Links between Childhood Experiences and Avoidant Personality Disorder Symptomatology

Tamara K Hageman, Andrew JP Francis, Ashlee M Field*, **Steven N Carr**

RMIT University, Bundoora Campus, Victoria, Australia

ABSTRACT

Research indicates that some types of adverse childhood experience may be involved in the development of avoidant personality disorder (AVPD). The current study examined relationships between retrospectively reported childhood maltreatment, parental bonding, and teasing on levels of adult AVPD symptomatology. The current study incorporated a cross-section research design. Four hundred and eleven, non-clinical participants (99 males and 312 females), ranging in age from 18 to 65 years (*M*= 29.75 years, *S*D= 11.44 years), completed a survey measuring current depression, anxiety and AVPD symptoms, and retrospective reports of childhood maltreatment, parental bonding and teasing. Consistent with hypotheses, AVPD symptomatology correlated positively with depression and anxiety symptoms, childhood maltreatment, parental overprotection and childhood teasing; while a negative association was found with AVPD and parental care. In regression, after controlling for the influence of depression and anxiety, sexual abuse and social behaviour teasing significantly and uniquely predicted AVPD symptomatology. Contrary to expectations, parental bonding was not a unique predictor of AVPD symptomatology in regression modelling. This study contributes to the understanding of factors potentially influencing the development of AVPD.
Key words: avoidant personality disorder, childhood, teasing, parenting, anxiety.

Novelty and Significance

What is already known about the topic?

- Avoidant personality disorder (AVPD) is a relatively common personality disorder (PD) with a prevalence of 1.4 to 6.6% in the general population.
- The debilitating behaviours expressed in individuals with AVPD, coupled with high rates of comorbidity, underscore the need for a better understanding of the developmental pathology.
- Despite suggestions that childhood experiences are pertinent to the development of AVPD, the role of these factors remains relatively unexplored.

What this paper adds?

- Findings indicate that retrospectively reported childhood maltreatment, parental bonding, and teasing are significantly associated with adult levels AVPD symptomatology.
- Sexual abuse and social behaviour teasing significantly predicted AVPD symptomatology, after controlling for the influence of depression and anxiety.
- Social behaviour teasing made the largest unique contribution to the prediction of AVPD.

Avoidant personality disorder (AVPD) is a relatively common personality disorder (PD) with a prevalence of 1.4 to 6.6% in the general population (Ekselius, Tillfors, Furmark, & Fredrikson, 2001; Jackson & Burgess, 2000). AVPD is marked by long-term patterns of behaviour intended to avoid personal attachments (both intimate and superficial), together with the desire for loving relationships (Stravynski, Elie, & Franche, 1989). Individuals with AVPD experience significant distress and social impairment (Robin, Cohan, Hambrick, & Albano, 2007), tend to devalue themselves, and suffer apprehension about possible ridicule and rejection from others (Stravynski

* Correspondence concerning this article: Ashlee Field, School of Health Sciences, RMIT University, Bundoora Campus, 3083, Australia. E-mail: ashlee.field@rmit.edu.au

et al., 1989). Avoidant personality disorder is associated with low global functioning, high interpersonal problems, and reduced quality of life (Wilberg, Karterud, Pedersen, & Urnes, 2009). In addition, comorbidity with other DSM-IV-TR Axis I or II disorders is high (Feske, Perry, Chambless, Renneberg, & Goldstein, 1996; Herbert, Hope, & Bellack, 1992). The debilitating behaviours expressed in individuals with AVPD, coupled with high rates of comorbidity, underscore the need for a better understanding of the developmental pathology. Despite suggestions that childhood experiences are pertinent to the development of AVPD (Benjamin, 1993; Millon, 1981), the role of these factors remains relatively unexplored. Accordingly, the current study examined associations between reported childhood maltreatment, teasing, and parental bonding with adult AVPD symptomatology, whilst controlling for the potential influence of depressive and anxiety symptomatology.

      Individuals suffering with AVPD are frequently diagnosed with comorbid depression and/or anxiety. Skodal *et al*. (1999) found that as many as 35.2% of individuals with AVPD were also diagnosed with major depressive disorder. With respect to anxiety disorders, in particular, generalised social phobia (GSP), reported comorbidity ranges widely between 25% to nearly 100% (Rettew, 2000). Indeed, some evidence suggests that AVPD may represent a more severe form of GSP with regards to social phobia symptoms and types of impairment (Holt, Heimberg, & Hope, 1992). Further evidence suggests current anxiety and/or depression may influence recall of childhood experiences (Lewinsohn & Rosenbaum, 1987). Together, these findings suggest substantial overlap between features of depression and anxiety with AVPD. In addition to the literature demonstrating substantial symptomatic overlap and comorbidity of AVPD with other disorders, some research has also investigated the relevance of adverse childhood experiences for development of AVPD.

      The relevance of childhood maltreatment to the development of AVPD symptoms has been acknowledged by numerous studies (i.e., Battle *et al*., 2004; Carr & Francis, 2009b), demonstrating some support particularly for the role of childhood emotional abuse, emotional neglect, and sexual abuse in the development of adult AVPD symptoms. For example, Battle *et al*. (2004) found that individuals with a PD reported more exposure to childhood abuse or neglect than individuals with major depressive disorder. Carr and Francis (2009b) examined whether early maladaptive schemas mediated the relationship between childhood experiences and AVPD symptoms in 178 non-clinical participants. They found AVPD symptomatology was significantly related to childhood emotional abuse, emotional neglect, sexual abuse, and physical neglect. These results are consistent with those of Gibb, Wheeler, Alloy, and Abramson (2001) who found emotional maltreatment (a combination of emotional abuse and neglect) was directly related to elevated AVPD symptoms. Sullivan, Bulik, Carter, and Joyce (1995) also found sexual abuse to be significantly associated with AVPD. Another clinical study found individuals with AVPD reported higher levels of childhood trauma (in particular, physical and emotional abuse) compared to depressed individuals (Rettew *et al*., 2003). However, when controlling for comorbid disorders (i.e., posttraumatic stress disorder and borderline PD), the impact of trauma was no longer significant. This study highlights the need to control for comorbid disorders in predictive analyses. In summary, past

research generally supports a link between AVPD and childhood maltreatment, although further confirmation using statistical designs which control for at least some comorbid disorders is required. In light of findings demonstrating that childhood maltreatment (often perpetrated by family members; May-Chahal & Cawson, 2005) is related to adult expression of AVPD, research has also examined the role of family relationships more broadly.

