate to the problems that teenagers may face: 1) pretend play in childhood and adolescence and; 2) forgetfulness and feeling 'cut off' from themselves or what they are doing.

Taking part involves filling in three questionnaires. Please read the instructions for each questionnaire carefully as each one is different. Just try your best as there are no right or wrong answers.

When you have finished the questionnaires take a moment to check that you have answered all the questions and not left any out. Then pop the completed questionnaires back into the envelope and seal it.

Your answers are confidential. No one from the school will look at your answers. You do not have to take part in this study.

A short report will be written for the school that will be made available to you to read if you would like. No one will be able to tell from the completed report that you took part. It is hoped that the results of this research will help us to better understand the difficulties that teenagers may face.

Thank you for taking part in this research.

Avon and Western Wiltshire
Mental Health Care NHS Trust

Young People's Service
3 North Parade Buildings
Bath
BA1 1NS
Tel:01225 448373
Fax:01225 332693

Dear

We are writing to all teenage girls who have been in contact with this service to invite them to take part in a research project. Here is some information to help you decide whether or not to take part. Please take time to read the following information carefully and discuss it with friends, relatives and your GP if you wish. Ask us if there is anything you do not understand or if you would like more information. Thank you for reading this.

1. You may or may not receive any direct benefit from taking part in the study. However, information obtained during the course of the study may help us to understand better your problems.

2. It is up to you to decide whether to take part or not. If you do decide to take part, you will be given a consent form. Even if you decide to take part, you are free to withdraw at any time without giving a reason. This will not affect the standard of care you receive. The health professional who is seeing you will not be upset if you decide not to take part.

3. All the information collected about you during the course of the research will be kept strictly confidential. Any published report of the research will not identify you.

Yours sincerely,

Alice Farrington

Alice Farrington
Trainee Clinical Psychologist

Avon and Western Wiltshire NHS
Mental Health Care NHS Trust

Young People's Service
3 North Parade Buildings
Bath
BA1 1NS
Tel:01225 448373
Fax:01225 332693

The Way Teenage Girls Coming for Psychological Help See Themselves

What is the purpose of this study?
My name is Alice Farrington. I am a Clinical Psychology trainee from the University of Southampton. As part of my training I am researching how three things relate to the difficulties of adolescents who seek help: 1) how they feel about themselves; 2) feeling 'cut off' from themselves or what they are doing and having problems remembering; and 3) seeing the different ways they are in various relationships as clashing.

What will happen to me if I take part?
You will be asked to meet with me once for about an hour. During this time you will answer some questions about how you see yourself in different situations. You will also fill in three short questionnaires:
1) looks at the different symptoms you may have experienced;
2) looks at the way you feel about yourself;
3) looks at the amount of experiences you have like feeling 'cut off' or having problems remembering.

Why have I been chosen?
You have been chosen to take part in this study because you are a teenage girl referred to the Young People's Service.

Who will know I am taking part in the study?
Only your parent or guardian if you are under sixteen years old.

What will happen to the results of the study?
The overall results of this study will be written up as a thesis submitted as part of my doctorate in Clinical Psychology at Southampton University. It may be written up for publication in an academic journal. No one will be able to tell that you took part from reading the report.

What happens now?
I will phone you over the next week or so to answer any questions and to see whether you agree to take part. We can then arrange a time and place to meet. If you would prefer it if I did not phone you at home then please leave me a message on the above number to let me know.
If you are under sixteen, please give your parent or guardian a copy of the information sheet.

Contact for further information
If you, or any member of your family, would like any additional information prior to meeting with me, please feel free to contact me at the above address or telephone number and I will be happy to answer any questions.

Thank you for reading this. I hope that you do choose to participate so that your views and experiences can be included.

Avon and Western Wiltshire
Mental Health Care NHS Trust

Young People's Service
3 North Parade Buildings
Bath
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You will be asked to meet with me once for about an hour. During this time you will answer some questions about how you see yourself in different situations. You will also fill in three short questionnaires:
1) looks at the different symptoms you may have experienced;
2) looks at the way you feel about yourself;
3) looks at the amount of experiences you have like feeling 'cut off' or having problems remembering.

Why have I been chosen?
You have been chosen to take part in this study because you are a teenage girl referred to the Young People's Service.

Who will know I am taking part in the study?
Only your parent or guardian if you are under sixteen years old.

What will happen to the results of the study?
The overall results of this study will be written up as a thesis submitted as part of my doctorate in Clinical Psychology at Southampton University. It may be written up for publication in an academic journal. No one will be able to tell that you took part from reading the report.

What happens now?
I will phone you over the next week or so to answer any questions and to see whether you agree to take part. We can then arrange a time and place to meet. If you would prefer it if I did not phone you at home then please leave me a message on 01225 481666 to let me know.
If you are under sixteen, please give your parent or guardian a copy of the information sheet.

