### cambridge.org/psm

# **Original Article**

Cite this article: Brown GW, Harris TO, Craig TKJ (2019). Exploration of the influence of insecure attachment and parental maltreatment on the incidence and course of adult clinical depression. *Psychological Medicine* 49, 1025–1032. https://doi.org/10.1017/S0033291718001721

Received: 13 March 2017 Revised: 1 June 2018 Accepted: 5 June 2018

First published online: 15 August 2018

#### **Key words:**

Adult depression; chaotic life style; insecure attachment types; parental maltreatment; physical abuse by mother

#### Author for correspondence:

George W. Brown, E-mail: george.brown@kcl. ac.uk

Exploration of the influence of insecure attachment and parental maltreatment on the incidence and course of adult clinical depression

George W. Brown, Tirril O. Harris and Thomas K. J. Craig

Department of Health Service and Population Research, Institute of Psychiatry, Kings College London, De Crespigny Park, LONDON SE5 8AF, PO Box 36, UK

### **Abstract**

**Background.** Both childhood maltreatment and insecure attachment are known to be associated with depression in adulthood. The extent insecure attachment increases the risk of adult clinical depression over that of parental maltreatment among women in the general population is explored, using those at *high risk* because of their selection for parental maltreatment together with an *unselected* sample.

**Methods.** Semi-structured interviews and investigator-based measures are employed. **Results.** Insecure attachment is highly associated with parental maltreatment with both contributing to the risk of depression, with attachment making a substantial independent contribution. Risk of depression did not vary by *type* of insecure attachment, but the core pathways of the dismissive and enmeshed involved the whole life course in terms of greater experience of a mother's physical abuse and their own anger as an adult, with both related to adult depression being more often provoked by a severely threatening event involving *humiliation* rather than *loss*. By contrast, depression of the insecure fearful and withdrawn was more closely associated with both current low self-esteem and an inadequately supportive core relationship. In terms of depression taking a chronic course, insecure attachment was again a key risk factor, but with this now closely linked with the early experience of a chaotic life style but with this involving only a modest number of women.

**Conclusions.** Both insecure attachment and parental maltreatment contribute to an increased risk of depression with complex effects involving types of insecure attachment.

## Introduction

This paper broadens the scope of earlier analyses linking parental maltreatment with adult depression (Brown *et al.*, 2007*a*, 2007*b*, 2007*c*, 2008*a*, 2008*b*) by exploring the contribution of insecure attachment style both in general and in terms of enmeshed, dismissive, fearful and withdrawn insecure types. Finally, it considers a link with whether an episode took a chronic course.

Relating styles such as dependence (Birtchnell et al., 1991), shyness (Simpson and Stevenson-Hinde, 1985) and hostility (Philip, 1973; Arrindell et al., 1984) have been included in aetiological models of depression with one in the late 1970s covering 'dependence', 'nurturance' and 'hostility', along with 'helplessness' (Harris et al., 1990). However, John Bowlby's trilogy (Bowlby, 1980, 1982, 1985), with its emphasis on the differing impact of loss in terms of attachment patterns, conveyed the importance of combining such personality characteristics in ways which reflect overall styles of relating to others. This, and Mary Ainsworth's research with children, resulted in Mary Main's Adult Attachment Interview which explores how individuals responded to childhood relationships in terms of secure/autonomous, insecure ambivalent/enmeshed and insecure avoidant/dismissive categories (George et al., 1984). One of our colleagues (Antonia Bifulco) proposed that combinations of high v. low dependency, nurturance and hostility approximated this scheme in terms of adulthood relationships, with this found associated with clinical depression (Harris and Bifulco, 1991). The index concerning insecure attachment reflects current adult experience and has been found to relate prospectively to new onsets of depression (Bifulco et al., 2002). More recently, other measures have been introduced and confirmed this link (Mikulincer and Shaver, 2016, Table 13.3).

The present analysis is concerned to locate such attachment within a broad psychosocial aetiological model of depression and to explore its link with earlier childhood experience, particularly parental maltreatment. Three core contributions have been shown to play *proximal* roles. First, studies using the Life Events and Difficulties Schedule (LEDS) have found that severely threatening life events provoke most depressive episodes with these most often involving loss when defined broadly, but with humiliation markedly increasing risk irrespective of

© Cambridge University Press 2018



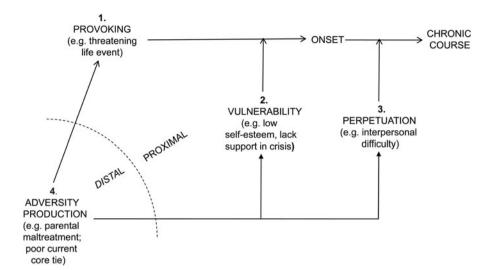


Fig. 1. Four aetiological mechanisms.