Parenting styles present in the early childhood environment have been reliably linked to the development of other PD's, such as borderline PD (Nickell, Waudby, & Trull, 2002), and are considered a potential risk factor for AVPD (Joyce *et al*., 2003). Studies of early parenting and PD's consistently link cluster C PD's (including AVPD) with deprivational parenting (greater parental indifference and parental abuse scores; Parker *et al*., 1999), while Carr and Francis (2009b) also found maternal overprotection to be positively related to AVPD symptomatology. Russ, Heim, and Westen (2003) focused on the relationship between personality pathology and parental bonding from 203 clinician reports, and found maternal and paternal rejection were significantly associated with AVPD. Together these and other studies support a potential link between parental overprotection and poor parental care with AVPD symptoms (Arbel & Stravynski, 1991; Geiger & Crick, 2001). In addition to literature indicating the relevance of family relationships and abuse to AVPD, there is evidence to suggest childhood teasing is a potential risk factor for AVPD.

Previous literature has established associations between adverse peer relationships and later psychopathology (Deater-Deckard, 2001; Kim & Cicchetti, 2010). Childhood teasing has been broadly associated with distress and later depression, anxiety, loneliness, and fear of negative evaluation (Storch, Bravata, Storch, & Johnson 2003). The experience of teasing has also been related to higher levels of social anxiety (Craig, 1998) and lower levels of social competence and global self-worth compared to children who have not experienced childhood teasing (Callaghan & Joseph, 1995). This suggests that children may internalise peer criticism (Storch *et al*., 2003), leading to maladaptive patterns of thinking typical of AVPD (e.g., belief of inadequacy).

Rettew *et al*. (2003) found that individuals with AVPD reported less athletic achievement, less involvement in adolescent hobbies, and less adolescent popularity; these findings suggesting a possible relationship between AVPD and the nature/quality of childhood peer relationships. More specifically, there is also some support for the role of teasing regarding performance, social behaviour, and appearance in the pathogenesis of adult AVPD. Being teased about performance (e.g., being bad at sport) has been uniquely associated with later fear of negative evaluation and social anxiety (Storch *et al*., 2004; Strawser, Storch, & Roberti, 2005), which is commonly experienced by individuals with AVPD. Teasing about an individual's appearance has also been associated with later psychological distress (Faith, Storch, Roberti, & Ledley, 2008; Strawer, Storch, & Roberti, 2005). The social domain of teasing is considered to capture experiences associated with an individual's personality (such as shyness), suggesting that being teased about one's personality could have long-lasting consequences, such as the development of maladaptive beliefs (Storch *et al*., 2004). Together the literature suggests the experience of teasing could lead to a negative view of self and cause difficulties engaging in social situations,

thus possibly leading to difficulties forming intimate relationships (Storch *et al*., 2004). It may be that these experiences contribute to later feelings of inadequacy and withdrawal from the social world (Storch *et al*., 2004); maladaptive thinking patterns and beliefs characteristic of individuals with AVPD. Thus, whilst data on the relationship between the experience of childhood teasing and adult levels of AVPD symptomatology are limited and the links somewhat conjectural, together with previous research investigating childhood teasing and later psychological distress more broadly these studies provide sufficient rationale to investigate this potential relationship further.

Although the literature has produced varied findings regarding the effects of specific negative childhood experiences on the development of AVPD, generally there is reasonable evidence to support the contention that maltreatment, poor parental bonding, and teasing are potential risk factors for AVPD development in some individuals. Whilst there is a limited database of studies examining associations between parental bonding, maltreatment and AVPD, the question of whether teasing per se is associated with AVPD has not been examined. Furthermore, the relatively small sample sizes used in previous research may not provide a reliable estimate of rare events like childhood sexual abuse, thus larger scale studies are required. Finally, AVPD is commonly comorbid with anxiety and depression, which have been found to influence reports of PD pathology (Hoffman *et al*., 1998; Kool, Dekker, Duijsens, Jonghe, & Barteld, 2003), whereas most AVPD studies have not controlled for these in analysis of associations with childhood variables (Carr & Francis, 2009a). Thus, there is need broadly to expand current understanding of the relevance of various adverse childhood experiences to the potential aetiology of AVPD.

The aim of the current study was to investigate the associations between adult levels of AVPD symptomatology and retrospectively reported adverse childhood experiences (maltreatment, poor parental bonding, and teasing). Furthermore, the research aimed to ascertain some unique statistical predictors of AVPD symptomatology. Consistent with the literature, it was hypothesised that AVPD symptomatology would be positively associated with emotional abuse, emotional neglect, and sexual abuse. It was also predicted that positive associations would be observed between AVPD symptomatology and parental overprotection, while negative associations with parental care. Furthermore, it was predicted that reported childhood teasing (pertaining to performance, social behaviour, and appearance) would be positively associated with adult AVPD symptomatology. Finally, it was expected that some of these childhood variables would significantly and uniquely predict AVPD symptomatology after controlling for depression and anxiety in regression modelling.

Given arguments that the PDs may be better conceptualised within a dimensional rather than categorical system (Farmer, 2000; Skodol *et al*., 2005; Westen & Shedler, 1999), and the move toward this conceptualisation of Axis II disorders in the DSM-V to be released in 2013, a general population (non-clinical) sample was sought for this study to permit examination of relationships across the full distributions of variables representing dimensions of function.

METHOD

Participants

Participants consisted of 411 adults ranging in age from 18 to 65 years (*M*= 29.75, *SD*= 11.44), recruited from a University in Australia and the general public. Of these participants 99 were males (*M*= 31.16, *SD*= 11.69) and 312 were females (*M*= 29.30, *SD*= 11.34). The ethnic background of participants varied, with 266 (64.7%) identifying as Anglo-Saxon, 79 (19.2%) identified as European, 16 (3.9%) identified as Asian and 31 participants (7.5%) reported having another unspecified background; 8 (1.9%) participants did not report their ethnic background. Of the total sample, 227 (55.2%) participants reported being students, with 190 (46.2%) having completed tertiary education. Three hundred and thirty seven (82%) participants were currently employed.