Contact for further information
If you, or any member of your family, would like any additional information prior to meeting with me, please feel free to contact me at the above address or telephone number and I will be happy to answer any questions.

Thank you for reading this. I hope that you do choose to participate so that your views and experiences can be included.

Avon and Western Wiltshire
Mental Health Care NHS Trust

Information for Parents or Guardians

Young People's Service
3 North Parade Buildings
Bath
BA1 1NS
Tel:01225 448373
Fax:01225 332693

The Way Teenage Girls Coming for Psychological Help See Themselves

What is the purpose of this study?
My name is Alice Farrington and I am a Clinical Psychology trainee from the University of Southampton. As part of my training I am researching how three things relate to the difficulties of adolescents who seek help: 1) how they feel about themselves; 2) feeling 'cut off' from themselves or what they are doing and having problems remembering; and 3) seeing the different ways they are in various relationships as clashing.

Why has your daughter been chosen?
She has been chosen to take part in this study because she is a teenage girl referred to the Young People's Service.

What will happen if she takes part?
She will be asked to meet with me once for about an hour. During this time your daughter will answer some questions about how she sees herself in different situations. She will also complete three short questionnaires: 1) looks at different symptoms experienced; 2) looks at the way she feels about herself; 3) looks at the amount of experiences she has like feeling 'cut off' or having problems remembering.

Who will know she is taking part in the study?
Only you and your daughter.

What will happen to the results of the study?
The overall results of this study will be written up as a thesis submitted as part of my doctorate in Clinical Psychology at Southampton University. It may be written up for publication in an academic journal. No one will be identifiable in the report.

What happens now?
I will phone over the next week or so to answer any questions and to see whether you agree for your daughter to take part. We can then arrange an appointment at a mutually convenient time and place. If you agree I will send you a consent form to sign for you daughter to give me.

Contact for further information
If you, or any member of your family, would like any additional information prior to your daughter meeting me, please feel free to leave me a message at the above number and I will contact you. I am happy to answer any questions.

Thank you for taking the time to read this. I hope that you allow your daughter to participate so that her views and experiences can be included.

Avon and Western Wiltshire
Mental Health Care NHS Trust

Young People's Service
3 North Parade Buildings
Bath
BA1 1NS
Tel:01225 448373
Fax:01225 332693

Dear

Thank you for agreeing to meet with me on _____

at _____. I look forward to meeting you.

Yours sincerely,

Alice Farrington

Trainee Clinical Psychologist

Avon and Western Wiltshire
Mental Health Care NHS Trust

Young People's Service
3 North Parade Buildings
Bath
BA1 1NS
Tel:01225 448373
Fax:01225 332693

Consent form for parents / guardians

The Way Teenage Girls Coming for Psychological Help See Themselves

Name of researcher: Alice Farrington

Please complete the following questions:	please circle
Have you read the information sheet?	yes / no
Have you had the opportunity to ask questions and discuss the study?	yes / no
Have you received satisfactory answers to all your questions?	yes / no
Have you received enough information about the study?	yes / no

Do you understand that your daughter may withdraw from the study at any time, without giving a reason, and without affecting future treatment? yes / no

Do you agree that your daughter may take part in this study? yes / no

Name of parent/ guardian_____

Date_____Signature_____

Avon and Western Wiltshire
Mental Health Care NHS Trust

Young People's Service
3 North Parade Buildings
Bath
BA1 1NS
Tel:01225 448373
Fax:01225 332693

Consent form for participants

The Way Teenage Girls Coming for Psychological Help See Themselves

Name of researcher: Alice Farrington

Please complete the following questions:	please circle
Have you read the information sheet?	yes / no
Have you had the opportunity to ask questions and discuss the study?	yes / no
Have you received satisfactory answers to all your questions?	yes / no
Have you received enough information about the study?	yes / no

Do you understand that you are free to withdraw from the study at any time, without giving a reason, and without affecting your future treatment? yes / no

Do you agree to take part in this study? yes / no

Name of participant _____

Date_____ Signature_____

DEPARTMENT OF PSYCHIATRY
Chairman: Professor J. Hubert Lacey

St. George's Hospital Medical School

Professor Glenn Waller
Psychology of Eating Disorders
JENNER WING
CRANMER TERRACE
LONDON SW17 0RE

Tel: 0181-725 5532/5543
Fax: 0181-725 1216
E-mail: g.waller@sghms.ac.uk

Patient Information Sheet
Version 1 (06/01/00)

Title of Project: Childhood Play, Imagination and 'Cutting Off' in Teenagers

Name of Researcher: Alice Farrington

You are being invited to take part in a research study. Before you decide it is important for you to understand why the research is being done and what it will involve. Please read the following information carefully and discuss it with friends, relatives and your GP if you wish. Ask us if there is anything that is not clear or if you would like more information. Take time to decide whether or not you wish to take part.