any involvement with loss (Brown and Harris, 1978). Second, given a severely threatening event of any kind, the presence of psychosocial vulnerability associated with low self-esteem or a severe difficulty in a core relationship further increases risk (op cit.). Third, once an onset has occurred, perpetuating factors, such as an ongoing interpersonal difficulty, increase the chance of an episode taking a chronic course of at least 12 months (Brown et al.,1990; Nanni et al., 2012). In addition, it has proved important to consider distal risk factors – for example, that parental maltreatment is associated with all three proximal types of risk (Brown et al., 2008b), including chances of a depressive episode taking a chronic course (Fig. 1 provides a summary). This paper will explore the role of attachment style as another distal risk factor that may link with adult depression by mediating between types of parental maltreatment and psychosocial vulnerability.

### **Methods**

## Samples and data collection

The study uses pairs of adult sisters with a two-phase sampling strategy (Brown et al., 2007a). First, women registered at two Islington general practitioner Health Centres in North London were contacted by postal questionnaire to identify those under 50 who had a sister within 5 years of age with whom they had been brought up. This initial approach included the Childhood Experience of Care and Abuse Questionnaire (CECA-Q, Bifulco et al., 2005) as a screen to identify those likely to have had an adverse childhood. Possible positive responses were followed up by telephone or brief face-to-face interviews. Those meeting a formal definition of severe maltreatment were invited to participate and subsequently asked for permission to contact a sister to carry out a similar interview with another interviewer. Somewhat more than half the pairs of sisters in the whole study were selected in this way because of the likelihood of the first sister's experience of maltreatment (the high-risk series). In addition, we included an unselected or comparison series of 80 women, again in terms of pairs, with the first recruited from the same general practice register, but now not taking account of the likelihood of maltreatment, and therefore providing a provisional estimate of the population frequency of such risk factors as insecure attachment, and of the generalisability of the findings of the high-risk series (see Bifulco et al., 1998; Brown et al., 2007a for details). The age of the two samples ranged from 17 to 55 with an average of 35 years.

The research interview, usually based on two visits, was tape-recorded and relevant extracts transcribed with measures of insecure attachment developed for the enquiry (Bifulco *et al.*, 2002). All ratings were investigator-based with team members, blind to the psychiatric material, checking key social ratings at consensus meetings. Extensive manuals, covering the various rating scales, were used during training and the research itself. All measures (see below) had achieved an inter-rater reliability of around a minimum of 0.80 (Kw; Cohen, 1968).

### Measures

Insecure attachment was measured using the Attachment Style Interview (ASI; Bifulco et al., 2002) based on detailed questioning about ongoing close relationships using rating scales concerning typical adulthood behaviour and attitudes with a particular attention to those that were potentially dysfunctional covering 'constraints on closeness', 'fear of rejection', 'mistrust in relationships', 'fear of separation', 'desire for engagement', 'selfreliance', 'anger in relationships' and 'overall ability to make and maintain close supportive relationships'. Although dealing with current relationships, the interview could cover incidents and behaviour at any point in a relationship as a whole. If a woman currently reported some irritability or social withdrawal, along with clinical depression, interviewers were instructed to question about how typical these tendencies were and whether pre-onset behaviour had been different. Frequent probes encouraged comments with, for example, for the rating of 'attitudinal constraints on closeness' asking whether she had 'difficulty in getting close', 'confiding' or 'asking anyone for help', and 'whether she was too proud to approach others', or 'there were persons she would not approach' or 'experienced feelings of nervousness about doing so'. The presence of insecure attachment itself was rated in terms of an 'overall ability to make and maintain close supportive relationships'. Further scales were used to allocate women to the four types of insecure attachment: enmeshed, angrydismissive (henceforth simply called dismissive), fearful and withdrawn. Those rated only mildly insecure were placed with the securely attached. Figure 2 provides brief definitions together with the scales considered in making the basic allocations.

ENMESHED

Eager for closeness and company with some ambivalence.

(Using subscales: i. desire for engagement, ii. low self-reliance, iii.

intolerance of separation, and iv. low attitudinal constraints on closeness).

DISMISSIVE Self reliance with mistrust/anger and no desire for closeness.

(Using subscales i. low desire for engagement, ii. self-reliance, and iii. anger in relationships.)

in relationship

FEARFUL Mistrust and fear of intimacy and rejection with desire for closeness.

