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Incorporating:

Bullying in primary schools: Emotional and behavioural problems evident in bullies, victims and bully-victims.

Volume I

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CONTENTS

ACADEMIC DOSSIER

ADULT MENTAL HEALTH ESSAY - Discuss the role of cognitive behaviour therapy in the management of a psychotic disorder.

PEOPLE WITH LEARNING DISABILITIES ESSAY - What is an autistic spectrum disorder (ASD) and what aetiological models have contributed to our understanding of autism? To what extent have these models guided intervention practices?

CHILD, FAMILY AND ADOLESCENT ESSAY - What theories have been advanced to explain childhood phobias? Consider their strengths and limitations and the evidence base that would support their use in clinical practice.

OLDER ADULTS ESSAY - Discuss the difficulties of distinguishing depression and early stage dementia and evaluate ways in which these difficulties might be addressed.

SPECIALIST ESSAY - To what extent do psychological models help us explain the impact on families of caring for a child with chronic illness, and how useful have these models proved in informing interventions for children and their families?

CLINICAL DOSSIER

ADULT MENTAL HEALTH

PEOPLE WITH LEARNING DISABILITIES

CHILD, ADOLESCENT AND FAMILY

OLDER ADULTS

SPECIALIST PLACEMENT - Child psychotherapy

SPECIALIST PLACEMENT - Children with developmental difficulties/ child neuropsychology

RESEARCH DOSSIER

SERVICE RELATED RESEARCH - Clients' views of a psychology service in a primary health care setting

LITERATURE REVIEW - Psychological adjustment of children involved in bullying: A review of the literature

MAJOR RESEARCH PROJECT - Bullying in primary schools: Emotional and behavioural problems evident in bullies, victims and bully-victims

Appendices

ACADEMIC DOSSIER

Adult Mental Health Essay

Year I

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Discuss the Role of Cognitive Behaviour Therapy in the Management of a Psychotic Disorder

INTRODUCTION

The term "psychotic disorder" is not a unitary concept.[1] In its narrowest form, the term "psychotic" refers to "delusions or prominent hallucinations, with the hallucinations occurring in the absence of insight into their pathological nature" (DSM-IV, American Psychiatric Association [APA], p.273). A more inclusive definition incorporates other positive symptoms of schizophrenia (i.e. disorganized speech, grossly disorganized or catatonic behaviour) (DSM-IV, APA, 1994). Finally, the term has been defined conceptually to suggest a person's separation from reality (DSM-IV, APA, 1994). This essay will be concerned with how difficulties in defining this heterogeneous disorder impact on its management. More specifically, it will discuss how the role of cognitive behaviour therapy informs this management.

Difficulties in defining a psychotic disorder will be examined through shifts which have occurred in the conceptualization of psychosis and its positive symptoms. This will be explored through an illustration of the vulnerability-stress model (e.g. Zubin and Spring, 1977, cited by Fowler, Garety and Kuipers, 1995) and cognitive models of psychosis whose developments mark a break from psychiatric models. A discussion will evolve as to how these models inform the role of cognitive behaviour therapy and how this impacts on the management of a psychotic disorder.

The complex nature of a psychotic disorder has led to necessary adaptations of cognitive behaviour therapy in the management of psychosis. Emphasis will, therefore, be placed on how the role of cognitive behaviour therapy differs from its role in the context of other disorders. Potential difficulties and key adaptations will be discussed. In the light of these adaptations, the question will be asked, what is cognitive behaviour therapy seeking to manage?

The role of cognitive behaviour therapy is further defined by the aims and goals which are set by the therapist and patient.[2] I shall discuss how the process by which

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[1] This essay will focus on the treatment of "functional" psychotic disorders (namely, schizophrenia, affective psychosis and delusional disorders) as it is these which, having no obvious cause, have been the focus of cognitive-behavioural research (see Fowler, Garety and Kuipers, 1995 for a review). For

these goals are jointly defined is a key part of the assessment/formulation process in therapy. In doing so, I shall highlight the primacy of "collaborative" working between patient and professional within the cognitive behavioural framework.

A discussion of the aims of cognitive behaviour therapy will seek to highlight differences as well as commonalities in its role in the management of a psychotic disorder. These differences will be explored in terms of different research emphases. This will include an examination of differences within and between conceptual emphases such as self-esteem (e.g. Chadwick and Birchwood, 1994; Freeman, Garety, Fowler, Kuipers, Dunn, Bebbington and Hadley, 1998) and "normalizing" (e.g. Kingdon and Turkington, 1994, 1998). The question will be raised as to how these different emphases impact on the role of cognitive behaviour therapy for psychosis.

A discussion of the role of cognitive behaviour therapy in the management of a psychotic disorder would be incomplete without an evaluation of its role. This evaluation is "still in its early phases" (Kingdon and Turkington, 1998, p.76) but an attempt will be made to demonstrate how the evaluation of cognitive behaviour therapy for psychosis is progressing developmentally in terms of research designs and sampling of participants. Limitations of these developments will also be discussed.

In summary, it will be argued that the role of cognitive behaviour therapy in the management of a psychotic disorder is informed by a complex of factors. These include: difficulties in defining psychosis; shifts in conceptualizations of psychosis away from psychiatric models; the development of cognitive models of a psychotic disorder; implications of the term "management"; the differences in aims of different cognitive behavioural approaches; and the cognitive behavioural interventions themselves.

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the sake of simplicity, I shall use the terms "psychotic disorder", "psychosis" and "schizophrenia" interchangeably.

[2] I shall refer to clients/ participants and patients as "patients" because this is largely consistent with the literature to be discussed in this essay.

PRINCIPLES OF COGNITIVE BEHAVIOUR THERAPY

Cognitive behaviour therapy developed from the premise that "psychological disturbances frequently involve habitual errors in thinking or cognition" (Beck, 1967). It places primary emphasis on how an individual appraises an event. In this way it seeks to formulate a hypothesis about the beliefs which informed the antecedents and consequences of clients' appraisals (Hawton, Salkovskis, Kirk and Clark, 1989).

This process of formulation is guided by a collaborative exploration of the client's thoughts and beliefs. The client's "negative automatic thoughts" are identified and consequently linked to his behaviour and emotions. Following this, the client is encouraged to test out the validity of these beliefs and to consider alternative, more "rational" ways of thinking with a view to modifying his unwanted emotions and/or behaviours and achieving his goals (Fowler *et al.,*1995).

APPLICATION OF COGNITIVE BEHAVIOUR THERAPY TO A PSYCHOTIC DISORDER

The role of cognitive behaviour therapy in the management of a psychotic disorder will first be discussed in terms of how the conceptualization of psychosis has shifted. This shift is articulated by the development of cognitive models of psychosis.

Cognitive Models of Psychosis

Vulnerability-stress models

Within cognitive models of psychosis, previous assumptions about psychosis are thrown into question and qualified. These assumptions include: the conceptualization of psychosis as a distinct disease entity; its inevitably deteriorating course; psychotic symptoms as a direct consequence of brain disorder; and the assertion that the beliefs of people with psychosis are not amenable to reason (Fowler *et al.,*1995). In the light of these qualifications, cognitive models conceptualize psychotic disorders as heterogeneous, multidimensional and on a continuum with normal mental states. These disorders are considered to have a number of hypothetical interacting causes which are best located within a general vulnerability-stress model (Garety, 1991).

There are a number of vulnerability-stress models (for example, Zubin and Spring, 1977, cited by Fowler *et al.*, 1995). The models aim to provide a summary of factors which contribute to an individual's susceptibility to psychosis (Fowler *et al.,* 1995). These factors include: firstly, a person's genetic, physiological or psychological vulnerability; and secondly, events or circumstances in an individual's life "that affect him in a sufficiently adverse way" (Kingdon and Turkington, 1994, p.38).

This conceptualization of psychosis has two key implications for the role of cognitive behaviour therapy in the management of a psychotic disorder. These have been summarized by Kingdon and Turkington (1994) and incorporate the identification of vulnerability factors, adverse life events and circumstances so an attempt can be made "to counteract, compensate for, or modify them" through the use of cognitive-behavioural techniques (p.38).

Cognitive Models of Positive Psychotic Symptoms

Positive psychotic symptoms refer to hallucinations and delusions. These have been defined as "false perceptions" and "false beliefs" respectively (Frith, 1992) and often co-occur (Close and Garety, 1998). Formally speaking, delusions are secondary hallucinations (Close and Garety, 1998). Frith's use of the term "false" is indicative of a biological account of positive psychotic symptoms. An implication of this is that delusions are meaningless. In 1991, Berrios asserted that delusions are "empty speech acts, whose informational content refers to neither world or self" (cited by Bentall and Kinderman, 1998, p. 120). I shall pay brief attention to a selection of cognitive models which represent a rejection of Berrios' view.

Chadwick, Birchwood and Trower's cognitive model of voices proposes that patients' beliefs about voices serve to defend the self from low self-esteem (1996). This will be considered in more detail later. Close and Garety's findings support and add weight to this former model, proposing that "appraisals of voices in relation to the self [constitute] a further factor in understanding the emotional impact of voices" (1998, p.172).

In 1991, Garety tested two competing theories of delusions. The first of these was formulated by Maher and proposed that "delusions are the result of an entirely normal attempt to account for abnormal perceptual experiences" (1974, cited by Garety, 1991, p.14). The second hypothesizes that delusions do not necessarily arise from abnormal perceptual experiences; but that the experiences themselves involve reasoning. In conclusion, Garety reported that her two studies "found a 'jump to conclusions' style, in which deluded subjects appear to be excessively influenced by stimuli immediately present in the environment" (1991, p.16).

