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Attachment style in patients with unexplained physical complaints

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ABSTRACT

Background. Patients who present with physical symptoms that lack an organic explanation are common, difficult to help and poorly understood. Their medical help-seeking is a form of care-eliciting behaviour and, as such, may be understandable in terms of attachment style. Adult attachment style influences functioning in relationships, and may affect help-seeking behaviour from professional carers such as the family doctor.

Method. A consecutive sample of 2042 primary-care attenders completed questionnaires on: the reason for consultation, attribution of symptoms, psychiatric distress (GHQ), somatic distress (BSI), and self-reported adult attachment style (ASQ). Their doctors rated presentations into explained physical, unexplained physical, or psychological.

Results. There is a powerful relationship between type of presentation and adult attachment style. Both abnormal attachment and level of psychiatric distress increased significantly from the explained physical group, through the unexplained physical group to the group who presented psychologically. Logistic regression models determined three explanatory variables that made significant independent contributions to presentation type: psychiatric distress, attachment style and symptom attribution.

Conclusion. Presentation to the doctor with unexplained physical symptoms is associated with both higher levels of psychiatric symptoms and abnormal attachment style when compared to presentations with organic physical symptoms. Patients who present overt psychological symptoms suffer more psychiatric distress and have more abnormal attachment than those presenting physical symptoms (either organically explained or unexplained). Models to explain these findings are discussed.

INTRODUCTION

Many patients with psychiatric disorder present to their primary care physician with physical complaints. 'Somatizers' have been defined as patients who are psychiatrically ill, but present with non-organic physical symptoms that they attribute to physical causes. Such patients account for about 20% of new illness presentations in primary care (Craig *et al*. 1993; Bridges & Goldberg, 1985). The recognition of somatization and the understanding of its aetiology are of great importance to health-care providers and to the individuals concerned. Somatizers often undergo multiple potentially noxious and costly investigations (Shaw & Creed, 1991), while their psychiatric distress remains unrecognized and therefore unaddressed (Kirmayer *et al*. 1993).

Researchers investigating the aetiology of somatization have examined the effect of early care on whether psychiatrically ill patients present overt psychological symptoms (psychologizers) or whether they somatize. The parental bonding instrument, which records subject's memory of parenting, did not dis-

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criminate between psychologizers and somatizers (Bridges *et al*. 1991), but it did distinguish between both these groups and the non-psychiatrically ill controls. Experience of aberrant early care is therefore a strong predictor of the underlying depressive illness that both groups have, and does not help us distinguish their different ways of presenting this depression. Craig *et al*. (1993) used a more detailed measure of lack of care based on descriptions of actual parental behaviours. The picture was similar, in that lack of care was more common among all subjects with emotional disorder compared with those with organic disorder, but it did not discriminate between somatizers and psychologizers. However, what did distinguish somatizers from psychologizers was the experience of physical illness in childhood in addition to lack of care. They suggest a model in which children learn that physical illness is more effective at eliciting care than emotional upset. In the current study we were interested in examining a characteristic of the patient that lies more distally on the pathway between early adverse experience and later medical help-seeking. It is possible that a person's current attitudes and ways of functioning in relation to others, and particularly to care giving figures, might influence the type of presentation they make to a professional carer such as the general practitioner (GP).

Bowlby (1973) theorized that an attachment system exists that consists of an enduring affective tie between child and caregiver. The nature of this early experience with caregivers provides a kind of template, which an individual applies in different relationships and caregiving situations. This early experience translates in adulthood into an 'attachment style', and Bowlby himself suggested a number of adult variations of insecure infant attachment styles included among which were 'compulsive care-seeking' and 'compulsive self-reliant' (Bowlby, 1980). Henderson (1974) argued that care-eliciting behaviours have their origin in the attachment behaviours of infancy, so that we might expect to see patterns of medical help seeking that relate to earlier attachment patterns. Although most investigation of this idea is in the psychoanalytical literature, a study in general psychiatry provides some support for the idea that attachment styles in both patient and therapist are important predictors of the type of care that is both sought and given (Dozier *et al*. 1994).