What is the purpose of this study?
This research aims to investigate how two things relate to the difficulties of adolescents who seek help: 1) feeling 'cut off' from themselves or what they are doing and having problems remembering; and 2) time spent pretending and imagining when they were younger and nowadays.
This study will take six months in total, although you would only take part once for about twenty minutes.

Why have I been chosen?
You have been chosen to take part in this study because you are a teenager referred to the Eating Disorder Service, Springfield University Hospital. About fifteen other teenagers from this service are being asked to take part.

Do I have to take part?
It is up to you, and your parent or guardian, to decide whether or not you take part. If you do decide to take part you will be given this information sheet to keep and asked to sign a consent form. Even if you do decide to take part, you are still free to withdraw at any time without giving a reason. This will not effect the standard of care you receive.

What will happen to me if I take part?
You will be asked to complete three questionnaires which take about twenty minutes to complete in all.
1) looks at the different symptoms you may have experienced over the previous week;
2) looks at the amount of experiences you have like feeling 'cut off' or having problems remembering.
3) looks at how you enjoyed playing during childhood and how your present interests relate to your childhood interests.

Will my taking part in this study be kept confidential?
Any information which is collected about you during the course of the research will be kept strictly confidential. Any information about you which leaves the hospital will have your name and address removed so that you cannot be recognised from it. However, you will be asked if it is acceptable for the researcher to notify your GP and your consultant that you are taking part in the research.

What will happen to the results of the research study?
The overall results of this study will be written up as a thesis submitted as part of my Doctorate in Clinical Psychology at Southampton University. It may be written up for publication in an academic journal. No one will be able to tell that you took part from reading the report. If you would like, you can be sent a brief summary of findings at the end of the study (August 2000).

Who is organising and funding the research?
The research is part of my Doctorate in Clinical Psychology, funded by the NHS. I am not being paid for including you in the study.

Who has reviewed the study?
The Wandsworth Local Research Ethics Committee have given their approval for this study to go ahead.

Contact for further information
If you, or any member of your family, would like any additional information prior to taking part, please contact Glenn Waller, Consultant Clinical Psychologist, Department of Psychiatry, St. George's Hospital Medical School, University of London, Cranmer Terrace, London, SW17 0RE (Tel: 01208 725 5543).

Thank you for reading this. I hope that you do choose to participate so that your views and experiences can be included.

You can keep this Information Sheet. If you agree to take part, then you will be asked to sign a Consent Form, and you can keep a copy of that form.

DEPARTMENT OF PSYCHIATRY
Chairman: Professor J. Hubert Lacey

St. George's Hospital Medical School

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Centre Number:
Study Number:
Patient Identification Number for this trial:

Version 1 (06/01/00)

Consent form for Participants

Title of Project: Childhood Play, Imagination and 'Cutting Off' in Teenagers

Name of Researcher: Alice Farrington

	Please initial below
1. I confirm that I have read and understand the Information Sheet dated 6th January 2000 (Version 1) for the above study and have had the opportunity to ask questions.	_____
2. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason, without my medical care or legal rights being affected.	_____
3. I understand that sections of my medical notes may be looked at by responsible individuals from South West London and St. George's Mental Health NHS Trust or from regulatory authorities where it is relevant to my taking part in research. I give permission for these individuals to have access to my records.	_____
4. I agree to take part in the above study?	_____

_____	_____	_____
Name of patient	Date	Signature
_____	_____	_____
Name of person taking consent (if different from researcher)	Date	Signature
_____	_____	_____
Name of researcher	Date	Signature

1 for patient; 1 for researcher; 1 to be kept with hospital notes

DEPARTMENT OF PSYCHIATRY
Chairman: Professor J. Hubert Lacey

St. George's Hospital Medical School

Professor Glenn Waller
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Tel: 0181-725 5532/5543
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E-mail: g.waller@sghms.ac.uk

Information Sheet for Parents or Guardians
Version 2 (08/02/00)

Title of Project: Childhood Play, Imagination and 'Cutting Off' in Teenagers

Name of Researcher: Alice Farrington

Your son / daughter is being invited to take part in a research study. Before you decide whether they can take part it is important for you to understand why the research is being done and what it will involve. Please read the following information carefully and discuss it with friends, relatives and your GP if you wish. Ask us if there is anything that is not clear or if you would like more information. Take time to decide whether or not you wish your son / daughter to take part.

What is the purpose of this study?
This research aims to investigate how two things relate to the difficulties of adolescents who seek help: 1) feeling 'cut off' from themselves or what they are doing and having problems remembering; and 2) time spent pretending and imagining when they were younger and nowadays.

This study will take six months in total, although your son / daughter would take part once for twenty minutes.

Why has your son / daughter been chosen?
Your son / daughter has been chosen to take part in this study because he / she is a teenager referred to the Eating Disorder Service, Springfield University Hospital. About fifteen other teenagers from this service are being asked to take part.