The models of Chadwick and his colleagues (1996), Close and Garety (1998) and Garety (1991) all point to the significance of the meaning attributed by patients to their psychotic experiences. The concept of delusions as "meaningful phenomena" (Bentall and Kinderman, 1998, p.120) paves the way for "modifying" beliefs about hallucinations, albeit with difficulty (Fowler *et al.,* 1995). Given, however, the complex nature of these delusions, it is not surprising that the role of belief modification - together with that of other cognitive behavioural techniques and principles - needs to be highly adaptive when managing a psychotic disorder (Fowler *et al.,* 1995).

Adaptations of Cognitive Behaviour Therapy to Psychosis

Several authors have highlighted the potential difficulties of working with patients using cognitive behaviour therapy (e.g. Fowler *et al.,* 1995; Tarrier, Beckett, Harwood, Baker, Yusupoff and Ugarteburu, 1993). These difficulties may arise in the context of: initial engagement; possible cognitive deficits; "modifying" patients' convictions in their beliefs; the potential inappropriateness of a time-limited approach; emotional difficulties such as depression; changes in the effectiveness of current medication; and external factors, such as the level of stress in the home environment (Tarrier *et al.,* 1993).

Potential adaptations will, therefore, include a specific emphasis on establishing and maintaining engagement throughout the course of therapy. Extra time will be given to the formulation of an individual's problems and the tailoring of techniques to meet an individual's needs. Flexibility about the number, timing and context of therapeutic sessions is also allowed (Fowler *et al.,* 1995). These adaptations do not have a purely functional purpose but start to raise key implications of the term "management."

Implications of the term "management"

Fowler, Garety and Kuipers (1995) have described cognitive behaviour therapy for psychosis as "[a] pragmatic approach focusing on doing what is possible" (p.13). This emphasis on pragmatism stands as a point of contrast with Freud's earlier "[warning] against accepting schizophrenics for treatment on the basis of their *incurability*" (1917, p.447, cited by Perris, 1989, p.59) and demonstrates the shift away from the purely biological model of psychosis.

The notion of "managing" a psychotic disorder is double-edged. On the one hand, it points to the limitations of "treating" psychosis: psychosis can not be "cured." On the other, it provides a new and realistic framework in which the problems of people with psychosis can be assessed and intervened upon. This framework is underpinned by terms which are scattered throughout the literature on cognitive behaviour therapy for a psychotic disorder. To name but a few: modification, reduction, increase/decrease, regulation and self-regulation, control, alleviation and prevention of relapse. From these terms it is possible to infer not only some of the cognitive-behavioural techniques employed in the management of a psychotic disorder but also the aims of these techniques.

Aims of Cognitive Behaviour Therapy for Psychosis

The role of cognitive behaviour therapy in the management of a psychotic disorder can be seen as defined by the aims of the therapy itself. Perhaps the most important starting point of these aims is the finding that, despite advances in drug treatments, psychotic disorders "[remain] ... debilitating" (Tarrier, Yusupoff, Kinney, McGarthy, Gledhill, Haddock and Morris, 1998, p.303). This finding emphasizes the role of cognitive behaviour therapy in psychosis in the context of a multidisciplinary team. The term "role" is crucial because it is indicative of the fact that cognitive behaviour therapy forms only part of the management of a psychotic disorder.

The aims of cognitive behaviour therapy at once vary and remain consistent between different groups of researchers. More importantly, these aims are dependent upon individual case formulations (Garety, Kuipers, Fowler, Chamberlain and Dunn, 1994). It is not the purpose of this essay to provide a comprehensive overview of aims stated by different studies. A citation of the aims of Garety's group will, however, serve to demonstrate the diverse and challenging role with which cognitive behaviour therapy is faced in the management of a psychotic disorder.

Garety's group have consistently defined their aims as belonging to one of three broad categories: "(a) to reduce the distress and interference that arises from the experience of chronic psychotic symptomatology; (b) to increase the understanding of psychotic disorders and to foster motivation to engage in self-regulative behaviours; (c) to reduce the occurrence of dysfunctional emotions and self-defeating behaviours arising from a sense of hopelessness, negative self-image or perceived psychological distress" (Garety *et al.*, 1994).

These aims can be summarized as a reduction in psychotic symptoms; emotional disturbance; risk of relapse; and social disability. In this way, they collectively address biological, psychological, emotional and behavioural factors and can be located in the vulnerability-stress framework. How these aims are addressed is a consequence of each individual case assessment and formulation.

Assessment and Formulation

The process of assessment and formulation revisits issues of adaptability and flexibility in the role of cognitive behaviour therapy for managing a psychotic disorder. The key principle here, though, is that of "collaborative empiricism" and the importance of sharing the formulation with the patient (e.g. Perris, 1989, p. 118).

While several authors have set out to define different phases of the assessment process (e.g. Chadwick *et al.,*1996; Fowler *et al.,* 1995), it is consistently acknowledged that "[the] whole process is lengthy and dynamic, with stages being recycled, depending on progress with a problem, tackling a new problem and so on" (Chadwick *et al.,* 1996, p.27).

In 1998, the formulation process was described as "understanding the inexplicable" (Fowler, Garety and Kuipers, 1998). The phrase highlights the importance of the role in cognitive behaviour therapy to infer meaning from an individual's response to and appraisal of his or her psychotic experiences. It suggests, furthermore, that a failure to formulate could result in a failure to address the management of an individual's problems. This point is reinforced when we consider Fowler, Garety and Kuiper's argument that "a key skill of cognitive behaviour therapy is the ability to apply psychological theory to the attempt to make sense of the problems of an individual case" (1995, p.73).

Having said this, there is no such thing as one formulation. Formulations are, by definition, guided by different conceptual orientations of different research practitioners and different emphases these practitioners place on different techniques. Some of these different emphases will be considered next.

Different Emphases within Cognitive Behaviour Therapy

The Omnipotence of Voices

The concept of the "omnipotence" of voices was developed by Chadwick and Birchwood in 1994; revised by Chadwick, Birchwood and Trower in 1996; and again by Beck-Sander, Birchwood and Chadwick in 1997. These papers chart a development in the authors' proposals about the relationship between "the degree of distress and problem behaviour [associated with voices]" and the beliefs about those voices (Chadwick and Birchwood, 1994, p.191). In this way, the role of cognitive behaviour therapy in the management of a psychotic disorder is defined as the management of positive psychotic symptoms with a view to reducing distress and problem behaviour.

In 1994, Chadwick and Birchwood found evidence for their hypothesis that the degree to which patients accepted and complied with voices' commands would be "mediated by beliefs about the voices' power, authority and consequences of disobedience" (p.190). An analysis of the content of these beliefs revealed that voices were "believed to be either malevolent or benevolent" (p.190). The authors then tested the hypothesis that "the weakening or loss of these beliefs [would] ease distress and facilitate a wide range of more adaptive coping strategies" (p.195). They did this through classic cognitive behavioural techniques of belief modification and reality testing.

Chadwick and Birchwood stress the "fear and reverence" (p.199) with which patients hold their voices and in this way give the role of belief modification a particular emphasis: beliefs are challenged from a perspective of "omnipotence" and not from the standpoint of beliefs *per se.* Further research is needed to identify whether techniques of "belief modification" which focus purely on the modification of beliefs about voices' omnipotence are more or less effective than belief modification in general.

In 1994, Chadwick *et al.* reported that the cognitive model was weakest in accounting for patients' compliance with commands: "the severity of the command, and not beliefs, was the single most important determinant of compliance" (p.200). In 1997, however, another study reported that participants "were more likely to comply with *benevolent* [my italics] voices making innocuous or severe commands" (Beck-Sander, Birchwood and Chadwick, 1997, p.146). The authors argue that this finding does not contradict that reported in 1994 but instead "provides additional information" (p.146). They hypothesize that the reason participants do not respond to a "benevolent" voice which gives a command to self-harm is because a "benevolent" voice is "at odds" with the severity of the command (p.146).

The argument has much intuitive appeal but lacks empirical support. It is possible, furthermore, that a reason why the findings of Birchwood *et al.* have shifted and become theoretically ambivalent is that their malevolence/ benevolence distinction is too unitary and fails to take into account other categories which are informing patients' beliefs about voices also. This suggestion is supported by Close and Garety's failure to replicate Birchwood *et al's* malevolent/ benevolent distinction (1998).

The research suggests the efficacy of reducing symptoms with a view to reducing distress and problem behaviour. The increase of participants in these studies (from twenty-six in 1994 to thirty-five in 1997) is encouraging in terms of evaluating the validity of the latter study's statistical findings. The research, however, needs to be replicated, ideally with a control group and a randomized sample of participants.

Coping Strategy Enhancement and Problem Solving

Tarrier and his colleagues compared the efficacy of two cognitive behavioural approaches, "coping strategy enhancement" (CSE) and "problem solving" (PS), and reported equivocal results (Tarrier *et al.,* 1993). Contrary to their hypothesis which predicted the greater efficacy of "coping strategy enhancement", both treatments were found to have some effect. This finding led the authors to ask, "would [the two treatments] be more effective in combination?" (p.530). Consequently, they developed a dual treatment (CSE and PS) called "intensive cognitive behaviour therapy" (Tarrier *et al.*, 1998).