With respect to relevant psychological history, 97 (23.6%) participants reported either a current or past diagnosed psychological disorder. In the total sample, depression (18.2%) and anxiety (10.5%) were the most common disorders reported, while eating disorders (3.4%), obsessive-compulsive disorder (2.9%), bipolar disorder (2.7%), post-traumatic stress (2.7%), and schizophrenia (1.2%) were also reported.

Participants were requested to provide basic demographic information such as their gender, age, ethnic background, occupation, and current or past psychological disorders.

Materials

The current study is part of a broader investigation examining relationships between adverse childhood experiences, early maladaptive schemas and personality disorders. The measures used within the current study are described below.

Childhood Trauma Questionnaire (CTQ). There are 28-items within the CTQ designed to measure childhood trauma across five types of maltreatment (sexual abuse, physical abuse, physical neglect, emotional neglect, and emotional abuse; Bernstein, Ahluvalia, Pogge, & Handelsman, 1997). Participants rate how frequently items occurred as they were growing up, according to a 5-point Likert scale (1= never true to 5= very often true). The CTQ has demonstrated strong internal consistency with a Cronbach's alpha of .97 and intercorrelations among the five factors ranging from .34 to .75 (Bernstein *et al*., 1997).

Parental Bonding Instrument (PBI). The PBI consists of 25-items used to assess parental behaviour during the first 16 years of the participant's life (Parker, Tupling, & Brown, 1979). There are two subscales each for mothers and fathers measuring level of care and level of overprotection. Each item within the PBI is rated according to a 4-point Likert scale (0= very unlikely to 3= very likely), with high care and low overprotection conceptualised as optimal bonding. The PBI has shown high internal consistency with Cronbach's alphas ranging from .87 to .90 on the overprotection scale (Safford, Alloy, & Pieracci, 2007; Willinger, Diendorfer-Radner, Willnauer, Jörgl, & Hager, 2005) and .89 to .92 on the care scale (Safford *et al*., 2007; Willinger *et al*., 2005). Furthermore, inter-rater reliability showed adequate consistency with coefficients for the care and overprotection scales as .63 and .76 respectively (Parker *et al*., 1979).

Structured Clinical Interview of the DSM Axis II, Personality Questionnaire (SCID-II-PQ). The 119-items within the SCID-II-PQ are used to screen for 9 Axis II PDs as well as depressive PD, passive aggressive PD and conduct disorder (First, Gibbon, Spitzer,

Williams, & Benjamin, 1997). Participants respond no (0) or yes (1) to each item, with a high score on a subscale indicating the presence of symptomatology for a PD. The SCID-II-PQ has shown adequate convergent and divergent validity (Ryder, Costa, & Bagby, 2007). Internal consistency coefficients range from .71 to .94, indicating satisfactory reliability (Maffei *et al.*, 1997) and strong test-retest reliability with kappa values of .70 to .85 (Modestin, Oberson, & Erni, 1997).

Teasing Questionnaire-Revised (TQ-R). The TQ-R is a 35-item scale designed to assess experiences of teasing during childhood, with five domains measuring performance, academic issues, social behaviour, family background, and appearance (Storch et al., 2004). Each item within the TQ-R is rated on a 5-point Likert scale (0= I was never teased about this to 4= I was always teased about this). The TQ-R has shown internal consistency with Cronbach's alphas for each domain ranging from .48 to .78 and a total score of .87 (Storch *et al.*, 2004), as well as good test-retest stability with correlations .89 and .87 respectively (Strawser, Storch, & Roberti, 2005).

Depression, Anxiety, and Stress Scales 21 (DASS-21). The DASS-21 measures common symptoms of depression, anxiety, and stress (Lovibond & Lovibond, 1995). Participants respond to items by indicating the extent that each state (depression, anxiety, and stress) had been experienced over the past week. The DASS-21 is rated on a 4-point Likert scale (0= did not apply to me at all to 3= applied to me very much, or most of the time). The DASS-21 has displayed strong internal consistency with Cronbach alphas of .88 for the depression scale, .82 for the anxiety scale and .90 for the stress scale (Henry & Crawford, 2005). According to the DASS manual, it is recommended that totals for each scale are doubled so they are equivalent to the 42-item DASS severity ratings (Lovibond & Lovibond, 1995).

Procedure

Subsequent to approval from the RMIT Human Research Ethics Committee, voluntary participants over the age of 18 were recruited from students at a University in Australia and the general public through classroom advertisements, the Facebook social networking website and via snowballing amongst acquaintances of the investigators and other participants. Upon providing consent, participants completed the survey through an online link to the SurveyMonkey website (SurveyMonkey, 2012) or were sent a reply-paid hardcopy survey questionnaire package. The questionnaire took approximately 30 minutes to complete. Anonymity and confidentiality of responses was assured and consent was implied through completion of the questionnaire. Responses were entered into the Statistical Package for the Social Sciences (SPSS, Version 18.0). No incentives were offered for participation.

Results

Prior to hypothesis testing, basic data screening was performed on all variables. Normality assumptions for each variable were assessed by visual inspection of the histograms, and all variables displayed high skewness. Although transformations did not improve the distribution of variables, Pearson's correlations and regression analyses are considered robust to assumption violations (Norman, 2010), thus parametric analysis proceeded with untransformed data.

Missing values were identified and replaced using the expectation-maximisation method (Watanabe & Yamaguchi, 2004). A non-significant Missing Completely at Random test (MCAR) indicated that the missing data were likely to have little systematic effect on results. All variables had less than 20% missing values, except the teasing scale for which the amount of missing values was 22.1%.

To screen for data entry errors the minimum and maximum values for each individual item on the questionnaire were examined. Any item that fell outside the theoretical range was corrected by referring back to the questionnaire. Inspection of stem and leaf box plots revealed outliers for most variables however, these scores were within the theoretical range and thus retained in analyses.

Table 1 displays the means, standard deviations, minimum and maximum scores, and Cronbach's alphas related to this study. All Cronbach's alphas fell above the .60 cutoff, indicating adequate internal consistency (Murphy & Davidshofer, 2001).