In primary care the importance of the doctor–patient relationship has long been recognized. If care-eliciting behaviour based on abnormal attachment is going to be played out through medical help-seeking then the obvious arena for this would be in a patient's use of their general practitioner services.

Measurement of infant attachment requires time consuming and complex direct observations of mother–infant interaction. However, there is good evidence that infant attachment styles persist into adulthood (Rutter, 1995) and measures are now available of adult attachment style. Some of these measures tap into underlying unconscious feelings (George *et al*. 1996), but others focus on the here and now and categorize current adult functioning in relationships into different styles (Stein *et al*. 1998). A brief self-report version of this latter type of measure is now available and has been used in a large-scale population study (Hazan & Shaver, 1987).

The current study aims to investigate the role of a patient's adult attachment style in determining the way they use their general practitioner. We examine the relationship between a self-reported attachment style and type of presentation to the GP. Our design enabled us to view somatization from several perspectives moving along a continuum of increasingly restrictive definition, involving the types of symptoms (explained or unexplained), and the patients' attributions to either physical or psychological cause. Psychodynamic theories of somatization suggest that abnormal early attachment produces a child who is unable to label and express emotions appropriately, and consequently develops non-organic physical symptoms as an expression of distress (Kraemer & Loader, 1995). We tested these ideas with the following hypotheses.

1 Patients who present with unexplained physical symptoms are more likely to have abnormal attachment styles than those presenting with explained physical symptoms, or those presenting with psychological symptoms.

2 In the subgroup of patients with unexplained physical symptoms those who attribute their symptoms to physical causes will have more

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abnormal attachment than those who attribute their symptoms to emotional causes.

METHOD

Study design

This paper reports the first part of a two-stage design, which collected a cohort of patients presenting in primary care with unexplained physical complaints. A consecutive series of patients consulting their primary care doctor were asked to complete self-report questionnaires, and the doctors rated whether or not the presenting symptom had an organic basis.

The research took place in 10 different general practices in and around London. Four were in more suburban, less deprived and mainly white areas of greater London, and its outskirts, two were very mixed inner London areas, and the remaining four were located in severely deprived inner-city London areas with high ethnic minority populations.

The recruitment phase took place over a period of 8 months from July 1997 to March 1998. All patients waiting to see their doctor were asked to complete a brief battery of self-completed questionnaire while waiting to see the doctor. Only patients aged over 16 who were seeing the doctor about a problem that began within the previous 12 months were included. At the same time the doctors completed a brief rating on all the patients they saw of the type of presentation the patient made.

Patient ratings

In addition to sociodemographic information, standardized ratings were obtained of five main factors: the first four from patient questionnaires, and the fifth from doctors' ratings.

1 Attribution of symptoms

Patients were asked what they thought was the cause of their problem and were offered four possible response categories: (*a*) physical disease; (*b*) emotional or stress related; (*c*) a mixture of these; and, (*d*) don't know. This rating has been used in previous primary care somatization studies (Morriss *et al.* 1998). For the purposes of some analyses these groups were combined into two groups: emotional attribution (*b* and *c*); or no emotional attribution (*a* and *d*).

2 Attachment style

A self-rated measure of adult attachment style the Attachment Style Questionnaire (ASQ) (Hazan & Shaver, 1987) was used. This requires the patient to select one of three categories that best describes their experience in, and attitude to, close relationships. On the basis of their choice the patients can be divided into a secure attachment style, or one of two abnormal styles: avoidant or anxious ambivalent.

3 Psychiatric distress

Self-rated psychiatric symptoms were measured using the General Health Questionnaire 12-item version (Goldberg & Williams 1988). This was scored using the 0/1 method (Goldberg & Williams, 1988) used to divide patients into probable case of psychiatric disorder and non-cases using a threshold score. The threshold chosen was a GHQ score of between 3 and 4 (Goldberg *et al.* 1997). The GHQ was also scored using the Likert scoring method, which produces a continuous score.