The study has many strengths. As a randomized, controlled trial with longitudinal data, it marks a significant improvement in outcome studies of cognitive behaviour therapy in terms of their research design (contrast single case designs, e.g. Haddock, Bentall and Slade, 1993). Furthermore, by combining two cognitive behavioural treatments into one, it demonstrates how the role of cognitive behaviour therapy in the management of a psychotic disorder shifts in the context of new findings. A disadvantage, however, is that "medication is not controlled for in the study" (p.306).

The treatment's overall aim is to modify those environmental factors identified as maintaining psychotic symptomatology and any emotional consequences. This modification is predicted to bring about a reduction in symptoms and any accompanying distress. The term "modification" once again informs the role of cognitive behaviour therapy in the management of a psychotic disorder. Where previously, though, this management concerned the patient's internal world (beliefs about voices etc.), "modification" in this context has a new frame of reference: external, environmental factors, as identified by the vulnerability-stress model. The aims of this "intensive cognitive behaviour therapy", as specified within each of its cognitive behavioural "components" (p.304), differentiate the role of cognitive behavioural management strategies from those of other management strategies applied in the study. The study involved three interventions. The first of these, "intensive cognitive behaviour therapy plus routine care", had three components: "coping strategy enhancement, aimed at teaching patients specific methods of coping with symptoms; training in problem solving; and strategies to reduce risk of relapse" (Tarrier *et al.,* 1998, p.304). By definition, this "intensive" therapy has broadened the remit of its role in the management of psychosis. The study reported that patients in this group "showed the greatest improvement in positive symptoms" (p.306).

The second intervention, "supportive counselling plus routine care" "aimed to provide emotional support through the development of a supportive relationship fostering rapport and unconditional regard for the patient." The control group, "routine care" entailed "standard psychiatric management by the clinical team with medication and monitoring outpatient follow-up and the care programme approach" (Tarrier *et al.,* 1998, p.304). These two groups showed less improvement than the first intervention, though the "routine care alone" group was the least effective.

While the study represents a broadening of cognitive behaviour therapy in one sense, in another sense this focus is narrowed by its singular objective: the reduction of positive psychotic symptoms in patients with chronic schizophrenia. It is not, therefore, possible to infer from the study's outcome measures the impact that a decrease in positive symptoms has on patients' lives. While the techniques informing the management have been broadened, the concept of management has in fact been narrowed down to the reduction in symptoms.

The disadvantage of this specific focus is that it is not possible to infer to what extent a decrease in positive psychotic symptoms impacts on other areas of patients' lives, for example, their mood. It should, however, be pointed out that this "impact" can be deduced from the finding that in the three month period following treatment in both the cognitive behaviour therapy and supportive counselling groups, "there were no relapses." Unfortunately, however, this follow-up data is only three months and does not differentiate the efficacy of cognitive behaviour and counselling therapies in terms of relapse.

This disadvantage seems pronounced in the light of the authors' theoretical orientation which places emphasis on the "significance and meaning" of symptoms which, they argue, occur "only when there is an accompanying emotional reaction" (Chadwick *et al.,* 1996, p.88). Though described as a "cognitive" approach, its model does not appear to take into account "people's attempt to make sense of [psychotic experiences]" (Chadwick and Birchwood, 1994, p.200).

Focusing or Distraction?

Haddock, Bentall and Slade have focused on the comparative efficacy of two cognitive-behavioural interventions, distraction and focusing (1996). These two approaches are based on competing premises: the first assumes that the more patients are able to distract themselves from their voices, the greater the possibility that the frequency of their voices will decline. The focusing approach, by contrast, posits that, by gradually focusing on the physical characteristics of voices, the content, related thoughts, patients' beliefs and their meaning and the frequency of these voices would decline. Despite their differences, both approaches consider "the role of cognitive behaviour therapy in the management of a psychotic disorder" in terms of reducing psychotic symptoms.

A strength of the study lies in the aspects of the hallucinations which the authors chose to measure: that is, the frequency of the hallucinations as well as the potentially disruptive effect to life caused by the voices. The results demonstrated "no significant group differences or significant interactions for any of the variables"

(p. 56) at the end of treatment and again at follow-up. Instead, improvements were found in both groups and again at short-term follow- up. While these results are contrary to the hypothesis, they suggest new possibilities of treatment and research: namely, the potentially increased benefit of training patients in two types of therapy (i.e. focusing and distraction), as did Tarrier *et al.* (1998). Naturally this "intensive" management strategy would have financial implications.

A further strength of the study was the attempt it made to maximize the "generalisability of the distraction skills acquired by patients during the course of treatment into their everyday lives" (p.57). The authors suggest that this attempt may have contributed to the maintenance of benefits at follow-up, though unfortunately this was not evaluated. This possibility, however, suggests the advantage of distraction techniques over focusing techniques, particularly if a dual intervention were not financially feasible. Given that part of the role of cognitive behaviour therapy in the management of a psychotic disorder is its prevention of "relapse", there appears to be mileage in providing patients with skills they can take away with them. Distraction techniques need not, however, be assigned randomly but formulated to fit with individual needs and abilities.

Self-Esteem

Research on self-esteem in patients suffering from a psychotic disorder has led to the development of two alternative cognitive models. The first of these models has much in common with psychoanalytic theories of self-esteem (e.g.Winters and Neale,1983, cited by Bentall and Kinderman, 1998) and hypothesizes that "patients' delusional attributions are a dysfunctional mechanism for the maintenance of a positive perception of the self" (Bentall and Kinderman, 1998, p.128).

Bentall and Kinderman's model links self-esteem to patients' attributional style and is founded on Higgins' (1987) Self-Discrepancy Theory. SDT proposes that individuals tend to attribute negative events to external causes and that, as a result, fail to discriminate accurately between (a) the "actual"/ "ideal"/ and "ought" self representations and (b) between self-perceptions and how others view the self

(Bentall and Kinderman, 1998, p.129). Bentall and Kinderman use the model to account for the hypothesis that "persecutory delusions reflect a tendency to avoid blaming the self for bad events in the environment and that this serves to defend against underlying low self-esteem reaching consciousness" (Bentall, 1994, cited by Freeman *et al.,* 1998). The implications of this model for the role of cognitive behaviour therapy in the management of a psychotic disorder are as follows: "If delusions reflect abnormal attributions...changing patients' attributions should result in a reduction in paranoid symptomatology" (Bentall and Kinderman, 1998, p.136). In this way, the authors infer that, by reducing paranoid delusions, self-esteem will increase.

The second model challenges its predecessor by offering an alternative view that self-esteem "can best be understood in terms of processes identified in non-psychotic disorders such as depression" (Freeman *et al.,* 1998, p.425). Supporting this, these authors have found that: "[for] individuals with persecutory beliefs, total self-esteem was found to correlate with measures of mood and social functioning but not with delusional conviction" (Freeman *et al.,* 1998, p.425).

Freeman and his colleagues do not propose how their findings might impact on cognitive-behavioural interventions. At this stage, therefore, without further research, we can only infer them. It would seem that, given the correlation between self-esteem and mood/social functioning, if part of the role of cognitive behaviour therapy is to improve self-esteem, the method of intervention would need reviewing. According to Freeman and his colleagues' model of self-esteem in psychosis, the modification of patients' attributions about their delusions will not affect levels of self-esteem. For self-esteem to improve, it would be necessary to improve mood and social functioning as independent factors and not as functions of paranoid symptomatology.

An advantage of Freeman and his colleagues' model is that, by locating the problems of people with psychosis (such as low self-esteem and depression) on a normal continuum and suggesting that there is no link between persecutory delusions and depression, the depressive symptomatology is by definition "decatastophized." It would be an interesting opening in research to test whether, by "normalizing" depression and social disability explicitly with clients, this would have the effect of increasing self-esteem.

At present, Freeman and his colleagues' study has the advantage that it is a large randomized controlled trial whereas the studies reviewed and reported by Bentall and Kinderman (1998) were either single case designs (e.g. Haddock, Bentall and Slade, 1993) or lacked control groups (e.g. Haddock, Bentall and Slade, 1996). Both Freeman and his colleagues' and Bentall and Kinderman's findings need further replication (Close and Garety, 1998).

"The Normalizing Approach"

This approach seeks to "decatastrophize" the psychiatric diagnosis of schizophrenia by developing, in collaboration with patients, a rationale to explain the emergence of his/ her symptoms (Turkington and Kingdon, 1996). The role of cognitive-behaviour therapy in the management of a psychotic disorder is, in this context, to remove the "not knowing, just fearing" element of suffering from a psychotic disorder (Kingdon and Turkington, 1994, p.9).

The vulnerability-stress model (e.g. Zubin and Spring, 1977, cited by Turkington and Kingdon, 1998) is discussed explicitly with the patient and used as a framework in which to formulate hypotheses about stressors which may have contributed to the onset of symptoms. In addition, patients are informed about other situations in which people might become psychotic: for example, as a result of sleep or sensory deprivation. In this way, "the patient is led towards an understanding" of how the symptoms may have occurred and, furthermore, "of the possibility that any one stressed in certain ways could become psychotic" (p.106).

Turkington and Kingdon perceive the role of "normalizing" a patient's psychotic experience as "fundamental to issues of recovery, relapse, compliance and coping" (p.103). These issues all inform different stages of managing a psychotic disorder.