From the sample of 411 participants, 396 (96.4%) scored one or more items on the AVPD subscale, therefore indicating some level of AVPD symptomatology. In addition to the DSM-IV General Diagnostic Criteria for Personality Disorders, to potentially be diagnosed with AVPD an individual must meet at least four of the seven DSM-IV diagnostic symptoms criteria. Of the total sample, 126 participants (29 male and 97 females) responded positively to four or more symptom items on the SCID- II-PQ for AVPD.

Pearson's correlations were used to examine the relationships between current levels of AVPD symptoms, depression, and anxiety and retrospective accounts of childhood maltreatment, parental bonding, and teasing (refer to Table 2). Most associations were small (<.30) to moderate (<.50) according to Cohen's (1988) conventions. AVPD symptoms were significantly, positively associated with depression and anxiety, childhood maltreatment (emotional abuse, emotional neglect, and sexual abuse), mother and father overprotection (PBI), and teasing (performance, social behaviour, and appearance). AVPD symptoms were also significantly, negatively associated with mother and father care (PBI).

Table 1. Means, Standard Deviations, Range and Reliability Estimates.

	Scale	*M*	*SD*	Min	Max	*α*
AVPD		2.67	1.84	0	7	.71
CTQ	Emotional Abuse	8.60	4.15	5	25	.86
	Emotional Neglect	9.50	4.07	5	23	.89
	Sexual Abuse	6.33	3.78	5	25	.88
PBI	Mother Care	27.46	7.75	2	36	.93
	Father Care	23.47	8.42	0	36	.93
	Mother Overprotection	13.12	6.56	0	37	.84
	Father Overprotection	11.91	6.77	0	36	.86
TQ-R	Performance	1.74	1.79	0	12	.65
	Social	2.79	3.57	0	21	.83
	Appearance	6.04	5.77	0	34	.84
DASS-42	Anxiety	5.55	6.21	0	42	.78
	Depression	8.07	7.75	0	36	.87

Notes: *N*= 411; AVPD= Avoidant Personality Disorder; CTQ= Childhood Trauma Questionnaire; PBI= Parental Bonding Instrument; TQ-R= Teasing Questionnaire-Revised; DASS-42= Depression, Anxiety and Stress Scales 42.

Table 2. Summary of Intercorrelations between Avoidant Personality Disorder and Childhood Maltreatment, Parental Bonding and Teasing Factors.

Measure	2	3	4	5	6	7	8	9	10	11	12	13
1. AVPD	.23**	.26**	.21**	-.23**	-.19**	.16**	.14**	.28**	.34**	.29**	.40**	.49**
2. CTQ EA	-	.61**	.48**	-.59**	-.37**	.39**	.22**	.19**	.25**	.32**	.38**	.31**
3. CTQ EN		-	.30**	-.72**	-.59**	.31**	.25**	.22**	.27**	.32**	.29**	.33**
4. CTQ SA			-	-.33**	-.25**	.21**	.13**	.14**	.16**	.22**	.20**	.15**
5. PBI MC				-	.39**	-.46**	-.18**	-.11*	-.13**	-.19**	-.28**	-.31**
6. PBI FC					-	-.22**	-.32**	-.21**	-.26**	-.22**	-.16**	-.22**
7. PBI MOP						-	.50**	.16**	.15**	.21**	.19**	.15**
8. PBI FOP							-	.16**	.19**	.23**	.09	.15**
9. TQ-R Per								-	.69**	.60**	.31**	.35**
10. TQ-R Soc									-	.52**	.28**	.29**
11. TQ-R App										-	.36**	.40**
12. DASS-42 A											-	.63**
13. DASS-42 D												-

Notes: N=411; AVPD= Avoidant Personality Disorder; CTQ= Childhood Trauma Questionnaire; CTQ EA= Emotional Abuse; CTQ EN= Emotional Neglect; CTQ SA= Sexual Abuse; PBI= Parental Bonding Instrument; PBI MC= Mother Care; PBI FC= Father Care; PBI MOP= Mother Overprotection; PBI FOP= Father Overprotection; TQ-R= Teasing Questionnaire-Revised; TQ-R Per= Performance; TQ-R Soc= Social Behaviour; TQ-R App= Appearance; DASS-42= Depression, Anxiety and Stress Scales 42; DASS A=Anxiety; DASS D= Depression; * *p* <.05, ** *p* <.01

To determine unique statistical predictors of AVPD symptoms, multiple regression analysis was performed with maltreatment, parental bonding, and teasing factors as independent variables and AVPD as the dependent variable. Since depression and anxiety were also significantly correlated with AVPD, their influence was controlled in order to assess the potential for the childhood variables to uniquely predict AVPD symptomatology. Results of multiple regression analyses are displayed in Table 3. Depression and anxiety were entered as control variables in step 1, explaining 25% of the variance in AVPD. Childhood variables were entered in step 2 accounting for an additional 6% of the variance in AVPD scores, after controlling for depression and anxiety. In the final model, only sexual abuse ($\beta=$ .12, $p=$ .017) and social behaviour teasing ($\beta=$ .22, p <.001) uniquely predicted AVPD symptomatology, with social behaviour teasing making the largest unique contribution to the prediction of AVPD. Parental bonding factors did not significantly predict AVPD symptoms in regression.

Table 3. Hierarchical Multiple Regression Analyses Predicting Power of Childhood Variables on Avoidant Personality Symptomatology.

Model	β	R^2	ΔR^2
Step 1		.25	.25***
Depression	.39***		
Anxiety	.15**		
Step 2		.31	.29**
Depression	.35***		
Anxiety	.11		
CTQ- Emotional Abuse	-.08		
CTQ- Emotional Neglect	.04		
CTQ- Sexual Abuse	.12*		
PBI- Mother Care	-.03		
PBI- Father Care	-.00		
PBI- Mother Overprotection	.03		
PBI- Father Overprotection	.02		
TQ-R- Performance	-.04		
TQ-R- Social Behaviour	.22***		
TQ-R- Appearance	-.01		

Notes: N= 411; CTQ= Childhood Trauma Questionnaire; PBI= Parental Bonding Instrument; TQ-R= Teasing Questionnaire-Revised; * p <.05, **p <.01, ***p <.001.