4 Somatic distress

Self-rated current somatic symptoms were measured using the Brief Symptom Inventory (BSI) (Derogatis & Melisaratos, 1983). This consists of 12 non-specific somatic symptoms, and patients rate how distressed they have been by each on a 5-point scale from 'not at all' to 'extremely'. A total symptom score is derived.

5 Presentation type

This was rated by asking the GPs to fill in a form on every patient they saw during the period of recruitment. GPs noted if the presentation was psychological or physical, and if it was physical the symptom was rated into three categories: (*i*) explained, i.e. patients who had presented to their doctor with a physical symptom for which the doctor thought there was an organic explanation; (*ii*) the doctor felt unable to assign the physical symptom as results of investigations were awaited; and (*iii*) unexplained, i.e. patients who had presented with a physical symptom for which the doctor thought there was no organic explanation.

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Table 1. *Relationship of attachment style to sociodemographic variables: odds ratios for abnormal attachment are calculated comparing with a baseline level within each variable*

Variable	Total *N* (%)	% Abnormal attachment	*P**	OR† abnormal to normal attachment (95% CI)
Age group years				
15–25	368 (18·0)	26·8		1·00
26–35	629 (30·8)	29·6		1·14 (0·86–1·52)
36–45	431 (21·1)	24·4	< 0·001	0·87 (0·64–1·20)
46–55	269 (13·2)	20·4		0·70 (0·48–1·02)
56–65	169 (8·3)	10·6		0·32 (0·19–0·55)
⩾ 66	166 (8·1)	6·0		0·17 (0·09–0·34)
Gender				
Male	696 (34·1)	20·7	0·048	1·00
Female	1346 (65·9)	24·6		1·25 (1·00–1·56)
Ethnic group				
White	1592 (78·0)	23·5		1·00
Black (African/Carribean/other)	262 (12·8)	21·4	0·10	0·88 (0·64–1·21)
Asian Indian	56 (2·7)	16·1		0·62 (0·30–1·28)
Other	97 (4·8)	32·0		1·53 (0·98–2·38)
Marital status				
Married	1036 (50·7)	16·5		1·00
Single	685 (33·5)	31·2	< 0·001	2·30 (1·82–2·89)
Divorced/separated	218 (10·7)	35·8		2·82 (2·04–3·89)
Widowed	87 (4·3)	10·3		0·58 (0·29–1·19)

* Significance from chi-square test for categorical variables.
† Unadjusted odds ratio with 95% confidence interval (CI). Odds ratios were also calculated adjusted for GHQ score but as this adjustment made only a small difference, and did not affect the result in this table, the adjusted odds ratios are not shown.
Total *N* – 2042. Where numbers do not add up to this is due to missing data on that variable.

The uncertain physical group was omitted from the analysis and there were therefore three categories of presentation type: explained physical; unexplained physical; and psychological, these were patients who had presented psychological symptoms to their doctor.

Statistical analysis

Differences between groups were tested for using *t* tests for continuous variables, and chi-squared tests for categorical data. Possible confounders are variables that are significantly associated with both the outcome, i.e. type of presentation for hypothesis 1 and attribution for hypothesis 2, and the main independent variable of interest, i.e. attachment style. The first part of the results looked for such possible confounders. GHQ score was identified as an important potential confounder, and was therefore adjusted for in testing hypotheses. To test the hypotheses concerning attachment style, logistic regression was used to generate odds ratios of abnormal to normal attachment, which were then compared between presentation types and attributional style. These odds ratios were then adjusted for GHQ score and for sociodemographic variables. In order to ascertain the contribution of the main variables of interest: attachment, attribution and GHQ, to the type of presentation, while controlling for one another and for sociodemographic variables, logistic regression models were developed for the two main outcomes of interest: unexplained compared with explained, and psychological compared with explained. A stepwise regression model was used and variables were dropped from the model if $P < 0{\cdot}05$.