(Using subscales: i. desire for engagement, ii. attitudinal constraints on

closeness, and iii. fear of intimacy.)

WITHDRAWN Self-reliance without anger or fear of engagement or closeness.

(Using subscales: i. low desire for engagement, and ii. self-reliance.)

**Fig. 2.** Four types of insecure attachment with relevant subscales.

Parental maltreatment involves three scales (rated 2 – marked, 1 – moderate and 0 – none) from the CECA instrument (Bifulco et al., 1994) concerning experience before age 17, using mother's lack of affection, mother's rejection and father's physical abuse. Surrogate mothers and fathers were included. A high threshold was taken with, for example, a mother's rejection rated 'moderate' based on comments such as 'She was cold and distant' and 'made it clear she would prefer not to be bothered', and 'who wished me away'. The scales give a score for parental maltreatment ranging from 0 to 6 with 2 or more defining severe threat (Brown et al., 2007a, 2007b). In the present analysis, we have added to the 113 women selected in this way an additional 10 who, although scoring 'moderate' on only one of these three scales, had undergone particularly intrusive or shameful experiences concerning either: (i) sexual abuse involving age incongruent physical contact that would be deemed frightening or distasteful by most children, or (ii) a mother's peak physical abuse in childhood involving hitting with an implement or around the head with a hand in a way that could cause damage.

Schedule for Clinical Assessment in Neuropsychiatry (SCAN) (Wing et al., 1990) was used to assess major depression throughout adulthood targeting the 3 and 10 years before interview. The threshold had an almost total overlap with DSM-3-R criteria. A depressive episode defined as *chronic* had to have lasted at least 12 months after the age of 17 (Brown et al., 2007a, 2007b).

Chaotic life style covers behaviour after the age of 17 lasting at least 2 years and involving at least three of 'heavy drinking', 'substance use', 'promiscuity', 'anti-social behaviour', 'criminal behaviour' and 'several highly troubled relationships', with the style usually present at the time of leaving home. The behaviour was not necessarily persistent with some showing an overall improvement by early adulthood. In instances where a partner led such a life style, a woman was rated positive only if she took part.

Violence exhibited in childhood. Extensive questioning dealt with eight kinds of conduct problems, such as attacking property, cruelty to pets and bullying other children before the age of 17 (Brown *et al.*, 2007c).

Anger shown in adult relationships is part of the measure of insecure attachment covering the extent of feeling 'hostile', 'resentful', 'jealous towards others', including parents, siblings, partners, children, confidants, colleagues, neighbours and other

friends. A positive rating could be made even if the anger was not directly expressed, with particular weight given to apparent over-reactions to minor 'slights'.

Quality of relationship of cohabiting partners covers partners of either sex using the Camberwell Family Interview (Brown and Rutter, 1966; Rutter and Brown, 1966; Quinton et al., 1976; Bifulco et al., 2000) with ratings based on questions about actual behaviour as well as comments made spontaneously. Important changes during a relationship were recorded with 'good' involving mutual concern and affection and the remaining part of the scale having two sections. For the first dealing with 'discord', a poor relationship involved important episodes of open disruption or hostility, but with periods of harmony or neutrality, and very poor open antagonism, frequent quarrelling and recrimination. The second section dealt with 'apathy' with poor typified by indifference, dislike or avoidance, despite some one-sided affection or co-operation in mutual activities and very poor by marked apathy or dislike/avoidance.

Low self-esteem at interview uses all negative comments made spontaneously about self or in response to standard questions and defined by the presence of either negative evaluation about: (i) personal attributes, (ii) role performance or (iii) low self-acceptance (Brown et al., 2007c for details).

Shyness in adolescence based on questions from CECA about social life, confidence with peers and popularity in teenage years.

Severe life events using the LEDS. It was impractical to use the full LEDS schedule to cover a woman's life in terms of threatening life events and difficulties. However, material was collected systematically by the Adult Life Phase Interview (ALPHI; Bifulco et al., 2000) about the period preceding any onset of adult episodes of depression. Attention was given to events and difficulties occurring in the context of core relationships, most often involving a partner or lover such as rows, separations, violence, infidelity, miscarriages and deaths, although other core relationships were occasionally involved. These were rated on contextual grounds in terms of the likelihood of marked threat or unpleasantness. For example, a severe rating of a separation from a boyfriend would typically only be justified to the extent it was unexpected and the extent of the threat likely to have been involved (Brown and Harris, 1978 for details). A rating of 'severe humiliating event' was made to the extent it markedly devalued a