"Normalizing", however, is not an end in itself. As their study demonstrated, it is a "crucial first step in the relationship with the patient" (Kingdon and Turkington, 1991, cited by Turkington and Kingdon, 1996, p.103). Once the patient is engaged in therapy, a range of cognitive behavioural techniques can be implemented "to reduce distress and improve compliance" (1996, p.103).

Other studies have also drawn attention to the process of normalizing an individual's experience of schizophrenia. In these studies, however, the process is given implicit rather than explicit focus. One study, for example, which looked at the psychological treatment of chronic auditory hallucinations, concluded that: "An important component of treatment seemed to be the implicit normalization of the patient's hallucinatory experiences" (Haddock, Bentall and Slade, 1993, p.344). Similarly, Chadwick, Birchwood and Trower have commented that: "to this extent our cognitive approach may be described as seeking to normalize an individual's experience" (1996, p.176).

While the concept of normalizing is not exclusive to Kingdon and Turkington's approach, by making this process the starting point of their therapy, the role of managing a psychotic disorder takes on a different emphasis. Its aim is first to alter the *quality* of the psychotic experience (by rendering it from catastrophic to non-catastrophic) before it seeks to alter what could be seen as the *quantity* of an experience through a variety of cognitive behavioural techniques (for example, the reduction of conviction in delusions through belief modification).

Of course, this point as it stands is exaggerated as it does not take into account the equally important emphasis on engagement and assessment across the board of cognitive behavioural studies. It would, however, be interesting to examine to what extent a patient's experience is decatastrophized by virtue of the assessment and engagement process *per se* by contrast with placing specific emphasis on "normalization."

DISCUSSION

A discussion of the role of cognitive behaviour therapy in the management of a psychotic disorder has revealed the diversity of this "management." This diversity is in part informed by the range of cognitive behavioural techniques which have been developed and adapted for the purpose of managing a psychotic disorder. For example: belief modification (e.g. Chadwick and Lowe, 1990); coping strategy enhancement and problem solving (e.g. Tarrier *et al.,* 1993); the concept of "normalizing" a patient's experience of psychosis (e.g. Kingdon and Turkington, 1994); and "focusing" (Haddock *et al.*, 1996).

This range reflects the innovative and exciting developments which have evolved within cognitive behaviour therapy for psychosis. An evaluation of their efficacy is still in its early stages and encouraging results require replication (Close and Garety, 1998). Nonetheless, it has been pointed out that outcome studies of cognitive behaviour therapy for psychosis have progressed from single case designs (e.g. Haddock *et al.,* 1993) to large randomized controlled trials (e.g. Tarrier *et al.,* 1998 and Freeman *et al.,* 1998).

These developments may be seen as a necessary evolution of "management" techniques to cope with the complex and heterogeneous nature of psychotic disorders. I have sought to illustrate how this evolution has occurred since conceptualizations of psychotic disorders have shifted away from the notion that psychosis is a distinct disease entity (Fowler *et al.,* 1995) to a theoretical framework which incorporates biological, psychological and social factors which may contribute to the onset of a psychotic disorder. These factors were discussed in terms of the vulnerability-stress model (e.g. Zubin and Spring, 1977, cited by Fowler *et al.,* 1995).

It was shown how the vulnerability-stress model guides the formulation of the difficulties associated with people with a psychotic disorder. These difficulties represent, to some extent, the targets for treatment and have been summarized as: psychotic symptoms; emotional disturbance and social disability (Fowler *et al.,* 1995). They also include environmental stresses (Neuchterlein and Subotnik, 1998, p.37).

The "management" of these difficulties poses ethical concerns which are not addressed by earlier biological models of psychosis. These concerns are, in short: which aspects of a psychotic disorder is it appropriate to manage and which aspects is it not? These ethical concerns have been raised implicitly through a discussion of the difference between eliminating and reappraising symptoms. The concerns may be highlighted explicitly, however, by way of example.

In the context of "normalizing" a patient's psychotic experiences, the importance of "[being] clear about what is being normalized" has been highlighted (Chadwick *et al.*, 1996, p.176). A distinction is drawn between the appropriateness of normalizing "psychological processes" by contrast with normalizing "content" (p.176). The distinction highlights a principle central to the role of cognitive behaviour therapy in the management of a psychotic disorder: the individual's appraisal of his or her symptoms take precedence over the symptoms as an end in themselves.

In summary, the "role" of cognitive behaviour therapy has been shown to find definition in the context of a multidisciplinary team but also as a treatment in its own right where positive psychotic symptomatology has proven resistant to medication. It has been argued that the notion of "managing" a psychotic disorder has wide-ranging implications and that these are informed by cognitive theories of the heterogeneous nature of a psychotic disorder. These implications will continue to be revised as the efficacy of cognitive behavioural interventions is further evaluated in the future.

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People with Learning Disabilities Essay

Year I

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What is an autistic spectrum disorder (ASD) and what aetiological models have contributed to our understanding of autism? To what extent have these models guided intervention practices?

INTRODUCTION

Autism is a pervasive developmental disorder which is usually evident from early childhood (Rutter, 1999). Behaviourally defined, it is characterized by the same triad of impairments (socialization, communication and imagination) essential to an autistic spectrum disorder (see below), and these must be present for a diagnosis to be made (Wing and Gould, 1979). For diagnostic purposes, the triad must be accompanied by repetitive, stereotyped activities which may be simple or complex, and may involve objects (e.g. intense attachment to particular items), routines (e.g. insistence on a particular route to school) or verbal/abstract repetitive activities (e.g. fascination with certain topics) (Wing, 1992).

A number of other features are also common in autistic individuals but are not necessary or sufficient for a diagnosis to be made (Wing, 1992). For example, learning disabilities, language problems and islets of ability. Researchers who wish to provide a causal account of autism must provide a *theory* or *model* which can explain *all* the core features of autism as well as other characteristics (e.g. islets of ability) which frequently present as part of the disorder (Happe, 1994a). This essay will be considering a range of aetiological theories about autism which inform one widely cited model of autism's aetiology, that of "the final common pathway."

This model postulates that multiple causes of autism (e.g. genetic, organic and viral) all meet at a "final common pathway" (e.g. Aitken, 1991, cited by Happe, 1994a). It is based on the premise that there is no single cause to autism and that any one "hazard" (Frith, 1989) - for example, faulty genes or metabolic disorder - may potentially cause a "developmental arrest of a critical system at a critical point in time" (Frith, 1989). This causes lasting damage, either mild or severe, to neural development; and hypothetically results in a single cognitive deficit, leading to the triad of impairments (Frith, 1991).

This essay will consider the two key types of theories - biological and cognitive - which are postulated by the "final common pathway" model and which have contributed to our understanding of autism's aetiology. It will then consider the extent to which these aetiological models have guided intervention practices. Firstly, though, the term "autistic spectrum disorder" will be discussed.

Autistic spectrum disorder

The concept of an "autistic spectrum disorder" arose as a result of an epidemiological study carried out by Wing and Gould (1979) on children with special needs. They found that features which fulfilled the diagnostic criteria for autistic disorders formed a significant cluster. This cluster was characterized by three main areas of impairment: reciprocal socialization, communication, and imagination/ behaviour (namely, a narrow and repetitive pattern of behaviour) (Wing, 1997a). These three areas were coined "the triad of impairments" (Wing and Gould, 1979).

It was further found that a large number of children in the study manifesting this triad did not fit into neat diagnostic categories (Wing and Gould, 1979). It was suggested, therefore, that the whole range of autistic conditions, of which the triad forms the basis, should be referred to as "the autistic continuum", later known as "the autistic spectrum" (Wing, 1997b). This concept of a spectrum permits a dimensional view of autism - popular today - whose three core impairments are seen as manifested "in different ways and to different degrees" (Myhr, 1998). Social impairment, for example, has been found to occur at all levels of IQ (Wing and Gould, 1979).

The term "ASD" highlights, then, the heterogeneity of the population of autism (Schreibman, 1997). It both includes and goes beyond a "nuclear" concept of autism as defined by Leo Kanner (1943, cited by Wing, 1997b) and Hans Asperger (1979, cited by Happe, 1994a). Essentially biological in origin, it incorporates the idea that, while one child in a family may exhibit "classic autism", other children in the family may be affected to a lesser degree (Bailey, Phillips and Rutter, 1996). Key to the term is the concept "spectrum."

Attempts to define the limits of this spectrum continue to be modest, and the identification of specific syndromes within the autistic spectrum is an onerous task (Wing, 1997a). Recently, for example, Asperger's Syndrome has been given an independent category in *Diagnostic and Statistical Manual of Diseases - IV* (Kugler, 1998). While some researchers and clinicians have endorsed the inclusion of this category (e.g. Klin, 1993, cited by Kugler, 1998), others consider the inclusion unnecessary: they place Asperger's Syndrome on the autistic spectrum and so perceive it to be the equivalent to high functioning or mild autism (Gillberg, 1998).

Wing (1997a) has attempted to short-circuit this difficulty through the development of a subgrouping system which relies wholly on describing the *type* of social impairment. These subgroups are: the "aloof" group, the "passive" group, the "active but odd group" (which takes social initiatives but these are inappropriate) and "loners." Consistent with the spectrum idea, these are not fixed groupings. An individual can shift between groups during the course of his or her development (Wing, 1997a). It would seem that the complexity of the term "ASD" resonates in the wide-ranging aetiological models of autism and interventions developed for people with autism - to be discussed.