Because the study has a two-stage design the sample at this stage is larger than is necessary in order to ensure adequate numbers with an unexplained complaint were available to follow-up. A power calculation indicated that to detect a two fold difference in abnormal attachment between the explained and unexplained groups of somatic presenters would require a sample size of 575 (460 explained and 115 unexplained) specifying 80% power and probability level 0·05.

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RESULTS

Sample description

The sample consisted of 2042 patients who had consented to the study, completed the questionnaires, and fulfilled the eligibility criteria. The refusal rate was < 2%. A further 295 patients had completed some of the forms, but not the attachment and GHQ measure, and so these were not included. This group did not differ from the remainder on any of the sociodemographic variables. The sociodemographic and clinical characteristics of the sample, and distribution of the variables of interest are shown in the first column of Tables 1 and 2. The mean age was 39·9 (range 16–91, S.D. = 15·3).

Possible confounders

Initial exploration of the data showed that GHQ increased significantly between each presentation type: explained mean = 12·61, CI = 12·31–12·92; unexplained mean = 15·57, CI = 14·84–16·31; and, psychological mean = 23·5, CI = 22·14–24·87. ANOVA and Tukey's test for *post hoc* differences indicate there are significant differences between all three groups ($P < 0{\cdot}001$). Somatic symptom scores were also compared between the three groups, and there was a significant difference between unexplained and explained, and between psychological and explained ($P < 0{\cdot}001$), but psychological and unexplained did not differ. (Explained mean = 18·17, CI = 17·89–18·46; unexplained mean = 19·89, CI = 19·24–20·53; psychological mean = 19·71, CI = 18·69–20·72.) Attribution also differed significantly between the presentation types: those presenting with unexplained symptoms differed significantly ($\chi^2 = 78{\cdot}47$, $P = < 0{\cdot}001$) from those making explained presentations. (Explained group, physical attribution 26%, don't know 50%, mixed/emotional 24%; unexplained group, physical attribution 14%, don't know = 40%, mixed/emotional 46%.) It is meaningless to look at attribution of those presenting overtly with psychological symptoms, as they all make psychological attributions. There were no differences between presentation types on any sociodemographic variables. Since GHQ score is significantly related to both presentation type and attachment (see below) it is a powerful potential confounders. GHQ score is adjusted for in testing both the hypotheses. Attribution was not initially adjusted for in testing hypotheses, as it has little meaning for the psychological presenters (and in any case did not affect the result), however it was entered in the final logistic regression.

Attachment ratings

The distribution of attachment styles was 76·7% normal, 16·3% avoidant and 7% anxious ambivalent. There were no significant differences between the two abnormal attachment style groups on any of the sociodemographic variables. Levels of psychological distress as measured by total GHQ score were the same in both the anxious ambivalent (mean = 19·70, CI = 18·50–20·90) and avoidant (mean = 19·34, CI = 18·49–20·20) groups, but both these abnormal groups had significantly higher GHQ scores ($P < 0{\cdot}001$) than those with normal attachment (mean = 12·01, CI = 11·75–12·27). The two subgroups of abnormal attachment style were compared on the remaining two variables of interest: presentation type, and attribution style, but no significant differences emerged. Since the main differences found were between normal and abnormal attachment, and the two abnormal attachment styles were similar on all the variables under consideration, for simplicity they were collapsed into one category of abnormal attachment for the testing of hypotheses.

Relationship of attachment style to sociodemographic variables, psychiatric distress, presentation type (hypothesis 1) and attribution (hypothesis 2)

There was a highly significant relationship between being a probable case of psychiatric disorder and having an abnormal attachment rating ($\chi^2 = 251{\cdot}62$, $P < 0{\cdot}001$). GHQ cases were 5·49 times more likely to have abnormal attachment than non-cases (Table 2). Psychiatric distress was therefore adjusted for using the total score in examining the relationship between attachment and other variables.