Table 1. Insecure attachment, parental maltreatment and depression in 3-year period for all women and comparison series

Insecure attachment/parental maltreatment	All women	Comparison series		
	% Depression in 3 years		% Depression 3 years	
Both	57% (36/63)		67% (6/9)	
Insecurely attached only	33% (3/9)	28% (19/69)	14% (1/7)	16% (3/19)
Maltreated only	27% (16/60)		17% (2/12)	
Neither	9% (6/66)		8% (4/52)	
Totals	31% (61/198)		16% (13/80)	
$\chi^2$ , 2df	37.88, <i>p</i> < 0.00001		19.61, <i>p</i> < 0.0006	

Table 2. Type of insecure attachment and two key distal risk factors

Adult attachment	Persistent adult anger %	Mother's physical abuse %	Both %
Dismissive/enmeshed	80 (21/26)	69 (18/26)	62 (16/26)
Fearful/withdrawn	20 (9/46)	26 (12/46)	4 (2/46)
Secure maltreated	12 (7/60)	32 (19/60)	3 (2/60)
Secure no maltreatment	9 (6/66)	2 (1/66)	0 (0/66)
$\chi^2$ , rows 1–4	p < 0.0001, 3df	p < 0.0001, 3df	p < 0.0001, 3df

woman in terms of: (i) a separation involving failure and rejection, (ii) delinquency of someone close, in most instances involving a child, or (iii) a 'put down' of a central aspect of self-identity with this often-involving violence or threats of violence (Brown et al., 1995). A supplementary index was also employed recording whether such a humiliating crisis had occurred during each partnership of a woman irrespective of whether it had been associated with depression.

## Analysis plan

We deal first with the link of insecure attachment with depression, then with four types of insecure attachment, and finally with such experience and depression taking a chronic course. The Statistical Package for the Social Sciences (SPSS22) is used, including odds ratios (ORs) and logistic regression. Tests for statistical significance of per cent differences use  $\chi^2$ , with degrees of freedom given if these are two or more.

### **Results**

# Insecure attachment, parental maltreatment and depression during a 3-year period

Of the total 198 women, 61 experienced depression in a 3-year period. Parental maltreatment and insecure attachment were highly correlated (OR of 7.7, p < 0.0001) with both independently associated with depression with partial ORs of 3.8 (p < 0.003) for maltreatment and 4.0 (p < 0.0001) for attachment with this holding for the high-risk and general population samples (Table 1). As many as 28% (17/61) of the depressive episodes were still present at the research interview, but the link with insecure attachment remained essentially unchanged when these were excluded.

After taking parental maltreatment into account, insecure attachment explained 37% (22.5/61) of the depressive episodes with this holding for both high-risk and general population women (see Appendix for details).

# The four types of insecure attachment and depression in the 3-year period

The four types of insecure attachment were associated with broadly the same marked risk of depression in the 3-year period with 50% (9/18) holding for the dismissive, 88% (7/8) enmeshed, 55% (17/31) fearful and 40% (6/15) withdrawn. However, key aetiological differences emerge in terms of the *types* of psychosocial risk factors involved when the dismissive and enmeshed are compared with the fearful and withdrawn.

## The dismissive/enmeshed and childhood and adult risk factors

Earlier research has shown that severely threatening events involving humiliation double risk of depression compared with those concerning loss (Brown et al., 1995). In terms of women reporting an episode in the 3-year period as many as 75% (12/16) of those of dismissive/enmeshed were linked with humiliation compared with 38% (17/45) of the remaining women with depression ( $\chi^2$ = 6.56, p = 0.01) – with for the latter 39% (9/23) holding for fearful/withdrawn, 41% (7/17) for securely attached with parental maltreatment and 20% (1/5) for other women. At this point in the analysis, given this link of the dismissive/enmeshed with humiliation, we will focus on the role of such events. Here the experience of persistent anger as an adult was of importance with as many as 80% (21/26) of dismissive/enmeshed positive compared with just 13% (22/172) of other women ( $\chi^2 = 61.39$ , p < 0.00001) (Table 3, column 1). Such anger, but only for the dismissive/enmeshed, was highly associated with a mother's physical abuse as a child (Table 2, column 3). To obtain an estimate of the overall aetiological contribution of such adult anger, the number of women experiencing at least one episode of depression will be increased by taking account of its presence in a 10-year period (Table 3). When restricting analysis to episodes associated with humiliation as many as 88% (15/17) of the dismissive/enmeshed with such a provoked onset in the 10 years had shown persistent