AETIOLOGICAL MODELS OF AUTISM

"Aetiology" refers to the study of the causes underlying a disease or disorder (Raber, 1995). A "model" is sometimes called a "mini theory" and refers to the illustration of a pattern of relationships observed in data or nature. Its purpose is to make predictions about something, to guide and to develop theory and research (Raber, 1995). In this essay, the terms "model" and "theory" will at times be used interchangeably although the "theories" to be discussed are seen as belonging to the broader model, that of the "final common pathway."

The exact aetiology of autism is currently unknown (Whiteley, Rogers and Shattock, 1998). A range of aetiological models have nonetheless contributed to our understanding of autism. Most of these have sought to offer a causal explanation of the biologically-caused deficit responsible for the triad of impairments associated with autism (Happe, 1994b). These models are required to link behavioural symptoms with assumed biological origins (Schopler and Mesibov, 1994). The psychogenic theory of autism is an early and notable exception to this and will be considered first.

The psychogenic theory of autism

The psychogenic (or "refrigerator mother") theory of autism was first postulated by Bruno Bettelheim (1967). It held that autism was a result of children's adverse reaction to hostile parenting. The theory was adopted by Kanner who, undercutting his earlier biological model of autism's aetiology, reported mild autistic characteristics in the parents of his patients (Kanner, 1943, cited by Happe, 1994a). The theory has received no empirical support and was subsequently replaced by Kanner's original hypothesis: that autism is of organic aetiology. Nonetheless its negative insinuations still resonate with some parents today (Happe, 1994a).

Biological Models

By contrast with the psychogenic theory of autism, there is increasing empirical evidence to suggest an organic explanation of autism, leading to a series of biological models. Evidence has been found in genetic studies of monozygotic and dizygotic twins (Bailey, Le Couteur, Gottesman, Bolton, Simonoff, Yuzda and Rutter, 1995) whose findings demonstrated a concordance rate for monozygotic twins of between 36% and 91%, by contrast with same sex dizygotic twins who showed zero concordance. This finding replicated that of an earlier study whose sample size was smaller (Folstein and Rutter,1977, cited by Rutter, 1999). This genetic bias was originally overlooked as the probability of autism occurring in a sibling is low in absolute, though not in relative, terms (Smalley, Asarnow, Spence, 1988, cited by Happe and Frith, 1996).

Different types of brain abnormality have also been implicated in the aetiology of autism. Steffenburg (1991, cited by Happe, 1994a), for example, reported a nearly 90% incidence of brain damage or dysfunction in a sample of 35 autistic children and 17 autistic-like children. Research findings have also suggested that when autism and a medical condition which is damaging to the nervous system coincide, this collision may be the cause of autism (Baron-Cohen and Bolton, 1993). Medical conditions include genetic influences (e.g. Fragile X Syndrome), viral infections (e.g. congenital rubella), metabolic conditions and congenital anomaly syndromes. Research has also indicated that pre and perinatal complications could contribute to the aetiology of autism (e.g. certain vaccines), although the incidence of this may be small (Stubbs, Ash and Williams, 1984, cited by Happe and Frith, 1996).

Anatomical studies have produced equivocal findings (Happe and Frith, 1996): for example, results from MRI studies and EEG recordings. While EEG abnormalities have been reported in approximately 50% of individuals with autism, the range across studies is varied (Minshew, 1991, cited by Bailey, Phillips and Rutter, 1996). One conclusion is that, although developmental cerebellar abnormalities are possibly causal in autism, it is more probable that they are but one consequence of abnormal brain development (Bailey *et al.,* 1996).

Cognitive Models

These have tended to focus on social impairment and the range of models can not all be discussed here. Theoretical perspectives on social impairment include: primacy of attention deficit, arousal deficit, sensory deficit, pain/reward system abnormalities, memory management deficit, executive function deficit, information processing deficit, weak central coherence faculty, theory of mind models, and Hobson's I-Thou Intersubjectivity model (see Waterhouse and Fein, 1997 for a review). These models attempt to account for the aetiology of autism through the primacy of a cognitive deficit but that no one account is all-encompassing. Three main theories will be discussed here: theory of mind deficits (ToM), executive function deficits (EF) and weak central coherence (WCC).

Theory of Mind Deficits

Theory of mind impairment stems from the hypothesis that the triad of impairments in autism can be accounted for in terms of a single cognitive deficit: namely, that individuals with autism will lack a theory of mind (Baron-Cohen, Leslie and Frith, 1986). Leslie (1987, cited by Happe, 1994b) proposed that humans are equipped at birth with an innate cognitive mechanism which allows individuals "to attribute independent mental states to self and others in order to explain and predict behaviour" (Happe, 1994b). According to Leslie, in order for a child to be able to distinguish between pretence and real world knowledge, he or she must have two forms of representation: *primary representations* of things as they actually are and *metarepresentations* which encapsulate the mode of pretending (cited by Happe, 1994b).

This theory has generated much research. The first empirical study of its kind was the "Sally-Ann" experiment (Baron-Cohen, Leslie and Frith, 1985). The performances of autistic children, normal four-year olds and Down's Syndrome children on a test of false belief were compared. Participants' ability to predict a doll's false belief was tested by showing the child a doll (Sally) which hides a marble in a basket before leaving the room. Once Sally has left the room, another doll (Ann) moves the marble to her own box. The child is asked a series of questions, for example, "Where will Sally look for her marble?" Findings revealed that 80% of autistic participants responded incorrectly. The finding was interpreted to suggest a cognitive deficit specific to autism, concerning insight into others' thinking (Happe, 1994b). This deficit has been conceptualized further and termed "mind-blindness" (Baron-Cohen, 1995).

This finding has been replicated both on the same and a variety of related tasks (Happe, 1994b). Studies of the ToM hypothesis then developed to include other aspects of the ability to mentalize and to understand "belief." Attwood, Frith and Hermelin (1988), for example, found that children with autism, unlike those with learning disabilities, did not use gestures that tend to reflect mental states (e.g. expressions of embarrassment) but that their use of manipulative gestures (e.g. signals to come) was similar to that of controls. This was taken as further evidence for a specific mentalizing deficit in autism.

Empirical studies investigating the ToM hypothesis have developed considerably over the past decade. The range of studies includes: investigations of how a ToM deficit would limit children's understanding of mental functions and entities (e.g. Baron-Cohen, 1989a); and how "mind-blindness" would render it awkward for autistic children to understand the distinction between mental and physical entities (Baron-Cohen, 1989b). Later studies have examined children with autism's understanding of the relationship between beliefs and emotions. Baron-Cohen, Spitz and Cross (1993), for example, found that, although children with autism could distinguish emotions such as "happy" and "sad" in photographs, they mistook belief-based emotions (e.g. surprise) for non-cognitive states (e.g. yawning) a significant number of times (Baron-Cohen, Spitz and Cross, 1993).

Baron-Cohen (1995) has argued that empirical evidence for a ToM deficit in autism is sound. Limitations, however, of the ToM hypothesis have often been noted and can be attributed to three broad categories (Happe, 1994b). The first frequently cited limitation questions the generalizability of the false belief task: that is, "does failure on false-belief tasks reflect an inability to mentalize?" (Happe, 1994b). Some researchers (see Happe, 1994b) have argued that failure on false-belief tasks is a result of pragmatic or grammatical difficulties. As Happe (1994b) has pointed out, however, such criticisms are unfounded in the light of rigorously conducted experiments which have compared children with autism's ability to manipulate sabotage with their inability to be "deceitful" (Sodian and Frith, 1992).

An alternative hypothesis which seeks to undermine ToM postulates that the autistic child is unable "to disengage from the object" (Hughes and Russell, 1993) due to a particular problem with being overwhelmed by a real object's perceptual salience. This was tested using "the windows task" (Hughes and Russell, 1993). Researchers reported that their findings supported their hypothesis. It has been pointed out, however, that this interpretation is only valid if the two tasks used in the experiment carried equal weight in terms of difficulty, something which has been contested (Happe, 1994b).

The second main limitation of the ToM hypothesis is two-fold: first, given that some children with autism pass ToM tests, "mind-blindness" does not appear to be universal in autism; and secondly, certain authors have maintained (e.g. Hobson, 1993) that the ToM deficit is a secondary, as opposed to primary, deficit. In response to the first of these criticisms, further experiments were conducted which tested more complex, "second order" ToM abilities. Several studies found that most autistic individuals years (e.g. Holroyd and Baron-Cohen, 1993). Baron-Cohen (1989a) consequently suggested a "delay hypothesis": the idea that people with autism's mentalizing ability is *delayed* as opposed to *lacking*.

A final limitation of the ToM account is that, while it goes a long way to explaining the triad of impairments, the presenting features of autism extend beyond these core impairments. The theory fails to account, for example, for the often restricted interests of people with autism, specific abilities, and a preoccupation with parts of objects (Frith and Happe, 1994). The theory of weak central coherence can be seen to address this particular shortcoming of ToM (Frith and Happe, 1994).

Weak Central Coherence

Frith (1989) has proposed that central to human information processing is the ability to integrate information at different levels: this in turn allows meaning to be attributed to different contexts. According to Frith, this ability is lacking in individuals with autism. These individuals lack, therefore, a "central coherence", an omission which accounts for both their islets of ability (as demonstrated, for example, by their unusually strong performance on tasks such as memory for unrelated items) and for specific weaknesses on certain tasks (e.g. memory for sentences) (Frith and Happe, 1994). In summary, this weak central coherence permits individuals with autism to excel on tasks which require a "piece-meal" approach to information processing, but to fall short on tasks which require semantic, high-level processing.