Does he / she have to take part?
It is up to you, and your son / daughter, to decide whether or not you take part. If you do decide to take part you will be given this information sheet to keep and asked to sign a consent form. Even if you do decide to allow your son / daughter to take part, you are still free to withdraw at any time without giving a reason. This will not effect the care your son / daughter receives.

What will my son / daughter be asked to do?
Your son / daughter will be asked to complete three questionnaires which take about twenty minutes to complete in all.
1) looks at the different symptoms experienced over the previous week;
2) looks at the amount of experiences like feeling 'cut off' or having problems remembering.
3) looks at how he / she enjoyed playing during childhood and how his or her present interests relate to childhood interests.
Should you wish, you can see copies of these questionnaires when you sign the consent form.

Will my taking part in this study be kept confidential?
Any information which is collected during the course of the research will be kept strictly confidential. Any information which leaves the hospital will have your son / daughter's name and address removed so that they cannot be recognised from it. You will be asked if it is acceptable for the researcher to notify your GP and your consultant that your son / daughter is taking part in research.

What will happen to the results of the research study?
The overall results of this study will be written up as a thesis submitted as part of my Doctorate in Clinical Psychology at Southampton University. It may be written up for publication in an academic journal. No one will be able to tell that your son / daughter took part from reading the report. If you would like, you can be sent a brief summary of findings at the end of the study (August 2000).

Who is organising and funding the research?
The research is part of my Doctorate in Clinical Psychology, funded by the NHS. I am not being paid for including your son / daughter in the study.

Who has reviewed the study?
The Wandsworth Local Research Ethics Committee have given their approval for this study to go ahead.

Contact for further information
If you, or any member of your family, would like any additional information prior to taking part, please contact Glenn Waller, Consultant Clinical Psychologist, Department of Psychiatry, St. George's Hospital Medical School, University of London, Cranmer Terrace, London, SW17 0RE (Tel: 01208 725 5543).

Thank you for reading this.

You can keep this Information Sheet. If you agree to take part, then you will be asked to sign a Consent Form, and you can keep a copy of that form.

DEPARTMENT OF PSYCHIATRY
Chairman: Professor J. Hubert Lacey

St. George's Hospital Medical School

Professor Glenn Waller
Psychology of Eating Disorders
JENNER WING
CRANMER TERRACE
LONDON SW17 0RE

Tel: 0181-725 5532/5543
Fax: 0181-725 1216
E-mail: g.waller@sghms.ac.uk

Centre Number:
Study Number:
Patient Identification Number for this trial:

Version 1 (06/01/00)

Consent form for Parents / Guardians

Title of Project: Childhood Play, Imagination and Cutting Off in Teenagers

Name of Researcher: Alice Farrington

	Please initial below
1. I confirm that I have read and understand the Information Sheet dated 6th January 2000 (Version 1) for the above study and have had the opportunity to ask questions.	_____
2. I understand that my son / daughter's participation is voluntary and that he / she may withdraw at any time, without giving any reason, without his / her medical care or legal rights being affected.	_____
3. I understand that sections of my son / daughter's medical notes may be looked at by responsible individuals from South West London and St. George's Mental Health NHS Trust or from regulatory authorities where it is relevant to my taking part in research. I give permission for these individuals to have access to my son / daughter's records.	_____
4. I agree that my son / daughter may take part in the above study?	_____

Name of parent/ guardian	Date	Signature
Name of person taking consent (if different from researcher)	Date	Signature
Name of researcher	Date	Signature

1 for parent / guardian, 1 for researcher, 1 to be kept with hospital notes

DEPARTMENT OF PSYCHIATRY
Chairman: Professor J. Hubert Lacey

St. George's Hospital Medical School

Professor Glenn Waller
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LONDON SW17 0RE

Tel: 0181-725 5532/5543
Fax: 0181-725 1216
E-mail: g.waller@sghms.ac.uk

6th January 2000

Notification to GP/responsible clinician of patient's participation in a research project.

Patient's name: _____

Title of Project: How do Dissociation and Imaginative Involvement relate to Psychological Problems in Adolescents?

Centre Number:
Study Number:
Name of Researcher: Alice Farrington

As you will know, this patient is currently receiving treatment at the Eating Disorder Service at Springfield University Hospital. We are currently running a project at this service investigating the relationship between dissociation and imaginative involvement and psychological problems in adolescents. Your patient has agreed to take part. Therefore, I am writing to you to let you know that he / she will be participating.

Dissociation refers to experiences like amnesia, feeling cut off from yourself and your surroundings and feeling very absorbed in something. We all have some dissociative experiences, such as losing awareness during driving and then suddenly discovering some miles have been travelled. Problematic dissociation is thought to develop through difficult childhood experiences. It is associated with many mental health problems in adults, such as bulimia and self-harm, and can hinder treatment if not taken into account. Very few studies have looked at dissociation in adolescents.