Table 3. Humiliation-provoked depressive episodes by parental maltreatment and type of insecure attachment

		Parental malt	Parental maltreatment	
Adult attachment	Total women ( <i>n</i> = 198)	Yes ( <i>n</i> = 123)	No ( <i>n</i> = 75)	
	% at least one onset in 10 years provoked by humiliation			
Dismissive/enmeshed (n = 26)	65% (17/26)	64% (16/25)	100% (1/1)	
Fearful/withdrawn (n = 46)	26% (12/46)	26% (10/38)	25% (2/8)	
Secure maltreated (n = 60)	25% (15/60)	25% (15/60)	-	
Secure not maltreated (n = 66)	6% (4/66)	-	6% (4/66)	
$\chi^2$ , rows 1–3	p < 0.0003, 2df	p < 0.001, 2df	rows 1–2, ns	

Table 4. The insecure fearful/withdrawn and depression in 3-year period

		р	
(a) Partial odds ratios 3-year depression (two risk factors)			
Fearful/withdrawn	2.4	0.02	
Parental maltreatment	4.0	0.005	
(b) Partial odds ratios 3-year depression (three risk factors)			
Fearful/withdrawn	1.1	ns	
Parental maltreatment	3.1	0.03	
'Very poor' core relation or low self-esteem	4.5	0.001	
	(n = 198	(n = 198 women)	

anger as an adult compared with just 17% (6/36) of other women ( $\chi^2 = 24.72$ , p < 0.00001).

The link of adult anger, often associated with a mother's earlier physical abuse, with the experience of humiliation raises the possibility that it was a more common experience among the dismissive/enmeshed *irrespective* of any link with adult depression. Here women were also questioned about the presence of at least one humiliating crisis during *each* marital-type partnership with this occurring on average in 0.75 (36/48) of the partnerships of the dismissive/enmeshed irrespective of any link with depression compared with a lower rate of 0.34 (83/246) for the fearful/with-drawn and secure maltreated with a similar experience and an overall relative risk of 2.21 (p < 0.01).

A chaotic life style involving conduct disorder, promiscuity and excessive alcohol or drug use originating by early adulthood was present for 39% (10/26) of dismissive/enmeshed, 22% (10/46) of fearful/withdrawn and 3% (4/126) of other women ( $\chi^2$  = 30.40, 2df, p < 0.00001). However, since for the dismissive/enmeshed, the life style largely involved those reporting a mother's physical abuse together with her own anger, it did not add further to the risk of humiliating provoked depression.

## The insecure fearful/withdrawn and ongoing vulnerability

A different aetiological pathway played a key role for the fearful/withdrawn, involving either low self-esteem or an ongoing 'very poor' core relationship both established vulnerability factors increasing the risk of a depressive onset in the presence of a severely threatening life event (Brown *et al.*, 1990). As many as

**Table 5.** Chronic depressive episode in 10 years by parental maltreatment, type attachment and chaotic life style

Chaotic life style			
Insecure attachment	Yes	No	Total
(a) With parental maltreatment % chronic episode in 10 years			
Insecure	84% (16/19)	34% (15/44)	49% (31/63)
Secure	66% (2/3)	25% (14/57)	27% (16/60)
			<i>p</i> < 0.01, 1df
(b) Without parental maltreatment % chronic episode in 10 years			
Insecure	0% (0/1)	13% (1/8)	11% (1/9)
Secure	0% (0/1)	6% (4/65)	6% (4/66)
			ns

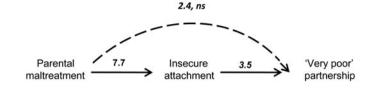
91% (42/46) of the fearful/withdrawn had at least one such risk factor compared with 62% (16/26) of dismissive/enmeshed, 50% (30/60) of secure maltreated and 35% (23/66) of those securely attached ( $\chi^2 = 36.6$ , 3df, p < 0.0001) with this difference sufficient to explain their greater experience of depression (Table 4).

Consistent with a life course perspective, 61% (28/46) of the fearful/withdrawn reported shyness as an adolescent compared with 37% (32/86) of the dismissive/enmeshed and secure maltreated ( $\chi^2 = 5.86$ , p < 0.02). This in turn was linked with the experience of current low self-esteem with 86% (24/28) of such women among the fearful/withdrawn reporting shyness compared with 37% (13/35) of other women ( $\chi^2 = 15.14$ , p < 0.0001).