Shah and Frith (1993) proposed that the superior skills demonstrated by individuals with autism on the Block Design subtest of the Wechsler Intelligence Scales (by comparison with other subtests and age-matched controls) could be indicative of WCC and not of superior or intact general spatial abilities. They presented autistic participants and matched controls (by non-verbal IQ) with a Block Design task. In the first instance, individuals were presented with whole designs; in the second instance, with pre-segmented designs. They found that controls performed better in the *pre-segmented design* condition and that autistic individuals performed better in the *whole design* condition. It was concluded that superior performance on the task could not be explained by superior general spatial skills because general spatial factors (e.g. block orientation) showed normal effects in autistic participants.

The weak central coherence theory of autism is not offered as an alternative aetiological model of autism but rather as one which will help account for autistic features left unexplained by ToM, in particular, islets of ability manifested by the talented minority (Frith and Happe, 1994). This position marks a departure from the earlier claim that WCC could account for ToM deficits which in turn explained pragmatic and social deficits. Current emphasis is placed on the fact that the ToM explanation does not adequately explain autism in all its forms, and further research is needed to investigate the relationship between ToM deficits and WCC (Bailey *et al.*, 1996).

Executive Function Deficits

It has been hypothesized that executive function (EF) is impaired in autism. Executive function refers to the ability to plan ahead; to prioritize tasks; and to foresee and consider the consequences of ones' behaviour (Rapin, 1997). The observation was made that many features of autism were similar to those exhibited by patients with frontal lobe damage (e.g. rigidity and perseveration) (Frith, 1996). It was further observed that the relationship between autism and frontal lobe damage was not two-way: that is, patients with frontal lobe lesions are not autistic (Frith, 1996). As a result, it was hypothesized that autism resulted from localized damage to the frontal lobes (Bishop, 1993).

Several studies have investigated this hypothesis using neuropsychological batteries of tests. Both individuals with frontal lobe damage (Shallice, 1988, cited by Baron-Cohen and Swettenham, 1997) and individuals with autism have been found to fail on these tests (Hughes and Russell, 1993). Prior and Hoffmann (1990, cited by Bishop, 1993), for example, reported that autistic children of normal nonverbal intelligence took significantly longer on a maze-learning task (which taps planning ability) and made three times as many mistakes as control children.

Ozonoff, Pennington and Rogers (1991) found that the autistic group of individuals was less proficient than the control group on the Tower of Hanoi task, and made a greater number of perseverative errors on the Wisconsin Card Sorting Task (WCST). As there were no significant group discrepancies between the WCST number of categories and number of errors, it was concluded that the difficulty lay in changing cognitive set as opposed to comprehending task demands.

The EF theory of autism does not replace ToM but potentially explains a number of features not addressed by ToM (Frith, 1996). The advancement of the theory relies on a more specific account of EF through a systematic comparison of autistic individuals with other non autistic groups (Bishop,1993). It remains to be seen precisely which components of EF are impaired (Frith, 1996). Furthermore, some studies have suggested that social cognition and executive function deficits of autism are not necessarily independent areas of impairment (e.g. Ozonoff, 1995, cited by Prior and Ozonoff, 1998). For this reason, the linking of ToM and EF could be promising for future research (Prior and Ozonoff, 1998).

Other aetiological models

Hobson (1993) proposed that the autistic child fails to experience normal I-Thou information processing and so is unable to (i) establish "normal social intersubjectivity", (ii) develop a theory of mind of others, (iii) form normal linguistic or social skills (Waterhouse and Fein, 1997). It has also been argued that autism results from an impairment in cognitive or affective mechanisms which develop prior to the ability to pretend or mentalize (Happe, 1994b). Examples of these impairments include damage to innate systems of joint attention (Charman, 1998), imitation and emotion-recognition. Social data is in turn not available to the child. This affects his or her ability to organize social information which gives rise to later mind-reading deficits (Rogers and Pennington, 1991). Baron-Cohen (1995), however, has suggested that such mechanisms evident in early infancy (e.g. joint attention) may in fact represent elementary mind-reading skills which later develop into ToM.

Attachment theory provides a further perspective on interpersonal factors, in particular with regard to the primary caregiver. It has been suggested that children with an innate inability to "read minds" and empathize may have difficulty in forming an attachment with their caregivers, and that this would have a potentially negative effect on their social, emotional and psychological development (Rooney and Byrne, 1997).

LINKING MODELS TO INTERVENTIONS

Now that different aetiological models of autism have been discussed, the extent to which these models have guided intervention practices will be considered. Because of limited space, a whole host of interventions which have been developed for people with autism will have to be omitted. These include: pharmacotherapy (e.g. the use of the drug fenfluaramine, based on a biochemical model of autism) (see Wolf-Schein, 1994); auditory training; high activity exercise regime (e.g. Rimland, 1988, cited by Wolf-Schein, 1994); holding therapy (based on a psychodynamic model of autism); facilitated communication (e.g. Biklen, 1990, cited by Wolf-Schein, 1994); and task demonstration (see Wolf-Schein, 1994).

The focus of this essay will be to consider those aetiological models, already discussed, which have guided intervention practices: namely, psychodynamic, behavioural and educational approaches. Firstly, though, it should be emphasized that no one intervention is likely to address the range of difficulties presented by individuals in the context of their families/ carers. It is, therefore, important to adopt a flexible, integrative approach to intervention (Howlin, 1998).

Aetiological models can be seen to have influenced intervention practices at a theoretical and clinical level. That is: when an individual with autism presents to a psychologist, the psychologist can draw from a wide range of psychological models (e.g. behavioural, systemic) and combine these with specific theories of autism (e.g. ToM, EF) to provide a formulation of the presenting difficulties. In this way, aetiological models of autism can be used to increase carers' understanding of autism and to encourage a needs-led approach (Howlin, 1998). This understanding can also be used within a multidisciplinary context.

Psychodynamic interventions

The psychogenic theory of autism led directly to the practice of psychotherapy for parents of children with autism. It was founded on the rationale that parents had to "become better parents" in order to facilitate their child's emotional development (Baron-Cohen and Bolton, 1993). Empirical studies which have evaluated the efficacy of this treatment have concluded that the approach is not effective with autistic children (Matson, Benavidez, Stabinsky Comptom, Paclawskyj and Baglio, 1995).

While this kind of intervention practice was largely displaced in the 1960s, more recent examples of psychodynamic theory impacting on intervention practices are still to be found. Unfortunately, these examples are generally single case studies so it is difficult to draw wider conclusions from the studies' findings. One case report, for example, reports on "Object relations theory applied to emotional deprivation, resulting in autistic spectrum disorder" (Rooney and Byrne, 1997). The intervention is guided by the theoretically-based observation that "children with autism continue to have attachment difficulties throughout...their lives."

One implication of the treatment's rationale is that the child's autistic features are environmentally caused by the child's emotional deprivation and that they can, therefore, be alleviated by the correct environment. This is attempted through the application of a range of approaches: behavioural, educational, play therapy and sensory integration. Interestingly, therefore, a psychodynamic aetiological model of autism is seen to combine a psychodynamic approach with more recent intervention approaches.

The authors reported that, despite the child's improved social interactions with others, she continued to demonstrate "marked deficits in her personality." This result suggests the limitations of an environmentally-driven aetiological model of autism. The reported "emotional deprivation...resulting in autistic spectrum disorder" can at most only be seen as a chance correlation, especially in the light of empirical findings that children from environmentally deprived backgrounds have not significantly developed autism (e.g. Cox, Rutter, Newman and Bartak, 1975, cited by Volkmar and Lord, 1998).

When aetiological models of autism shifted from being environmentally-based to organically-based, this shift had revolutionary implications on treatment (Rutter, 1999). The psychodynamic approach - essentially insight-oriented - was replaced by educational and behavioural methods. These aimed to improve children's ability to cope with what were potentially basic cognitive disabilities (Rutter, 1999). These two approaches are considered below.

Educational intervention practices

When the psychogenic theory of autism was disproved (Schopler and Loftin, 1969, cited by Schopler, 1997), parents were no longer seen as patients but rather as "agents of recovery" whose collaborative input is essential to interventions with their child (Schopler, 1997). Essential also is the adaptation of educational strategies to the individual strengths and disabilities of each child with autism (Jordan and Powell, 1995). Unstructured psychotherapy was replaced by educational structure, a key component of which was structured behavioural techniques (e.g. TEACCH, cited by Schopler, 1997).

Teaching children with autism is a complex process given the wide range of their disabilities. Howlin and Rutter (1989), for example, have developed an individualized structured home-based program which incorporates a range of behavioural techniques. This educational process may include: ways of facilitating social communication, emotional development, communication, the ability to "think" and problem-solve; and ways of managing challenging behaviours (Jordan and Powell, 1995). Naturally, this draws on a wide range of theories about autism, not least, "theory of mind."

The organic aetiological model of autism explicitly guides the goals of educational intervention practice. Because the difficulties which define autism are seen as organically-based and, therefore, irreversible, the long-term goal of TEACCH is not that of "becoming normal" but rather to help the individual with autism "to fit as well as possible into our society as an adult" (Mesibov and Shea, 1998).