This study aims to investigate the nature of dissociation in adolescents and whether it is related to severity, and type of, psychological problems. As a related construct, I am also looking at imaginative involvement, and how this relates to dissociation scores and symptomatology. I am conducting research on both clinical and non-clinical groups of adolescents.

Taking part in the study involves completing three questionnaires: 1) measures symptoms experienced over the past week; 2) measures dissociative experiences; and 3) measures imaginative involvement. These will take about twenty minutes to complete in total.

The research is part of my Doctorate in Clinical Psychology at the University of Southampton, and has been approved by the Wandsworth Local Research Ethics Committee. If you would like more information about this research (or would like details of the outcome of the study), please contact me via Glenn Waller, Consultant Clinical Psychologist, at the above address.

Yours sincerely,

Alice Farrington
Trainee Clinical Psychologist

Huntercombe Manor

Patient Information Sheet **Version 1 (17/02/00)**

Title of Project: Childhood Play, Imagination and 'Cutting Off' in Teenagers

Name of Researcher: Alice Farrington

You are being invited to take part in a research study. Before you decide it is important for you to understand why the research is being done and what it will involve. Please read the following information carefully and discuss it with friends, relatives and your GP if you wish. Ask us if there is anything that is not clear or if you would like more information. Take time to decide whether or not you wish to take part.

What is the purpose of this study?
This research aims to investigate how two things relate to the difficulties of adolescents who seek help: 1) feeling 'cut off' from themselves or what they are doing and having problems remembering; and 2) time spent pretending and imagining when they were younger and nowadays.
This study will take six months in total, although you would only take part once for about twenty minutes.

Why have I been chosen?
You have been chosen to take part in this study because you are a teenager referred to the Eating Disorder Service, Huntercombe Manor Hospital. About fifteen other teenagers from this service are being asked to take part.

Do I have to take part?
It is up to you, and your parent or guardian, to decide whether or not you take part. You have at least a week to decide. If you do decide to take part you will be given this information sheet to keep and asked to sign a consent form. Even if you do decide to take part, you are still free to withdraw at any time without giving a reason. This will not effect the standard of care you receive.

What will happen to me if I take part?
You will be asked to complete three questionnaires which take about twenty minutes to complete in all.
1) looks at the different symptoms you may have experienced over the previous week;
2) looks at the amount of experiences you have like feeling 'cut off' or having problems remembering.
3) looks at how you enjoyed playing during childhood and how your present interests relate to your childhood interests.

Will my taking part in this study be kept confidential?
Any information which is collected about you during the course of the research will be kept strictly confidential. Any information about you which leaves the hospital will have your name and address removed so that you cannot be recognised from it. However, you will be asked if it is acceptable for the researcher to notify your GP and your consultant that you are taking part in the research.

What will happen to the results of the research study?
The overall results of this study will be written up as a thesis submitted as part of my Doctorate in Clinical Psychology at Southampton University. It may be written up for publication in an academic journal. No one will be able to tell that you took part from reading the report. If you would like, you can be sent a brief summary of findings at the end of the study (August 2000).

Who is organising and funding the research?
The research is part of my Doctorate in Clinical Psychology, funded by the NHS. I am not being paid for including you in the study.

Who has reviewed the study?
The Berkshire Health Authority Research Ethics Committee have given their approval for this study to go ahead.

Contact for further information
If you, or any member of your family, would like any additional information prior to taking part, please contact Alice Farrington at the Training Course in Clinical Psychology, Department of Psychology, University of Southampton (Tel: 01703 595321).

Thank you for reading this. I hope that you do choose to participate so that your views and experiences can be included.

You can keep this Information Sheet. If you agree to take part, then you will be asked to sign a Consent Form, and you can keep a copy of that form.

Huntercombe Manor

Centre Number:
Study Number:
Patient Identification Number for this trial:

Version 1 (17/02/00)

Consent form for Participants

Title of Project: Childhood Play, Imagination and 'Cutting Off' in Teenagers

Name of Researcher: Alice Farrington

	Please initial below
1. I confirm that I have read and understand the Information Sheet dated 17th February 2000 (Version 1) for the above study and had the opportunity to ask questions.	_____
2. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason, without my medical care or legal rights being affected.	_____
3. I agree to take part in the above study	_____

_____	_____	_____
Name of patient	Date	Signature
_____	_____	_____
Name of person taking consent (if different from researcher)	Date	Signature
_____	_____	_____
Name of researcher	Date	Signature

1 for patient; 1 for researcher; 1 to be kept with hospital notes

Huntercombe Manor

Information Sheet for Parents or Guardians **Version 1 (17/02/00)**

Title of Project: Childhood Play, Imagination and 'Cutting Off' in Teenagers

Name of Researcher: Alice Farrington

Your son / daughter is being invited to take part in a research study. Before you decide whether they can take part it is important for you to understand why the research is being done and what it will involve. Please read the following information carefully and discuss it with friends, relatives and your GP if you wish. Ask us if there is anything that is not clear or if you would like more information. Take time to decide whether or not you wish your son / daughter to take part.