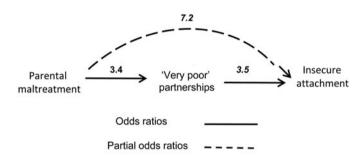
## Chronic depression and the role of a chaotic life style

During a 10-year period, a chronic depressive episode defined as lasting at least 12 months held for 35% (41/118) of high-risk and 14% (11/80) of the comparison women ( $\chi^2$  11.61, p < 0.001). Among those reporting parental maltreatment, the insecurely attached were at approaching double the risk of such an episode (Table 5a, column 3), although this risk was not associated with the *type* of insecure attachment. The link, however, was limited to those not only with maltreatment, but who also reported chaotic-type behaviour, which was present for 19 of the 22 insecurely attached women involved (Table 5a, column 1). However, among those without parental maltreatment too, few experienced such a life style for such an analysis to be possible (Table 5b).

### (a) TIME ORDER ASSUMED BY MODEL



### (b) ALTERNATIVE TIME ORDER



Logistic regression analysis with all odds ratios & partial ratios all statistically significant at p < .003 except one partial OR..

(Using the presence of such a 'very poor' partnership among 175 women with at least one partnership.)

Fig. 3. Effect of changing the time order of insecure attachment of the assumed causal model.

### A question of the time order

So far it has been assumed that insecure attachment was usually present by the time a woman left home, although questions about it were largely restricted to the period around the time of our research contact. It is, however, possible to explore the likelihood of an early dating by taking account of two risk factors that were dated – parental maltreatment and the presence at some point of a 'very poor' partnership, dealing with the 175 women with at least one partner. Using an analytic procedure meeting criterion for establishing the mediating role of a variable (Baron and Kenny, 1986), parental maltreatment no longer correlates with such a partnership once insecure attachment is controlled, supporting the early dating of the maltreatment (Fig. 3a) with this consistent with maltreatment's link with insecure attachment remaining unchanged when the quality of partnership is assumed to link the two (Fig. 3b).

## **Discussion**

Previous research had established that insecure attachment, parental maltreatment and depression are highly associated (Mikulincer and Shaver, 2016, Table 13.3) with this ensuring that, given somewhat more than half the women in the study were selected as likely to have experienced parental maltreatment, there would be a sufficient number of insecurely attached women to explore its link with depression.

Our initial analysis by correcting for the substantial link of parental maltreatment with insecure attachment estimated that a third of depressive episodes were explained by such attachment with this also holding for the general population sample of 80 women when considered alone (Table 1 and Appendix 1).

As in earlier studies, types of insecure attachment (Mickelson et al., 1997; Bifulco and Thomas, 2013) were unrelated to the risk experience of depression. However, such types did differ in the psychosocial risk factors involved. For the dismissive/ enmeshed as much as two-thirds of depression in a 10-year period was provoked by a humiliating event compared with around a quarter holding for the fearful/withdrawn and maltreated securely attached (Table 3). This for the dismissive/enmeshed was linked with a woman's persistent anger as an adult with as many as 80% (21/26) compared with just 13% (22/172) among all other women (Table 2). This difference was underlined by a link of such adult anger among the dismissive/enmeshed with a mother's earlier physical abuse to the woman as a child, which did not hold for other women (Table 2). An additional more exploratory analysis suggested that there was also a greater general experience on their part of such humiliation irrespective of that linked with depression with the possibility that their heightened experience of anger as an adult played some part in bringing this about.

In contrast, the depression of the fearful/withdrawn was highly associated with the well-established risk factors of low self-esteem and 'very poor' partnership, which given the presence of a threatening life event was sufficient to explain their increased experience of depression (Table 4). Here there was also evidence that their more frequent experience of adolescent shyness was a common early precursor of this risk with it linked to their later greater experience of low self-esteem.

The findings concerning attachment are consistent with the definition of the insecure dismissive in terms of 'emotional barriers to becoming close, low need for company and frequent anger', and that of the insecure enmeshed in terms of the common presence of 'ambivalence about core relationships involving resentment of any dependence' if their 'need for closeness from a

core tie' is unmet (Bifulco and Thomas, 2013; see also Feeney, 2007).

Finally, a chaotic life style, involving behaviour such as persistent drug abuse usually present at least by early adulthood was closely associated with a *chronic* depressive episode lasting at least 12 months. However, such highly disturbed behaviour was uncommon in population terms and almost entirely restricted to the insecurely attached. But despite this the link with chronic depression is obviously relevant in terms of public health terms. Here its somewhat greater frequency among the dismissive/enmeshed, despite not reaching statistical significance, may be of relevance given that it was highly associated with their experience of a mother's physical abuse.