Patients with abnormal attachment styles were significantly younger than those with normal attachment (Table 1). This result was unaffected by adjusting for psychiatric distress. Women were slightly more likely to rate themselves as having an abnormal attachment style, but this difference was explained by the fact that women

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Table 2. *The relationship of attachment style to psychiatric distress, presentation type and patients attribution of symptoms*

Clinical variables	Total* *N* (%)	Abnormal attachment %	*P*†	OR abnormal to normal cf to baseline‡ group (95% CI)	OR adjusted for soc dem variables§ and GHQ score (95% CI)	*P* value for adj OR
GHO status						
Non-case	1290 (63·2)	11·9	< 0·001	1·00		< 0·001
Case	752 (36·8)	42·7		5·49 (4·49–6·86)		
Presentation type						
Explained	1433 (70·2)	17·6	< 0·001	1·00		
Unexplained	345 (16·9)	34·5		2·47 (1·90–3·20)	1·92 (1·42–2·61)	< 0·001
Psychological	121 (5·9)	64·5		8·50 (5·72–12·63)	3·25 (2·02–5·22)	< 0·001
Attribution style						
Physical	406 (19·9)	13·5	< 0·001	1·00		
Don't know	878 (43·0)	15·8		1·20 (0·86–1·68)	1·29 (0·88–1·87)	0·19
Mixed (emotional/physical)	334 (16·4)	37·7		3·86 (2·70–5·54)	2·31 (1·54–3·48)	< 0·001
Emotional	291 (14·3)	46·4		5·52 (3·83–7·96)	2·59 (1·70–3·95)	< 0·001

* Total $N - 2042$. Where % does not add up to 100% is due to uncertain group (7%) for presentation type and missing data (6·4%) in attribution style.
† Significance from chi-square test for categorical variables.
‡ Unadjusted odds ratio and 95% confidence interval (CI).
§ Odds ratio and 95% confidence interval (CI) adjusted for GHQ score and sociodemographic variables age, gender, ethnic group and marital status.

Table 3. *Results of logistic regression comparing unexplained physical presentation with explained physical presentation; and psychological presentation with explained physical presentation*

	Variable entered*	OR† (OR adj)	95% CI (CI adj)	*P*‡
Unexplained cf explained physical (Outcome 1)	Attachment	1·73 (1·83)	1·30–2·31 (1·35–2·47)	< 0·0001
	GHQ status	1·55 (1·51)	1·18–2·03 (1·14–1·99)	< 0·0001
	Attribution	2·07 (2·07)	1·58–2·71 (1·57–2·73)	< 0·0001
Psychological cf physical explained (Outcome 2)	Attachment	4·33 (4·06)	2·84–6·60 (2·90–7·31)	< 0·0001
	GHQ status	9·59 (9·02)	5·50–16·76 (5·13–15·88)	< 0·0001

* Variables which were entered stepwise and were significant at $P = 0{\cdot}05$ so remained in the model. Somatic symptom score and the sociodemographic variables were dropped as they were not significant at $P = 0{\cdot}05$.
† This is the odds ratio for each variables comparing unexplained or psychological presentation to explained. For attachment the odds are abnormal compared to normal, for ghq case to non case, and for attribution emotional compared to non-emotional. (Figures given in parentheses are the odds ratios adjusted for possible confounding sociodemographic variables.)
‡ This is the *P* value from the likelihood ratio test indicating whether the variable contributes significantly to the overall model.

had more psychiatric distress as it did not persist after adjustment for GHQ score (Table 1). There were no differences between different ethnic groups in attachment style (Table 1).

Marital status was significantly related to attachment style even after adjusting for psychiatric distress. Both single people, and those who were divorced/separated were more than twice as likely to report abnormal attachment style (Table 1). Since age is related to attachment we looked at this marital status attachment relationship more closely by controlling for age using logistic regression. A significant interaction between age, marital status and attachment was found ($P = 0{\cdot}05$). In the youngest age group there was no significant excess of abnormal attachment in single people (326 single, 73 married in this age group). There was also no significant excess of abnormal attachment in the divorced/separated group, but there were only five divorced/separated in this youngest age group. There was a significant excess of ab-

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normal attachment in both single and divorced/separated for all others age groups, except the oldest groups (aged over 56).