Discussion

The current study aimed to investigate the associations between adverse childhood experiences and AVPD symptomatology, and to determine if any study variables would persist as unique predictors of AVPD symptoms, after statistically controlling for anxiety and depression. Results indicate that individuals reporting higher levels of AVPD symptomatology do report higher levels of concurrent depression and anxiety. They also are likely to recollect higher levels of childhood maltreatment (emotional abuse,

emotional neglect and sexual abuse), higher parental overprotection (maternal and paternal), less parental care (maternal and paternal), and greater exposure to childhood teasing (performance, social behaviour and appearance). In regression analysis, after controlling for the contribution of depression and anxiety, sexual abuse and social behaviour teasing persisted as significant predictors of AVPD symptomatology. Notwithstanding the cross-sectional nature of this study, these results suggest that childhood maltreatment and teasing could potentially play a significant role in the development of AVPD symptoms in adulthood.

As predicted, reports of emotional abuse, emotional neglect, and sexual abuse were associated with higher levels of AVPD symptomatology. These results support empirical literature examining adverse childhood experiences and AVPD in adulthood (Battle et al., 2004; Lobbestael, Arntz, & Bernstein, 2010). Furthermore, the results are comparable to Carr and Francis's (2009b) study, with similar strength associations found between AVPD and maltreatment variables. However, after controlling for the influence of depression and anxiety, only sexual abuse remained a unique and significant predictor of AVPD symptoms. Hence, the prediction that childhood maltreatment factors would significantly predict AVPD symptomatology was only partially supported.

The finding that sexual abuse was a significant and unique predictor of AVPD symptoms is consistent with previous research indicating associations between sexual abuse and AVPD (Carr & Francis, 2009b; Sullivan, Bulik, Carter, & Joyce, 1995). These results suggest the act of sexual abuse may evoke shame and guilt commonly felt by sexual abuse victims (Negrao, Bonanno, Noll, Putmam, & Trickett, 2005) and thus potentially lead to withdrawal and avoidance. Furthermore, the results are consistent with those of Johnson, Sheahan, and Chard (2003) who found that in a sample of sexual abuse victims AVPD was significantly associated with avoidant coping and, in turn, the degree to which participants tended to use this coping strategy was found to impact the severity of personality pathology (i.e., likelihood of meeting the criteria for a PD; Johnson *et al.*, 2003). This suggests sexual abuse victims using avoidant coping may be at higher risk for AVPD.

Contrary to expectations, emotional abuse and emotional neglect did not uniquely predict AVPD. These results are not consistent with previous studies (Carr & Francis, 2009b; Gibb, Wheeler, Alloy, & Abramson, 2001). However, comorbid anxiety and depression were not controlled for in these studies thus, they may have potentially acted as a third variable, thereby influencing reports of emotional abuse and neglect and self-reports of AVPD. Nevertheless, these findings are consistent with those of Hurst (2011), who failed to establish emotional abuse as a significant predictor of AVPD once demographic variables and other maltreatment types were controlled.

As predicted, sexual abuse was a significant predictor of AVPD symptoms. This finding further contributes to literature indicating emotional maltreatment as an important factor in the aetiology of PD's. Importantly these findings highlight the notion that the development of AVPD may be associated with greater reports of maltreatment.

Results revealed that AVPD was significantly associated with greater parental overprotection and less parental care. These findings are consistent with findings by Russ, Heim, and Weston (2003) and again comparable to those of Carr and Francis

(2009b), with similar strength associations found between AVPD and parental care and overprotection. However, despite significant associations between variables, regression analyses suggested that once controlling for depression and anxiety, parental bonding did not significantly and uniquely predict avoidant behaviour in the current sample. Thus hypotheses for parental bonding were only partially supported.

There are several potential explanations for these findings. First, the correlation analysis revealed only small magnitude relationships between AVPD and parental bonding variables, and thus it may be expected that the regression analysis, being a more conservative procedure, would produce a nonsignificant result. Second, current anxiety and/or depression may influence recall of childhood parental behaviour (Lewinsohn & Rosenbaum, 1987). Certainly, Nordahl, and Stiles (1997) found that a history of lifetime depressive disorder accounted for higher levels of parental overprotection and lower levels of care associated with AVPD. Thus these findings underscore the importance of controlling for comorbid depression when examining predictors of AVPD.

As predicted, teasing variables (performance, social behaviour, and appearance) were significantly associated with higher AVPD symptomatology. These results support previous studies indicating that childhood teasing predicts later psychological distress (Storch *et al.*, 2004). In addition, social behaviour teasing persisted as a significant predictor of AVPD symptomatology in regression modelling. Although significant associations were found between variables, regression analysis suggested that teasing regarding performance and appearance did not significantly and uniquely predict AVPD symptoms.

Indeed, of all variables in the study, social behaviour teasing was the largest predictor of AVPD symptoms in the current sample. This result is consistent with research finding social behaviour teasing was associated with less comfort in intimacy, trust and dependence on others, and higher levels of worry about abandonment and being unloved (Ledley *et al.*, 2006), all of which are common AVPD traits. Such a finding could imply that childhood teasing might cause social withdrawal to begin at an early age, with children internalising peer criticism regarding their social behaviour (Storch *et al.*, 2003), which could then lead to the development of maladaptive beliefs typically displayed by individuals with AVPD (e.g., belief of inadequacy); future research should further examine the role of teasing in the development of PD's.

The findings of this study should be interpreted with respect to a number of limitations. First, the use of the SCID-II-PQ limits the generalisability of the current sample with respect to patients with a formal diagnosis of AVPD. This instrument is designed as a screening tool for AVPD and cannot diagnose an individual without additional detailed assessment. There were a relatively large number of individuals who met the screening criteria for AVPD in the current non-clinical sample. However, it is imperative to note that particular items examining AVPD are less specific than the DSM-IV-TR criteria, and exclude aspects of criteria that reflect a level of severity or impact on functioning. For example, DSM-IV-TR criteria five states: "is inhibited in new interpersonal situations due to feelings of inadequacy" (American Psychiatric Association, 2000), whereas the SCID-II-PQ merely asks, "are you usually quiet when you meet new people" (First, Gibbon, Spitzer, Williams, & Benjamin, 1997). Furthermore, the yes/

no format of the SCID-II-PQ, is problematic for assessment validity in that it fails to differentiate between infrequent versus longstanding patterns of behaviour.