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Why has your son / daughter been chosen?
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Does he / she have to take part?
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What will my son / daughter be asked to do?
Your son / daughter will be asked to complete three questionnaires which take about twenty minutes to complete in all.
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3) looks at how he / she enjoyed playing during childhood and how his or her present interests relate to childhood interests.
You can see copies of these questionnaires before you sign the consent form.

Will my son / daughter taking part in this study be kept confidential?
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Huntercombe Manor

Centre Number:
Study Number:
Patient Identification Number for this trial:

Version 1 (17/02/00)

Consent form for Parents / Guardians

Title of Project: Childhood Play, Imagination and Cutting Off in Teenagers

Name of Researcher: Alice Farrington

	Please initial below
1. I confirm that I have read and understand the Information Sheet dated 17th February 2000 (Version 1) for the above study and have had the opportunity to ask questions.	_____
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3. I agree that my son / daughter may take part in the above study?	_____

_____	_____	_____
Name of parent/ guardian	Date	Signature
_____	_____	_____
Name of person taking consent (if different from researcher)	Date	Signature
_____	_____	_____
Name of researcher	Date	Signature

1 for parent / guardian; 1 for researcher; 1 to be kept with hospital notes

Huntercombe Manor Hospital, Huntercombe Lane South, Taplow, Maidenhead, Berkshire, SL6 0PQ England
Telephone: 01628 667881 Facsimile: 01628 666989 E-mail:enquiries@huntercombemanor.com
Registrations No. 2152773
A CrestaCare plc Company

Huntercombe Manor

17th February 2000

Notification to GP / responsible clinician of patient's participation in a research project.

Patient's name: _____

Title of Project: How do Dissociation and Imaginative Involvement relate to Psychological Problems in Adolescents?

Centre Number:
Study Number:
Name of Researcher: Alice Farrington

As you will know, this patient is currently receiving treatment at the Eating Disorder Service at Huntercombe Manor Hospital. We are currently running a project at this service investigating the relationship between dissociation and imaginative involvement and psychological problems in adolescents. Your patient has agreed to take part. Therefore, I am writing to you to let you know that he / she will be participating.

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Yours sincerely,

Alice Farrington

Alice Farrington
Trainee Clinical Psychologist

Appendix E: Inventory of Childhood Memories and Imaginings for Children

The major purpose of this questionnaire is to find out to what extent people remember how they played and imagined during childhood and how their present interests relate to their childhood interests.

Please place a tick (√) in front of each item below that applies to you. Please answer as honestly as possible and do not be concerned if you find that you are either ticking almost all the items or almost none.

___1.. When I was younger, I enjoyed active playing such as running and jumping.

___2.. When I was younger, I enjoyed swinging (on a swing).

___3.. When I was younger, I liked lots of music.

___4.. When I was younger, I enjoyed cartoons (on TV or in movies).

___5.. I can remember clearly one or more things that happened to me when I was two years of age or younger.

___6.. When I remember back to when I was 6, or 7 years of age, I can "see" and "hear" again what I saw and heard then and I can feel again the feelings (happy, sad, afraid, etc.) I felt then.

___7.. Although I have grown, I still feel almost the same as I did when I was younger.

___8.. When I was younger, I believed in such beings as elves, witches, leprechauns, fairies, etc.

___9.. Now that I am older, I still in some ways believe in such beings as elves, witches, leprechauns, fairies, etc.

___10.. When I was younger, I would dream or make believe I was flying so clearly that I felt as if I really did fly.

___11.. When I was younger, I enjoyed fairytales.

___12.. Now, I would still enjoy fairytales.

___13.. When I was younger, I was very good at make believe and imagining.

___14.. At the present time, I am still very good at make believe and imagining.

___15.. When I was younger, I spent time thinking about such things as the meaning of life, and of death.

___16.. When I was a young child (below age 8), I liked playing make-believe games such as cowboys, school, house, etc. I liked them better than games without make-believe such as draughts, building things, ball games, hopscotch, etc.

___17.. When I was playing make-believe games as a young child, I would make believe so well that what I pretended seemed real to me.

___18.. When I was younger, I lived in a make-believe world much or most of the time.

___19.. Now, I still live in a make-believe world some of the time.

___20.. When I was much younger, I believed that my doll(s) or stuffed animal(s) were alive and had feelings (that is, they could feel hurt, lonely, happy, etc.).

___21.. When I was younger, I had a pretend friend or companion such as a make-believe person, animal, or object which I talked to, or took along with me.