Our findings concerning the types of insecure attachment are tentative in the sense of involving a combination of risk factors identified for the first time (Bifulco et al., 2002). For example, an earlier publication using half the present sister pairs reported a link of the insecure dismissive with severe abuse without taking account of the parent involved, nor physical from sexual or psychological abuse, and with the role of adult anger and humiliating events unexamined (Bifulco and Thomas, 2013, p. 120). It should be added that it is possible that our analysis, largely using sister pairs, has placed too much weight on childhood maltreatment and underplayed broader family-wide effects, although given the extent sister pairs differed in the type of insecure attachment this would seem perhaps unlikely. Taking pairs where at least one sister was insecurely attached, 29 involved a secure and an insecure sister, 14 had different types of insecure attachment, with only eight pairs similar in such terms, with all others both securely attached.

### **Conclusions**

Finally, there are potential clinical implications: knowledge that insecure attachment types have different links with depression may help clinicians focus attention on relevant automatic behaviour of their patients – on the one hand on anger among the dismissive/enmeshed and its potential to produce humiliating situations among those whose childhood exposure to physical abuse from a mother, the very person supposed to protect them, has contributed to this anger; and on the other hand, on the less angry self-paralysis of low self-esteem, which can hold back the fearful/withdrawn from exploring other possibilities and moving on to a new way of life and perhaps lesser experience of depression.

**Acknowledgements.** Funding was from the Medical Research Council. The authors would like to acknowledge the support and advice from Antonia Bifulco, and the help from Ann Brackenridge, Amanda Lillie, Julie Jarvis, Ruth Robinson, Hedy Wax and Anna Westlake. We are indebted to Islington general practitioners and health visitors for permitting the selection of subjects from their registration lists, and, of course, the women themselves who gave up hours of their time to help with the research.

Conflict of interest. None.

## References

Arrindell WA, Hafkenscheid AJPM and Emmelkamp PMG (1984) The Hostility and Direction of Hostility Questionnaire (HDHQ): a psychometric evaluation in psychiatric outpatients. *Personality and Individual Differences* 5, 221–231.

Baron RM and Kenny DA (1986) The moderator-mediator variable distinction in social psychological research: conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology* 51, 1173–1182.

- Bifulco A, Bernazzani O, Moran PM and Ball C (2000) Lifetime stressors and recurrent depression: preliminary findings of the Adult Life Phase Interview (ALPHI). Social Psychiatry Psychiatric Epidemiology 35, 364–275.
- Bifulco A, Bernazzani O, Moran PM and Jacobs C (2005) Childhood Experience of Care and Abuse Questionnaire (CECA.Q) validation in a community series. *British Journal of Clinical Psychology* **44**, 563–581.
- **Bifulco A, Brown GW and Harris TO** (1994) Childhood Experience of Care and Abuse (CECA): a retrospective interview measure. *Journal of Child Psychology and Psychiatry* **35**, 1419–1435.
- **Bifulco A, Brown GW, Moran P, Ball C and Campbell C** (1998) Predicting depression in women: the role of past and present vulnerability. *Psychological Medicine* **28**, 39–50.
- Bifulco A, Moran P, Ball C and Bernazzani O (2002) Adult Attachment Style I: its relationship to clinical depression. Social Psychiatry & Psychiatric Epidemiology 37, 50–59.
- **Bifulco AT and Thomas G** (2013) *Understanding Adult Attachment in Family Relationships: Research, Assessment and Intervention.* Abingdon: Routledge.
- Birtchnell J, Deahl M and Falkowski J (1991) Further exploration of the relationship between depression and dependence. *Journal of Affective Disorders* 22, 221–233
- Bowlby J (1980) Attachment and Loss, Volume 1, Loss, Sadness and Depression. London: The Hogarth Press.
- Bowlby J (1982) Attachment and Loss, Volume 1, Attachment. London: The Hogarth Press.
- Bowlby J (1985) Attachment and Loss, Volume 2, Separation, Anxiety and Anger. London: The Hogarth Press.
- Brown GW, Bifulco AT and Andrews B (1990) Self-esteem and depression:

   Aetiological issues. Social Psychiatry & Psychiatric Epidemiology 25, 235–243.
- Brown GW, Craig TKJ and Harris TO (2008a) Parental maltreatment and adult cohabiting partnerships: a life-course study of adult chronic depression 4. *Journal of Affective Disorders* 110, 115–125.
- Brown GW, Craig TKJ and Harris TO (2008b) Parental maltreatment and proximal risk factors using the Childhood Experience of Care & Abuse (CECA) instrument: a life-course perspective on chronic depression 5. *Journal of Affective Disorders* 110, 222–233.
- Brown GW, Craig TKJ, Harris TO, Handley RV and Harvey AL (2007a)