While the intervention acknowledges that autism is a developmental disability caused by neurological dysfunction, its theoretical framework is informed not only by an organic aetiology but also by a cultural perspective. It maintains that the role of the teacher of an individual with autism is comparable to that of a cross-cultural interpreter: someone, that is, "who understands both cultures and is able to translate the expectations and procedures of the non-autistic environment to the student with autism" (Mesibov and Shea, 1998). Part of this translation process is teaching the individual with autism communication skills.

The teaching of individuals with autism is seen as dependent on an understanding of the associated strengths and deficits of these individuals (Mesibov and Shea, 1998). Given this premise, the intervention practice TEACCH is guided by a range of aetiological models and theories which inform the understanding of these strengths and deficits. Cognitive deficits, for example, are worked with. These include: lack of concept of meaning, excessive focus on details, and difficulty with combining or integrating ideas (Mesibov and Shea, 1998).

An understanding of these cognitive deficits is increased by a knowledge of theories such as executive function and weak central coherence, discussed above. The impact of these particular theories on intervention is implicit rather than explicit; yet the overall intervention is guided by an aetiological hypothesis and has been stated as follows: "if we are correct in conceptualizing the primary cognitive deficit of autism as a problem of understanding meaning, then it follows that a primary educational goal is to teach the student that his environment does have meaning (Mesibov and Shea, 1998).

It has been found that intensive educational and behavioural interventions do not lead to a significant improvement in IQ. It was concluded, therefore, that many individuals with autism have a general cognitive deficit that is not in any way secondary to social withdrawal (Rutter, 1999). In this way, the interplay between aetiological models, clinical intervention and evaluation is evident (Rutter, 1999).

Behavioural intervention practices

Bartak and Rutter (1971, cited by Rutter, 1999) have carried out a comparative study of educational and behavioural methods and concluded that the former are the most effective. Nonetheless the two approaches are often used in conjunction with one another and behavioural interventions, despite controversies over the use of punishment and aversive techniques (Rutter, 1999), remain very popular. Behavioural interventions have been guided by the organic aetiological model of autism to the extent that they represent a departure from the psychogenic model of autism. Beyond this, however, it is difficult to draw direct links between aetiological models of autism and behavioural intervention practices.

Early work demonstrated the influence of behavioural principles on the behaviour of individuals with autism (e.g. Lovaas, 1987, cited by Rutter, 1999). To this day interventions are based on a functional analysis of behaviour and are tightly structured, well planned and tailored to meet individual needs (Harris, 1998). Ethical issues over the use of aversives have in part been overcome by the dis-use of these methods; and difficulties of generalizing newly acquired behaviours have been tackled by incorporating parents in the teaching process (e.g. Schopler and Reichler, 1971, cited by Rutter, 1999).

In this way, behavioural models of human functioning can be seen to have guided interventions with people with autism more than the aetiological models of autism themselves. This is perhaps a reflection of the complexity of autism and the need to "break" the disorder into quantifiable aspects (i.e. specific behaviours) in order to achieve visible results. There is, however, a difficulty with this. Autistic children's acquisition of new behaviours has led to claims that children with autism can be "cured" (Mesibov, Adams and Klinger, 1998). Lovaas has advocated this suggestion, claiming that very early interventions using behavioural modification techniques, applied between 30 and 40 hours a week, can help children with autism reach such a high level of functioning that they are "indistinguishable" from normal children (Lovaas, 1987, cited by Matson, Benavidez, Stabinsky Comptom, Paclawskyj and Baglio, 1995).

Testing the link between aetiological models and intervention practices

So far this essay has considered the extent to which aetiological models have impacted on psychodynamic, behavioural and educational interventions. Studies in which aetiological models of autism have *directly* guided intervention practices (e.g. theory of mind) are few but will be considered next.

Teaching Social Understanding

Approaches applied to the teaching of social understanding have included behavioural approaches (e.g. Howlin and Rutter, 1987) and the involvement of normal peers (e.g. Brady, Schores, McEvoy, Ellis and Fox, 1987, cited by Baron-Cohen and Howlin, 1993). Unfortunately, small sample sizes and inadequate outcome measures have hindered firm conclusions about the relative advantages of these interventions being drawn (Baron-Cohen and Howlin, 1993).

Can a theory of mind be taught?

This question renders explicit the link between an aetiological model of autism and an intervention practice. Studies have demonstrated that even after relatively brief ToM training programmes using a variety of techniques (for example, computers, pictures, photographs and toys), individuals with autism improve in their ability to pass ToM tests (Ozonoff and Miller, 1995). However, generalization to other situations and to untaught aspects of ToM is poor (Ozonoff and Miller, 1995), raising a question about which is being taught: the task or the ability to understand other minds.

Implications of other models for intervention

The executive function model of autism could guide intervention practice, though this possibility is still in the early stages of research. Interventions could focus on developing specific executive functioning skills. For example, individuals with autism could be taught to break tasks down into small steps to help planning and to develop hierarchies of increasingly complex goals and sequences (Ozonoff and Miller, 1995). The development of processing-oriented learning strategies could also be useful here (Mesibov, Adams and Klinger, 1998). The theory of weak central coherence has not yet guided intervention practices in this way though it seems to offer an exciting avenue of research.

DISCUSSION

Autism is a complex, multi-faceted disorder and this complexity has been reflected in the three main sections of this essay. Firstly, a consideration of the term "autistic spectrum disorder" highlighted problematic issues relating to diagnosis. Because our understanding of autism's aetiology is imperfect, the diagnosis of autism rests on observations of the disorder's behavioural symptomatology (Kugler, 1998). The identification of causes and effective interventions follow on from a diagnosis (Kugler, 1998).

No one model or theory has yet been able to provide a full account of autism's aetiology. For this reason, it has been argued that a proper understanding of the causal processes leading to autism requires an integration across clinical, genetic, neuropsychological and neurobiological perspectives (Bailey *et al.,* 1996). This integrative approach avoids the potential pitfall of approaching an understanding of (a) autism's aetiology, and (b) how to intervene with individuals (and their families/carers) with autism within a too narrow perspective. This was illustrated by the psychodynamic approach to treating individuals with autism.

The extent to which aetiological models have guided intervention practices can be summarized in three ways. These are:
(i) a biological level: i.e. the shift from psychogenic theory of autism to an organic view led to the displacement of a psychodynamic intervention practice by educational and behavioural approaches.
(ii) within these educational and behavioural approaches, aspects of how aetiological models and theories have impacted on specific interventions have been considered; though it is often difficult to identify a specific link between theory and practice.
(iii) interventions which have been directly guided by aetiological models of autism - for example, deficits in theory of mind - have been considered and these have been

found to demonstrate some promising results though generalization has been poor (Ozonoff and Miller, 1995).

It is evident that our knowledge base of autism's aetiology will increase significantly (Rutter, 1998). It remains to be seen, however, whether any one model can sufficiently explain autism and, furthermore, if it could, how this would impact on intervention practice.

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Child, Adolescent and Family Essay

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What theories have been advanced to explain childhood phobias? Consider their strengths and limitations and the evidence base that would support their use in clinical practice.

INTRODUCTION

The literature on childhood phobias over the past decades has sought to differentiate the terms childhood "fears" and childhood "phobias" (King and Ollendick, 1997). Early definitions stated that, whereas childhood "fears" tend to be transitory and adaptive, forming a natural part of cognitive and emotional development, phobias are defined as persistent and maladaptive. They constitute an excessive and irrational response to a given stimulus, situation or event which results in avoidance of the feared stimulus or context. These fear reactions are involuntary and not specific to age (Marks, 1969, cited by King, 1993).

These early defining features of phobic fears underpin current diagnostic criteria for phobias (King and Ollendick, 1997): namely, *Diagnostic and Statistical Manual of Mental Disorders – 4th edition* (DSM-IV: American Psychiatric Association, 1994) and *International Classification of Diseases – 10th edition* (ICD-10) (World Health Organization). Also central to the contemporary conceptualization of childhood phobias is the "tripartite" model which identifies three aspects of childhood phobia: cognitive, physiological and overt-behavioural (Lang, 1984, cited by King, 1993). All three aspects are seen to exist in combination, thus forming "a complex organized state of emotional activity" (King, 1993). Despite criticisms of the model, it remains pivotal to the way in which phobias are assessed and evaluated, at least within the behavioural paradigm (Merckelbach, de Jong, Muris and van den Hout, 1996).

It is important to note that both major diagnostic classification systems distinguish between "specific" (or "simple") phobia and "social" phobia. "Specific" phobia refers to those fears which are confined to extremely specific situations or stimuli. According to DSM-IV (APA, 1994), these phobias can be assigned to one of several subtypes: animals (e.g. spiders), natural environment (e.g. thunder), blood-injection injury (e.g. the sight of blood) and situational type (e.g. flying) (Muris, Schmidt and Merckelbach, 1999). The prevalence rates of specific phobia range from 2.4 to 9.1%, with an average of approximately 5%

across studies (King and Ollendick, 1997).

"Social" phobia refers to the fear of others' "scrutiny", resulting in avoidance of social situations (DSM-IV, APA, 1994). Children with social phobia fear social interactions to such a degree that it inhibits their daily functioning and social-emotional development (Liebowitz, Gorman, Fyer, and Klein, 1985, cited by Beidel and Randall, 1994). The prevalence rates of social phobia found by epidemiological studies are lower than that of specific phobia, falling below 2% (King, Gullone and Ollendick, 1998a).