___22.. When I was younger, I would at times pretend and in some ways believe I was someone else such as a prince, princess, Snow White, Peter Pan, etc.

___23.. Now, I sometimes pretend I am someone else.

___24.. When I was younger, I would have liked to take ballet lessons or I do or did enjoy taking ballet dancing lessons.

___25.. At times I have been afraid my pretending would become so real to me that I would be unable to stop it.

___26.. At least once, someone thought I was lying when I was just telling what I was making-believe.

___27.. When I was younger, I would spend at least half of the time I was awake pretending or imagining.

___28.. Now, I still spend a large part of the day pretending and imagining.

___29.. If I could not pretend or make-believe any more, I wouldn't be me -- I wouldn't be the same person.

___30.. At times, when I was younger, it was hard for me to tell if something had actually happened or if I made believe it happened.

___31.. If given the chance, I would be very eager to feel an entirely new feeling -- a feeling such as sight, hearing, smell, or touch, but as different from all of these as they are all different from each other.

___32.. I have had an important religious, or spiritual experience.

___33.. I have felt, heard, or seen a ghost or spirit.

___34.. I have had an out-of-body experience; that is, I have felt as if "I" (my mind or my spirit) left my body and lived for awhile without my body.

___35.. I have known something would happen before it happened even though there was no real way I could have known.

___36.. I have at times written poems, stories, or songs, etc., and I did not feel it was I who was thinking of them.

___37.. I have at times felt that I just had to go somewhere or to do something I wouldn't usually do (such as call someone I wouldn't usually call) and then later found out there was a reason for this feeling. (For instance, the person I called really needed me at that time.)

___38.. I believe being born again in a different life is possible, and I think I may have lived more than one life.

___39.. I would like to try hypnosis.

___40.. I think I could be hypnotized.

___41.. I have at times thought something happened to me, but later I found out that what I thought happened never did.(Some possible examples to show you this are as follows: (a) you thought you got something in your eye, your eye hurt, but you couldn't find anything in your eye; (b) or you thought you ate spoiled food, got sick, but found out later that the food was not spoiled; (c) or you thought you touched nettles, started itching, but the doctor said it wasn't nettles.)

___42.. While listening to my favourite music, in addition to feeling calm, relaxed, happy, etc. I often have a feeling of oneness with the music, or being in another place or time, or vividly remembering the past.

___43.. When I remember important events in my life, in addition to thinking about them, I can also see again what I saw then, hear again the sounds, voices, etc., as I heard them before, feel the feelings I felt then. I can live them all over again -- not just think about them.

___44.. I can clearly feel again in my imagination such things as: the feeling of a gentle breeze, warm sand under bare feet, the softness of fur, cool grass, the warmth of the sun, and the smell of freshly cut grass.

___45.. When asked to close my eyes and pretend I am holding an animal (dog, cat, etc.) on my lap, I can feel its weight and warmth, touch it, see it, hear it, etc., as if it were really there.

___46.. At times just before I fall asleep, I can see very clear pictures or images.

___47.. Many or most of my dreams tend to be at least as real as things in my real life.

___48.. If I wish, I am usually able to finish or change a dream after I wake up.

Appendix F: Letters of Ethical Approval

1. Department of Psychology, Southampton University

2. Bath Local Research Ethics Committee

3. Wandsworth Local Research Ethics Committee

4. East Berkshire Local Research Ethics Committee

University of Southampton

Department of Psychology

University of Southampton
Highfield
Southampton
SO17 1BJ
United Kingdom

Telephone +44 (0)23 8059 5000
Fax +44 (0)23 8059 4597
Email

Miss Alice Farrington
37 Rivers Street
Bath
BA1 2QA

11th January 2000

Dear Alice,

I am writing to confirm you that your ethical application titled, "How does dissociation and imagination relate to adolescent psychopathology?", has been given approval by the department.

Should you require any further information, please do not hesitate in contacting me on (01703) 593995.

Yours sincerely,

KMSmith

Kathryn Smith
Academic Secretary

BATH LOCAL RESEARCH ETHICS COMMITTEE
Direct tel/fax: 01225 825725. e-mail: *research.ethics@ruh-bath.swest.nhs.uk*

3 February 2000

Ms A Farrington
Flat 6
37 Rivers Street
BATH BA1 2QA

Dear Ms Farrington

BA52/99-00 ***(please quote this reference on all correspondence)***
Shame, dissociation and conflicting self-attributes: How do they relate to adolescent psychopathology?

At the meeting held on 27 January 2000, the Committee confirmed Chairman's Action approval, dated 5 January 2000, to an amendment in the way potential participants are approached to include Protocol version 3 (16/12/1999), Inventory of Childhood Memories and Imaginings (Child version), General information about taking part in research letter, version 3 (16/12/1999), Participant Information Sheet, version 3 (16/12/1999), Parents/Guardian Information Sheet, version 3 (16/12/1999).