Testing of hypothesis 1: patients who present with unexplained physical symptoms are more likely to have abnormal attachment styles than those presenting with explained physical symptoms, or those presenting psychological symptoms

Patients presenting with unexplained symptoms were 2·47 times more likely to have abnormal attachment than those with explained symptoms (Table 2). Even after adjustment for GHQ and sociodemographic variables those presenting unexplained symptoms were 1·92 times more likely to have abnormal attachment. This finding alone would support the hypothesis, however, when we examine those presenting psychological symptoms they were 8·5 times more likely to have abnormal attachment than those with explained symptoms (even after adjustment they were 3·25 times more likely). Psychological presenters have the highest abnormal attachment, then unexplained presenters are second highest. Finally, those with explained physical complaints had significantly less abnormal attachment than either of the other two groups.

Testing of hypothesis 2: in the subgroup of patients with unexplained physical symptoms those who attribute their symptoms to physical causes will have more abnormal attachment than those who attribute their symptoms to emotional causes

A significant relationship was found between attachment style and attribution of symptoms (Table 2). Compared with a baseline of physical attribution, those making mixed attributions had 3·86 times more abnormal attachment, and those making emotional attributions 5·52 times more abnormal attachment. These differences were not affected by controlling for sociodemographic variables, but were reduced by controlling for psychiatric distress, though they remained significant. Thus, GHQ score explains some but not all of the effect. If these odds ratios are also adjusted for presentation type they remain significant. To test our specific hypothesis that patients with unexplained complaints who made physical attributions would have more abnormal attachment we examined the relationship between attachment and attribution only within the group of patients with unexplained complaints. The finding was the same as in the whole sample, and contrary to our hypothesis. Patients with unexplained complaints who made physical attributions were less likely to have abnormal attachment ($\chi^2 = 28{\cdot}15$, $P < 0{\cdot}0001$), a difference that persisted after adjusting for GHQ.

Logistic regression models of predictors of consultation behaviour (Table 3)

In order to look at the contribution of attachment to presentation type at the same time as examining the contribution of other variables we used logistic regression models to see which variables significantly predicted the type of presentation a patient would make. Logistic regression models were built up for the two main outcomes of interest: (1) unexplained physical presentations compared to explained physical presentations; and, (2) psychological presentations compared with presentation with explained physical symptoms.

For outcome 1 the dependant variable in the model was unexplained *v.* explained presentation, and for outcome 2 the dependant variable was psychological *v.* explained physical presentation. The independent variables were: attachment style, GHQ status and symptom attribution (the latter was entered into model 1, but not model 2 as it was considered meaningless since a patient presenting with an overt psychological complaint will obviously attribute psychologically). All these independent variables made significant contributions to both outcomes ($P < 0{\cdot}001$) and none were dropped. Possible confounding variables were then entered for both outcomes: sociodemographic characteristics (gender, age, ethnic group and marital status) and total somatic symptoms score. None of these made any difference to the large significant effect of attachment, GHQ case status, and attribution, shown in Table 3. In neither model did any of the confounding variables contribute significantly, and they were therefore dropped out of the models. Although total symptom score made a significant contribution to both outcomes if entered before GHQ, it lost its effect once GHQ score was entered, so the GHQ score appeared to cover the effect of the total symptom score in its effect on

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each outcome. These results show that presentation with unexplained rather than explained symptoms is significantly predicted by both abnormal attachment style, high GHQ, and a tendency to make non physical attribution of symptoms. Each is significant even after controlling for the other two. Presentation with psychological rather than explained physical symptoms, was significantly predicted by both abnormal attachment style and high GHQ.