  Development of a retrospective interview measure of parental maltreatment using the Childhood Experience of Care & Abuse (CECA) instrument a life-course study of adult chronic depression 1. *Journal of Affective Disorders* 103, 205–215.
- Brown GW, Craig TKJ, Harris TO, Handley RV and Harvey AL (2007b) Validity of retrospective measures of early maltreatment and depressive episodes using CECA (Childhood Experience of Care & Abuse) a life-course study of adult chronic depression 2. *Journal of Affective Disorders* 103, 217–224.
- Brown GW, Craig TKJ, Harris TO, Handley RV and Harvey AL (2007c)
  Child-specific and family-wide risk factors using the retrospective Childhood
  Experience of Care & Abuse (CECA) instrument: a life-course study of
  adult chronic depression 3. Journal of Affective Disorders 103, 225–236.
- **Brown GW and Harris TO** (1978) *Social Origins of Depression*. London: Tavistock Publications, New York: Free Press.
- **Brown GW, Harris TO and Hepworth C** (1995) Loss, humiliation and entrapment among women developing depression: a patient and non-patient comparison. *Psychological Medicine* **25**, 7–21.
- Brown GW and Rutter M (1966) The measurement of family activities and relationships: a methodological study. *Human Relations* 19, 241–263.
- Cohen J (1968) Weighted kappa: nominal scale agreement provision for scaled disagreement or partial credit. Psychological Bulletin 70, 213–220.
- Feeney BC (2007) The dependency paradox in close relationships: accepting dependence promotes independence. *Journal of Personality and Social Relationships* 24, 535–555.
- George C, Kaplan N and Main M (1984) Attachment Interview for Adults. Berkeley: University of California.
- Harris TO and Bifulco A. (1991) Loss of parent in childhood, and attachment style and depression in adulthood. In Parkes CM and Hinde JS (eds),

Attachment Across the Life Cycle. London: Tavistock, New York: Routledge, pp. 234–267.

- Harris TO, Brown GW and Bifulco A (1990) Loss of parent in childhood and adult psychiatric disorder: a tentative overall model. *Development and Psychopathology* 2, 311–328.
- Mickelson KD, Kessler RS and Shaver PR (1997) Adult attachment in a nationally representative sample. *Journal of Personality and Social* Psychology 73, 1092–1006.
- Mikulincer M and Shaver PR (2016) Attachment in Adulthood. New York: Guilford Press.
- Nanni V, Uher R and Danese A (2012) Childhood maltreatment predicts unfavourable course of illness and treatment outcome in depression: a meta-analysis. *American Journal of Psychiatry* 169, 141–151.
- Philip AE (1973) Assessing punitiveness with the Hostility and Direction of Hostility Questionnaire (HDHQ). *British Journal Psychiatry* **123**, 435–439.
- **Quinton D, Rutter M and Rowlands O** (1976) An evaluation of an interview assessment of marriage. *Psychological Medicine* **6**, 577–586.
- **Rutter M and Brown GW** (1966) The reliability and validity of measures of family life and relationships in families containing a psychiatric patient. *Social Psychiatry* 1, 38–53.
- Simpson AE and Stevenson-Hinde J (1985) Temperamental characteristics of three to four-year old boys. *Journal of Child Psychology & Psychiatry* 26, 35–45.

Wing JK, Barbor T and Brugha TS (1990) SCAN: schedule for clinical assessment in neuropsychiatry. *Archives of General Psychiatry* **47**, 587–593.

# Appendix 1. The aetiological contribution of insecure attachment

To assess the aetiological contribution of insecure attachment, two corrections have been made to the data shown in Table 1. The first with the fact that 8% (5/66) of those with *neither* core risk factor of parental maltreatment or insecure attachment experienced depression in the 3 years with it is therefore necessary to deduct this proportion from the depression reported by either the insecurely attached or parental maltreated but securely attached. This resulted in the 39 onsets of the insecurely attached being reduced to 33.9 (i.e. 2.7 for those only insecurely attached, and 31.2 for those insecurely attached together with maltreatment), and those with only parental maltreatment with 16 onsets reduced to 11.4. The second correction deals with those just made by subtracting the women with an onset among those with only parental maltreatment from the onsets of the insecurely attached giving 22.5 (33.9–11.4).

Taking both corrections into account, 36.9% (22.5/61) of onsets are explained by insecure attachment with much the same holding for onsets among the 80 women of the comparison series [32.3% (4.2/13)].