This Committee is organised and operates according to ICH/GCP Guidelines and the applicable laws and regulations. Any changes or extensions to the protocol, or additional investigators should be notified to the Committee for approval. Serious and unexpected adverse events should also be notified to the meeting. May we remind you of the Data Protection Act 1984 and the need to conduct the trial in accordance with the Good Clinical Practice Guidelines.

The Committee is required to audit progress of research and to produce a yearly report to the Avon Health Authority and Department of Health. You are therefore required to provide a brief yearly report and a short final report.

Yours sincerely

Dr Andrew Taylor
Vice-Chairman

Royal United Hospital
Combe Park, Bath BA1 3NG
Tel: (01225) 428331

St George's Healthcare

St. George's Healthcare NHS Trust
St. George's Hospital
Blackshaw Road, London SW17 0QT
Telephone: 0181-672 1255
Fax: 0181-672 5304

Our Ref: IAS/kj/00.6.8

21 February 2000

Ms Alice Farrington
Trainee Clinical Psychologist
41 Manor Road
Didcot
OXON
OX11 7JZ

Dear Ms Farrington

Re: How do dissociation and involvement in imagination and fantasy change during adolescence and how do they relate to psychological problems? - 00.6.8

Thank you for your letter of 14 February 2000 and for your full answers to our concerns. I now feel that we understand much more clearly what you propose and I am now happy to approve the commencement of the study.

Yours sincerely

Canon Ian Ainsworth-Smith
Chairman
Local Research Ethics Committee

Please Note: All research should be conducted in accordance with the guidelines of the Ethical Committee; the reference number allocated to the project should be used in all correspondence with the Committee and the Committee should be informed:

(a) when the project is complete.

(b) what stage the project is at one year from today's date.

(c) if any alterations are made to the treatment or protocol which might have affected ethical approval being granted.

(d) all investigators whose projects have been approved by this Committee are required to report at once any adverse experience affecting subjects in the study and at the same time state the current total number of Serious Adverse Events that have occurred.

Heatherwood and Wexham Park Hospitals NHS
NHS Trust

Administration/Legal Services Department
Direct Line Telephone Number: 01753-634297
Fax Number: 01753-633577

Wexham Park Hospital
Wexham Street
Slough
Berkshire
SL2 4HL

Tel: 01753 633000
Fax: 01753 634848

Our Ref: JAG/PC/2178

15th March 2000

Dr. Brian Lask,
Consultant in Child & Adolescent Psychiatry,
Huntercombe Manor Hospital,
Taplow,
Berks.

Dear Dr. Lask,

Re: East Berkshire Research Ethics Committee Application No: 2178
How do dissociation and involvement in imagination and fantasy change during adolescence and how do they relate to psychological problems?

At its meeting held on Thursday 9th March, 2000, the East Berkshire Research Ethics Committee received and approved your application for a project entitled 'How do dissociation and involvement in imagination and fantasy change during adolescence and how do they relate to psychological problems?'.

For your information, the following members of the Committee were present at the meeting held on Thursday 9th March, 2000, when your application was received and gained ethics approval:

Mr.	G.	Odds OBE (Chairman) – (Vice Chairman)	Lay Member
Mrs.	M.	Barwick	Nurse Member
Dr.	R.	Behrman	Consultant Physician
Mr.	D.	Lauder	Chief Pharmacist
Mr.	J.	McAllister	Consultant Ophthalmic Surgeon
Dr.	I.	Mower	General Practitioner Member
Dr.	J.	Pattison	Consultant Anaesthetist
Mr.	A.	Prosser	Lay Member

For record keeping purposes, the following documentation was received and approved at the meeting:

1. Application Proforma.
2. Protocol.
3. Questionnaires.
4. Patient Information Sheet (version 1 – 17-02-00).
5. Consent Form (version 1 – 17-02-00).
6. Information Sheet for parents/guardians (version 1 – 17-02-00).
7. Consent Form for parents/guardians (version 1 – 17-02-00).
8. Notification to GP/responsible clinician of patient's participation in a research project (dated 17-02-00).

/Continued.....2

Our Ref: JAG/PC/2178 15th March 2000

On behalf of the East Berkshire Research Ethics Committee, I should like to wish you every success with your project.

With best wishes.

Yours sincerely,

Jennie Gray

J.A. GRAY
Assistant Administrator

Copy to: Ms. Alice Farrington, Trainee Clinical Psychologist, 41 Manor Road, Didcot, Oxon. OX11 7JZ.

Appendix G: Written permission to use Inventory of Childhood Memories and Imaginings for Children

Susan & Bill Myers
120 Rolling Hills Dr
Washington MO 63090-6000

Alice, I have enclosed the papers you requested. Good luck with your research. Would love a copy of it. This is also with permission to use the ICMIC.

Warm Regards

Dr. Susan Myers