DISCUSSION

Methodological considerations

This study has several methodological strengths: The numbers are large, and the refusal rate was negligible. We therefore obtained a representative sample of UK primary care attenders, in which the prevalence of psychiatric morbidity as estimated by the GHQ was comparable to that found in other British primary care populations (Williams *et al*. 1986). The rating of whether or not physical symptoms had an organic basis was made by the patient's usual doctor with access to their notes, and often prior knowledge of the patient. This rating therefore has clinical face validity being the doctors' best assessment on the basis of the evidence at the time. Obviously, as it was a rating based on the doctors' assessment at one point in time, some patients will have been misclassified, but this is unavoidable in a cross-sectional sample such as this one. The 1-year follow-up stage will reveal how many of these patients were found to have an organic cause for their symptom. GPs failed to allocate only 7% of patients. Although these were more similar to the explained than the unexplained group (in terms of GHQ score and physical symptom scores) we opted to exclude them altogether rather than merge them with the explained group. This minimized the possibility of including patients who would turn out to have organic disorders explaining their symptoms.

Validity of the attachment measure

The major potential weakness of our study lies in the validity of the attachment measure used. A recent review concluded that the attachment style questionnaire, which we used, had acceptable psychometric properties (Stein *et al*. 1998). The categories produced were found to be consistent with type and quality of the subjects' relationships. They were also consistent with retrospective accounts of the subjects' experience of care in childhood (Hazan & Shaver, 1987). When compared with other self-report attachment measures its agreement is good, however there are large differences when comparisons are made with interview based attachment measures such as the Adult Attachment Interview (AAI) (George *et al*. 1996). The AAI is the best known interview measure, which consists of a semi-structured interview concerning patients' experience of early carers. It is rated by examining the coherence of the patients' discourse and thus aims to tap into unconscious aspects of the attachment system. It is not surprising that this produces very different results from the attachment style questionnaire, which provides information of patients' own perceptions of the way that they function in current intimate relationships. Both may be valid, but they are measuring different aspects of a related concept. The large-scale epidemiologically based design of this first part of the study required the use of a brief self-report measure. However, the opportunity will arise at the second stage of the interview to gather interview based attachment data, which can be used to compare with the self-report attachment ratings.

The prevalence of abnormal attachment in this sample is comparable to that found in other studies (Fonagy *et al*. 1991; Ainsworth & Eichberg, 1991). The fact that the proportions falling into the different categories resembled findings in other studies both with more detailed interview measures, and using the same measure provides evidence that this attachment measure is meaningful. Further support is provided by the finding of a significant relationship between abnormal attachment style and failure of past relationships. Hazan & Shaver (1987) also reported this finding. The significant relationship between abnormal attachment style and being a probable case of psychiatric disorder replicates findings using more in depth assessments of attachment style. Harris *et al*. (1999) found that a non-standard adult attachment style halved the chance of remission of chronic depression in a sample of women. A review by Rutter (1995) comments on significant associations between insecure attachment in infancy and psychopathology later in life.

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Hypotheses

The first hypothesis about the relationship between attachment and presentation style was not supported by our results. We did find that abnormal attachment was greater in those presenting an unexplained physical symptom compared with those with an explained physical symptom, but those presenting psychologically had the most abnormal attachment of all, which was opposite to what we had hypothesized. The theoretical model of somatization underlying this hypothesis is that those who somatize rather than psychologizing distress have had aberrant experiences of early care, and failed to learn a psychological language for distress. We found no support for this, though a caveat is that we did not directly measure early care-giving and attachment experience. However, there is evidence for continuity of attachment style from childhood to adulthood, so a measure of attachment in adulthood will give an indication of early attachment experience. The second hypothesis, which tested the same underlying theory about somatization, was also not supported. The findings were opposite to those hypothesized: within the subgroup of patients who had an unexplained physical complaint abnormal attachment was strongly associated with the tendency to attribute this symptom psychologically, even after adjusting for level of psychiatric distress.

A possible interpretation of this finding is that it is an artefact of the use of a self-report measure of attachment, rather than a true finding. Patients who report psychological distress may also be more able to acknowledge problems in relationships, and more able to see their physical problems as having emotional explanation.