The use of retrospective reports on childhood circumstances is another notable limitation of this study, using a cross-sectional design. Previous research has demonstrated that recollections of past events can be subject to inaccuracies (Miller, Newcorn, & Halperin, 2010) although other studies indicate retrospective self-reports have some validity (Windom & Morris, 1997). In either case, conclusions of the current study are limited in this respect, although there is a dearth of longitudinal or experimental studies in this area of research generally.

The current study supports the importance of social processes in the emergence of AVPD symptoms from a developmental psychopathology perspective (Geiger & Crick, 2001). Findings indicate that retrospectively reported childhood maltreatment, parental bonding, and teasing are significantly associated with adult levels AVPD symptomatology in predicted directions. Furthermore, sexual abuse and social behaviour teasing continued significantly predicted AVPD symptomatology in regression after controlling for the influence of depression and anxiety. This is consistent with the notion that associations between AVPD and retrospective reports of childhood maltreatment and teasing cannot be solely accounted for by comorbid depression and anxiety.

Of particular interest is the finding that social behaviour teasing made the largest unique contribution to the prediction of AVPD in regression modelling. However, future research is required to determine whether individuals on the shyness-social anxiety-AVPD spectrum experience childhood teasing as a result of being shy and anxious, or whether the general experience of childhood teasing leads to later development of these features, or both. It is further evident that with high rates of childhood bullying reported (Cross *et al*., 2009), early intervention could be crucial in moderating the development of avoidant symptoms.

Due to problems with using retrospective measures such as inaccurate recall of past events, future research could include both self-report questionnaires and interview-based measures. Furthermore, it cannot be concluded that these negative childhood experiences cause AVPD. Many individuals who experience negative events do not develop PD's (Paris, 1998) and mediating factors such as schemas and positive childhood factors may have an important role in who develops AVPD (Carr & Francis, 2009b; Skodal *et al*., 2007).

To date, previous research has failed to examine the associations and unique contributions of these childhood variables to AVPD symptomatology. Although few participants potentially met full criteria for AVPD in the current sample, there is considerable evidence to suggest that childhood maltreatment and teasing are prominent factors in the development of AVPD symptoms, even in the presence of current depression and anxiety symptoms. Thus, there is need for future studies to not only examine these childhood experiences in relation to AVPD but also to control for comorbid depression and anxiety. In conclusion, this research contributes importantly to the general understanding of factors influencing AVPD symptomatology.

REFERENCES

Alden LE, Laposa JM, Taylor CT, & Ryder AG (2002). Avoidant personality disorder: Current status and future directions. *Journal of Personality Disorders, 16*, 1-29. doi:10.1521/pedi.16.1.1.22558

American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders* (4th ed., text rev.). Washington, DC: Author.

Arbel N & Stravynski A (1991). A retrospective study of separation in the development of adult avoidant personality disorder. *Acta Psychiatrica Scandinavica, 83*, 174-178. doi:10.1111/j.1600-0447.1991. tb05519.x

Battle CL, Shea MT, Johnson DM, Yen S, Zlotnick C, Zanarini MC, & Morey LC (2004). Childhood maltreatment associated with adult personality disorders: Findings from the collaborative longitudinal personality disorders study. *Journal of Personality Disorders, 18*, 193-211. doi:10.1521/pedi.18.2.193.32777

Benjamin LS (1993). *Interpersonal diagnosis and treatment of personality disorders*. New York: The Guilford Press.

Bernstein DP, Ahluvalia T, Pogge D, & Handelsman L (1997). Validity of the childhood trauma questionnaire in an adolescent psychiatric population. *Journal of the American Academy of Child and Adolescent Psychiatry, 36*, 340-348.

Callaghan S & Joseph S (1995). Self-concept and peer victimization among school children. *Personality and Individual Differences, 18,* 161-163. doi:10.1016/0191-8869(94)00127-E

Carr S & Francis A (2009a). Childhood maltreatment and adult personality disorder symptoms in a non-clinical sample. *Australian Psychologist, 44,* 146-155. doi:10.1080/0005006090313847

Carr S & Francis A (2009b). Do early maladaptive schemas mediate the relationship between childhood experiences and avoidant personality disorder features? A preliminary investigation in a non-clinical sample. *Cognitive Therapy and Research, 34*, 343-358. doi:10.1007/s10608-009-9250-1

Cohen J (1988). *Statistical power analysis for the behavioural sciences* (2nd ed.). Hillsdale, New Jersey: Lawrence Erlbaum Associates Inc

Craig WM (1998). The relationship among bullying, victimization, depression, anxiety, and aggression in elementary school children. *Personality and Individual Differences, 24,* 123-130. doi: 10.1016/S0191-8869(97)00145-1

Cross D, Shaw T, Hearn L, Epstein M, Monks H, Lester L, & Thomas L 2009. *Australian Covert Bullying Prevalence Study (ACBPS)*. Child Health Promotion Research Centre. Edith Cowan University: Perth.

Deater-Deckard K (2001). Annotation: Recent Research Examining the Role of Peer Relationships in the Development of Psychopathology. *Journal of Child Psychology and Psychiatry, 42*, 565-579. doi:10.1111/1469-7610.00753

Ekselius L, Tillfors M, Furmark T, & Fredrikson M (2001). Personality disorders in the general population: DSM-IV and ICD-10 defined prevalence as related to sociodemographic profile. *Personality and Individual Differences, 30*, 311-320. doi:10.1016/s0191-8869(00)00048-9

Faith MA, Storch EA, Roberti, JW, & Ledley DR (2008). Recalled childhood teasing among non-clinical, non-college adults. *Journal of Psychopathology and Behavioral Assessment, 30*, 171-179. doi:10.1007/s10862-007-9062-0

Feske U, Perry KJ, Chambless DL, Renneberg B, & Goldstein AJ (1996). Avoidant Personality Disorder as a Predictor for Treatment Outcome among Generalized Social Phobics. *Journal of Personality Disorders, 10*, 174-184. doi:10.1521/pedi.1996.10.2.174

Field A (2009). *Discovering statistics using SPSS* (3rd ed.). Thousand Oaks, California: SAGE Publications.

First MB, Gibbon M, Spitzer RL, Williams BWJ, & Benjamin LS (1997). *SCID-II personality questionnaire*. Washington, DC: American Psychiatric Press.