Interpretation of findings

A striking finding is that among patients making a physical presentation of a non-organic symptom to their doctor nearly half (45%) acknowledge emotional factors as causative. A further 41% have no definite view, and only 13% suggest a physical cause. Despite this they presented the physical symptom. Thus, far from lacking a psychological language these patients with non-organic symptoms are well aware of psychological factors in their symptoms, but chose not to focus on this in their consultation. To explain this behaviour we need to investigate in more detail patients' reason for consulting, and their beliefs about the role of their doctor, and what it is possible for medicine to treat. It may be that at this stage patients are seeking reassurance or symptomatic relief, and not help with their emotional problems. This finding makes it unsurprising that other studies have found a high prevalence of facultative somatizers in their samples (Bridges & Goldberg, 1985). In our study it is not possible that contact with the doctor caused patients to see their symptoms as possibly emotionally linked, as they filled in the questionnaire with this item while sitting in the waiting room before consultation.

There are two clear findings in our results: first, there is an increasing level of psychiatric distress as we move from the baseline organic physical symptoms group, through the non-organic physical symptoms group, to the group who present psychologically who have the highest levels of psychiatric distress. Secondly, the same pattern is seen with abnormal attachment, which increases through the groups in the same way. A plausible model may be that depression mediates the relationship between adult attachment style and presentation to the doctor with psychological symptoms. However, the logistic regression models demonstrate that although depression does explain some of the relationship between abnormal attachment and presentation type it is not the whole story. All three factors: abnormal attachment; psychological distress; and, the way in which patients attribute their symptoms, make independent contributions to the type of presentation they make to their family doctor. Somatic symptoms accompanying the psychiatric distress make no independent contribution. A suggested model is, therefore, that increasing psychiatric distress will be accompanied by somatic symptoms, which the patient may initially present to the doctor. A greater amount of psychiatric distress makes an overt psychological presentation more likely. In addition, for the same level of distress and somatic symptom a patient with more abnormal attachment will be more likely to ask the doctor for psychological help. This may be because their attachment problems lead them to have both fewer supportive relationships and/or to be unable to

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make use of their intimate relationships for support. They are, therefore, more likely to turn to a professional carer such as their family doctor for emotional support.

Weich *et al*. (1996), in their study of somatic presenters, did not directly use an attachment style measure but they did look at patients' reporting of relationships. They found that psychological presenters report much greater insecurity and difficulties in intimate relationships, than do somatic presenters. They suggest psychologizers have more difficulty forming close personal relationships, and this makes them more likely to present psychological symptoms to their doctor. Although we used a different measure our findings support this suggestion.

Conclusion

This study shows that although the majority of patients presenting with new symptoms are regarded by the GP as having organic complaints, a substantial minority are unexplained. The latter group are significantly more likely to be psychiatrically distressed. They are also significantly more likely to report abnormal attachment.

We have shown an increasing severity of psychiatric distress and abnormal attachment moving from the explained physical presentation group through unexplained physical presentations to psychological presentations. In contrast level of somatic distress, indicated by non-specific somatic symptoms, is the same in the unexplained and psychological presenters, but is significantly greater in both of these than in explained physical presenters.

A possible model is that psychiatric distress is the primary factor and produces increased levels of non-specific somatic symptoms. Patients with abnormal attachment will have poorer relationships, and therefore poorer social and emotional support, and so will be more likely to present such symptoms to the doctor. Whether they present these symptoms physically or psychologically will be determined by three factors: first, their inherent tendency to make psychological attributions themselves for symptoms; secondly, an increasing level of psychiatric distress; and thirdly, their level of abnormal attachment (with associated lack of other sources of emotional support). The more severe their attachment problems the less able they will be to use their personal relationships, and social supports, and the more likely to present overt psychological distress to their doctor.

These conclusions have to be tentative because we used a self-report measure of attachment. We cannot exclude the interpretation that patients with unexplained complaints who present physically have more normal attachment than those who present psychologically because the tendency to acknowledge psychological problems, and therefore present them overtly to a doctor, is associated with a tendency to acknowledge relationship problems. Further research is needed in which more detailed interview and informant measures are used.

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