Geiger TC & Crick NR (2001). A developmental psychopathology perspective on vunerability to

personality disorders. In RE Ingram & JM Price (Eds.), *Vulnerability to Psychopathology: Risk across Lifespan* (pp. 57-102). New York: Guilford Press.

Gibb BE, Wheeler R, Alloy LB, & Abramson LY (2001). Emotional, physical, and sexual maltreatment in childhood versus adolescence and personality dysfunction in young adulthood. *Journal of Personality Disorders, 15*, 505-511. doi:10.1521/pedi.15.6.505.19194

Henry JD & Crawford JR (2005). The short-form version of the depression, anxiety stress scales (DASS-21): Construct validity and normative data in a large non-clinical sample. *The British Journal of Clinical Psychology, 44*, 227-239. doi:10.1348/014466505X29657

Herbert JD, Hope DA, & Bellack AS (1992). Validity of the distinction between generalized social phobia and avoidant personality disorder. *Journal of Abnormal Psychology, 101*, 332-339. doi:10.1037/0021-843X.101.2.332

Holt CS, Heimberg RG, & Hope DA (1992). Avoidant personality disorder and the generalized subtype of social phobia. *Journal of Abnormal Psychology, 101*, 318-325. doi:10.1037/0021-843X.101.2.318

Hurst T (2011). *Adult Personality and Childhood Experiences of Maltreatment*. Doctoral Thesis. New School University, New York, USA.

Jackson HJ & Burgess PM (2000). Personality disorders in the community: A report from the Australian National Survey of Mental Health and Wellbeing. *Social Psychiatry and Psychiatric Epidemiology, 35*, 531-538. doi:10.1007/s001270050276

Johnson DM, Sheahan TC, & Chard KM (2003). Personality disorder, coping strategies, and posttraumatic stress disorder in women with histories of childhood sexual abuse. *Journal of Child Sexual Abuse, 12*, 19-39. doi:10.1300/J070v12n02_02

Johnson JG, Smailes EM, Cohen PP, Brown J, & Bernstein DP (2000). Associations between four types of childhood neglect and personality disorder symptoms during adolescence and early adulthood: Findings of a community-based longitudinal study. *Journal of Personality Disorders, 14*, 171-187. doi:10.1521/pedi.2000.14.2.171

Joyce PR, McKenzie JM, Luty SE, Mulder RT, Carter JD, Sullivan PF, & Cloninger CR (2003). Temperament, childhood environment and psychopathology as risk factors for avoidant and borderline personality disorders. *Australian & New Zealand Journal of Psychiatry, 37*, 756-764. doi:10.1111/j.1440-1614.2003.01263.x

Kim J & Cicchetti D (2010). Longitudinal pathways linking child maltreatment, emotion regulation, peer relations, and psychopathology. *Journal of Child Psychology and Psychiatry, 51*, 706-716. doi:10.1111/j.1469-7610.2009.02202.x

Kool S, Dekker J, Duijsens IJ, Jonghe F, & Barteld P (2003). Changes in personality pathology after pharmacotherapy and combined therapy for depressed patients. *Journal of Personality Disorders, 17*, 60-72. doi:10.1521/pedi.17.1.60.24058

Ledley DR, Storch EA, Coles ME, Heimberg RG, Moser J, & Bravata A (2006). The relationship between childhood teasing and later interpersonal functioning. *Journal of Psychopathology and Behavioral Assessment, 28*, 33-40. doi:10.1077/s10862-006-4539-9

Lewinsohn PM & Rosenbaum M (1987). Recall of parental behavior by acute depressives, remitted depressives, and nondepressives. *Journal of Personality and Social Psychology, 52*, 611-619. doi:10.1037/0022-3514.52.3.611

Lobbestael J, Arntz A, & Bernstein DP (2010). Disentangling the relationship between different types of childhood maltreatment and personality disorders. *Journal of Personality Disorders, 24*, 285-295. doi:10.1521/pedi.2010.24.3.285

Lovibond SH & Lovibond PF (1995). *Manual for the Depression Anxiety Stress Scales*. (2nd. Ed.) Sydney: Psychology Foundation.

Maffei C, Fossati A, Agostoni I, Barraco A, Bagnato M, Deborah D, & Petrachi M (1997). Interrater reliability and tnternal consistency of the structured clinical interview for DSM-IV Axis II personality disorders (SCID-II), version 2.0. *Journal of Personality Disorders, 11*, 279-284. doi:10.1521/pedi.1997.11.3.279

May-Chahal C & Cawson P (2005). Measuring child maltreatment in the United Kingdom: A study of

the prevalence of child abuse and neglect. *Child Abuse and Neglect, 29*, 969-984. doi:10.1016/j. chiabu.2004.05.009

McCabe RE, Antony MM, Summerfeldt LJ, Liss A, & Swinson RP (2003). Preliminary examination of the relationship between anxiety disorders in adults and self-reported history of teasing or bullying experiences. *Journal of Cognitive Behaviour Therapy, 32*, 187-193. doi:10.1080/16506070310005051

Meyer B & Carver CS (2000). Negative childhood accounts, sensitivity, and pessimism: A study of avoidant personality disorder features in college students. *Journal of Personality Disorders, 14*, 233-248. doi:10.1521/pedi.2000.14.3.233

Miller PM & Lisak D (2011). Associations between childhood abuse and personality disorder symptoms in college males. *Journal of Interpersonal Violence, 14*, 642-656. doi:10.1177/088626099014006005

Miller CJ, Newcorn JH, & Halperin JM (2010). Fading Memories: Retrospective recall inaccuracies in ADHD. *Journal of Attention Disorders, 14*, 7-14. doi:10.1177/1087054709347189

Millon T (1981). *Disorders of personality: DSM-III: Axis II*. New York: John Wiley & Sons.

Modestin J, Oberson B, & Erni T (1997). Possible correlates of DSM-III-R personality disorders. *Acta Psychiatrica Scandinavica, 96*, 424-430. doi:10.1111/j.1600-0447.1997.tb09943.x

Murphy KR & Davidshofer CO (2001). *Psychological testing: Principles and applications* (5th ed.). New Jersey: Prentice hall.

Negrao C, Bonanno GA, Noll JG, Putmam FW & Trickett PK (2005). Shame, humiliation, and childhood sexual abuse: Distinct contributions and emotional coherence. *Child Maltreatment, 10*, 350-363. doi:10.1177/1077559505279366

Nickell AD, Waudby CJ, & Trull TJ (2002). Attachment, parental bonding and borderline personality disorder features in young adults. *Journal of Personality Disorders, 16*, 148-159. doi:10.1521/pedi.16.2.148.22544

Nordahl HM & Stiles TC (1997). Perceptions of parental bonding in patients with various personality disorders, lifetime depressive disorders, and healthy controls. *Journal of Personality Disorders, 11*, 391-402. doi:10.1521/pedi.1997.11.4.391

Norman G (2010). Likert scales, levels of measurement and the "laws" of statistics. *Advances in Health Sciences Education, 15*, 625-632. doi:10.1007/s10459-010-9222-y

Paris J (1998). Does childhood trauma cause personality disorders in adults? *Canadian Journal of Psychiatry, 43*, 148-153.

Parker G, Roy K, Wilhelm K, Mitchell P, Austin M, & Hadzi-Pavlovic D (1999). An exploration of links between early parenting experiences and personality disorder type and disordered personality functioning. *Journal of Personality Disorders, 13*, 361-374. doi:10.1521/pedi.1999.13.4.361

Parker G, Tupling H, & Brown LB (1979). A parental bonding instrument. *British Journal of Medical Psychology*, *52,* 1-10. doi:10.1111/j.2044-8341.1979.tb02487.x

Raczek SW (1992). Childhood abuse and personality disorders. *Journal of Personality Disorders*, *6*, 109-116. doi:10.1521/pedi.1992.6.2.109

Rettew DC (2000). Avoidant personality disorder, generalized social phobia, and shyness: Putting the personality back into personality disorders. *Harvard Review of Psychiatry, 8*, 283-297. doi:10.1093/hrp/8.6.283

Rettew DC, Zanarini MC, Yen S, Crilo CM, Skodol AE, Shea TM, & Gunderson JG (2003). Childhood antecedents of avoidant personality disorder: A retrospective Study. *Journal of American Academy of Child & Adolescent Psychiatry, 42*, 1122-1130. doi: 10.1097/01.CH.0000070250.24125.5F

Robin JA, Cohan SL, Hambrick J, & Albano AM (2007). Avoidant personality disorder. In A Freeman & MA Reinecke (Eds.), *Personality disorders in childhood and adolescence* (pp. 611-639). New Jersey: Wiley & Sons, Inc.

Russ E, Heim A, & Westen D (2003). Parental bonding and personality pathology assessed by clinician report. *Journal of Personality Disorders, 17*, 522-536. doi: 10.1521/pedi.17.6.522.25351

Ryder AG, Costa PT, & Bagby RM (2007). Evaluation of the SCID-II personality disorder traits for the DSM-IV: Coherence, discrimination, relations with general personality traits, and functional

impairment. *Journal of Personality Disorders, 21*, 626-637. doi: 10.1521/pedi.2007.21.6.626

Safford SM, Alloy LB, & Pieracci A (2007). A comparison of two measures of parental behavior. *Journal of Child and Family Studies, 16*, 375-384. doi: 10.1007/s10826-006-9092-3

Skodol AE, Bender DS, Pagano ME, Shea TM, Yen S, Sanislow CA, & Gunderson JG (2007). Positive childhood experiences: Resilience and recovery from personality disorder in early adulthood. *Journal of Clinical Psychiatry, 68*, 1102-1108. doi: 10.4088/JCP.v68n0719

Skodol EA, Stout LR, McGlashan HT, Griol MC, Gunderson GJ, Shea TM, & Oldham MJ (1999). Co-occurrence of mood and personality disorders: A report from the collaborative longitudinal personality disorders study (CLPS). *Depression and Anxiety, 10*, 175-182. doi: 10.1002/(SICI)1520-6394(1999)10:4<175::AID-DA6>3.0.CO;2-2

Statistical Package for the Social Science (Version 18.0) [Computer software]. Chicago, IL: IBM.

Storch EA, Bravata A, Storch JB, & Johnson JH (2003). Psychosocial adjustment in early adulthood: The role of childhood teasing and father support. *Child Study Journal, 33*, 153-163.

Storch EA, Roth DA, Coles ME, Heimberg RG, Bravata A, & Moser J (2004). The measurement and impact of childhood teasing in a sample of young adults. *Journal of Anxiety Disorders, 18*, 681-694. doi: 10.1016/j.janxdis.2003.09.003

Stravynski A, Elie R, & Franche RL (1989). Perception of early parenting by patients diagnosed avoidant personality disorder: a test of the overprotection hypothesis. *Acta Psychiatrica Scandinavica, 80*, 415-420. doi: 10.1111/j.1600-0447.1989.tb02999.x

Strawser MS, Storch EA, & Roberti JW (2005). The teasing questionnaire-revised: measurement of childhood teasing in adults. *Journal of Anxiety Disorders, 19*, 780-792. doi: 10.1016/j.janxdis.2004.09.005

Sullivan PF, Bulik CM, Carter FA, & Joyce PR (1995). The significance of a history of childhood sexual abuse in bulimia nervosa. *The British Journal of Psychiatry, 167*, 679-682. doi: 10.1192/bjp.167.5.679

SurveyMonkey. (2012) (Computer software). Palo Alto, CA: Author.

Watanabe M & Yamaguchi K (2004). *The EM algorithm and related statistical* models. New York: Marcel Dekker.

Westen D & Shedler J (1999). Revising and assessing axis II, part II: Toward an empirically based and clinically useful classification of personality disorders. *The American Journal of Psychiatry, 156*, 273-285.

Wilberg T, Karterud S, Pedersen G, & Urnes Ø (2009). The impact of avoidant personality disorder on psychosocial impairment is substantial. *Nordic Journal of Psychiatry, 63*, 390-396. doi: 10.1080/08039480902831322

Willinger U, Diendorfer-Radner G, Willnauer R, Jörgl G, & Hager V (2005). Parenting Stress and Parental Bonding. *Behavioral Medicine, 31*, 63-69. doi: 10/3200/BMED.31.2.63-72

Windom CS & Morris S (1997). Accuracy of adult recollections of childhood victimization: Part 2. Childhood sexual abuse. *Psychological Assessment, 9*, 34-46. doi: 10.1037/1040-3590.9.1.34.