Theories that have been advanced to explain childhood phobias are concerned with the aetiology or causes of childhood phobia. Such causes have been described as "complex"(King and Ollendick, 1997) and "perplexing" (King *et al.,* 1998a). It is not surprising, therefore, that a wide range of theoretical constructs have been used in an effort to explain the aetiology of childhood phobias (King, 1993). These theories can be seen to incorporate the following factors: environmental, biological/ genetic and constitutional. The range of theories is, therefore, diverse, and the interplay between the environmental, biological and constitutional influences extremely complex (Spence and Dadds, 1996).

In this essay, a variety of theories will be considered in the context of their strengths and limitations. These theories will include psychoanalytical, behavioural, cognitive, evolutionary and biological perspectives. Finally, the evidence base that would support the application of these theories to clinical practice will be discussed. It should be noted, however, that social phobia has been considerably neglected in the literature (Beidel and Randall, 1994); and a similar bias towards literature on specific phobias will be evident in this essay.

THEORIES OF CHILDHOOD PHOBIA

Psychoanalytic theory

According to psychoanalytic theory, phobias are a defense mechanism against repressed or forbidden impulses. These repressed impulses are transformed into neurotic anxiety which is then displaced onto a surrogate object. As a result of this process, the surrogate object is avoided (Freud, 1926, cited by Herbert, 1994). The theory is illustrated by Freud's case of Little Hans. In this case, it was hypothesized that Little Hans' horse phobia was a symbolic fear of the child's repressed castration anxiety and fear of his father which were displaced onto the surrogate object, horses (Freud, 1909, cited by Carr, 1999). According to Freud, Little Hans' phobia was an attempt to solve his conflict with his father: his ambivalent feelings of Oedipal jealousy and hostility combined with a deep love (Freud, reprinted 1909, cited by Carr, 1999).

A much-cited limitation of Freud's psychoanalytic theory is that it did not *explain* the causes of childhood phobia but rather *made sense of phobic symptoms* (Herbert, 1994). It has been argued, therefore, that, contrary to Freud's aim, his theory was not scientifically based; and that he failed in his writings to make predictions about the outcome of any patients' decisions or choices (Herbert, 1994). In the review literature of psychoanalytic theories on childhood phobias, strengths of this orientation are often omitted in the context of its controversial status (e.g. Carr, 1999). Nonetheless, an arguable strength of the approach appears to be its commitment to intensive and long-term treatment (Target and Fonagy, 1994).

Behavioural theories

Classical (Pavlovian) conditioning theory

Classical conditioning theory was first advanced to explain childhood phobia in the seminal study by Watson and Rayner (1920, cited by King *et al.,* 1998a). These experimenters conditioned a young boy ("Little Albert") who had previously demonstrated no fear of rats into developing a fear for white rats (King and Ollendick, 1997). The laboratory experiment involved presenting a rat to "Little Albert" on a series of occasions together with an aversive stimulus. At the time, a strength of the theory appeared to lie in its predictive hypothesis: as hypothesized by conditioning theory, "Little Albert's" fear of the white rat generalized to objects similar to the conditional stimulus (for example, Watson's hair) (King *et al.*, 1998a).

Limitations of the theory have, however, also been noted. Firstly, it has been difficult to replicate this finding consistently: traumatic experiences have not always been found to co-occur with the onset of a phobia (King and Ollendick, 1997). Secondly, the theory does not explain why phobias are not randomly distributed: a fear of snakes is more common than that of electricity despite the assumption that each have an equal probability of being associated with an aversive stimulus. And thirdly, the theory fails to account for the reason that phobics persistently avoid the classically conditioned stimulus (Merckelbach *et al.*, 1996).

Different conditioning theories have been developed to account for the shortcomings of classical conditioning theory and will be considered below in the context of both behavioural and cognitive theories.

Mowrer's two-stage theory

Mowrer's theory (1960, cited by Merckelbach *et al.*, 1996) attempts to explain the reason behind phobics' persistent avoidance of the CS. Very simply, Mowrer's model identifies two stages: the first stage whereby the neutral CS is paired with an aversive UCS resulting in a conditioned phobic reaction to the CS; and the second stage whereby the individual learns that avoidance of the CS leads to a reduction in their fearful response (Merckelbach *et al.*, 1996). Consequently, the individual's fear is reinforced on every occasion that s/he avoids the CS. This theory has the advantage of seeking to explain why phobics passively avoid the feared stimulus (CS). It fails, however, to account for an individual's active avoidance of the UCS (Merckelbach *et al.*, 1996).

Cognitive-Behavioural Models

Rachman's three pathways theory

It is now acknowledged that nontraumatic experiences can have a key role in the aetiology of childhood phobias. In recognition of this, conditioning models of childhood phobia have been extended to include a cognitive component. Rachman (1976, 1977, 1978, cited by King *et al.*, 1998a), for example, proposed that phobias are acquired via three distinct pathways, and so developed a model which combined behavioural and cognitive perspectives. The first pathway is consistent with a classical conditioning model and is termed "direct conditioning" (e.g. when a child is attacked by a dog). According to Rachman, in this instance the individual's psychophysiological and behavioural responses are primary.

The second and third pathways, however, suggest that indirect pathways may be central to the acquisition of childhood phobias. These pathways are known as "vicarious conditioning" and "instruction information", respectively. "Vicarious conditioning" refers to the acquisition of phobias through the modelling of phobic behaviours (Merckelbach *et al.*, 1996). It hypothesizes that phobic responses can be learned by observing others' fearful behaviour in response to a stimulus (e.g. when a child witnesses his or her siblings' fearful response to a nightmare). Both animal and human laboratory studies have provided evidence for this hypothesis. For example, Cook and Mineka (1989, cited by Merckelbach *et al.*, 1996) found that rhesus monkeys developed a phobia about snakes after observing on video model monkeys responding fearfully to toy snakes.

"Instruction information" refers to the cognitive process whereby a child receives negative information about stimuli from significant others, books or television, and this elicits a fearful response to the given stimuli (Merckelbach *et al.*, 1996). According to Rachman's hypothesis, phobias are probably mild rather than severe when acquired via this pathway (King *et al.*, 1998a). Given this, it is perhaps not surprising that there is less empirical evidence for this pathway than there is for vicarious conditioning (Merckelbach *et al.*, 1996). Nonetheless, social psychological studies have demonstrated that participants attribute greater value to negative than positive information (e.g. Pratto and John, 1991, cited by Merckelbach *et al.*, 1996).

Overall, the evidence to support Rachman's three pathways theory is favourable though, as can be seen from above, some pathways have received more supportive evidence than others. Furthermore, findings from studies which have made use of retrospective methodology should be approached with caution as retrospective reports have been found to be unstable over time (Kheriaty, Kleinknecht, and Hyman, 1999; Taylor, Deane, and Podd, 1999). One study, for example, revealed that, when children were questioned retrospectively using a self-report measure, 56% attributed their phobia to vicarious factors and 39% attributed their fears to instructional factors (i.e. indirect factors). It was more common, however, for children to develop a fear subsequent to the combined experience of indirect factors with direct conditioning (Ollendick and King, 1991). The authors of this study concluded that the three pathways of fear were interactive as opposed to independent.

Two other studies have examined 30 children identified as either "high fear" or "low fear" participants. They found that a greater number of "high fear" participants reported direct conditioning experiences such as a dog jumping up at them (Doogan and Thomas, 1992; King, Ollendick and Murphy, 1997). Another study, which looked at parents' explanations for their children's phobia about dogs, revealed that the majority of parents assigned this phobia to one of Rachman's three pathways (King and Ollendick, 1997). These findings all offer support to Rachman's theory but, as shall be seen below through a discussion of the nonassociative perspective, have not been left unchallenged. Further research is needed using more stringent methodology (ideally, a prospective and longitudinal study with a large sample of children) to locate the processes crucial to the aetiology of childhood phobias (King *et al.*, 1998a).

The Role of Disgust Sensitivity

Theories of childhood phobia discussed so far have considered the link between phobia acquisition and an individual's anticipation of danger. This hypothesized link is key to all theories of childhood phobia and conditioning, and is made explicit by Rachman's pathways of vicarious conditioning and information instruction. Other research, however, takes into account the roles of "disgust" and "disgust sensitivity." That is, those instances when the individual evaluates the conditioned stimulus as disgusting as opposed to dangerous (Merckelbach *et al.,* 1996).

In support of the theory, Davey (1994) has shown that normal participants typically perceive small animals (e.g. snakes, spiders) as disgusting rather than dangerous. A weakness of this theory, however, is that most studies have used a correlational approach. It is difficult, therefore, to tease out whether or not the "disgust" component is in fact mediated by an individual's fear of a conditioned stimulus (Merckelbach *et al.,* 1996). One recent study examined the hypothesis that disgust sensitivity is largely related to an array of anxiety symptoms, including those found in social phobia and the three types of specific phobia (Muris, Merckelbach, Schmidt and Tierney, 1999). It concluded that it is doubtful whether disgust sensitivity functions as a causal antecedent in the range of anxiety symptoms tested.

Cognitive Biases – Attentional and Judgmental Bias

Cognitive models of childhood phobia have broadened the theoretical framework from a predominantly behavioural perspective. In doing so, it has sought to remedy gaps in classical conditioning theory. For example, it has extended the modern perspective on Mowrer's two-stage model (that phobic fear is maintained through avoidance behaviour) (Malloy and Levis, 1988, cited by Merckelbach *et al.,* 1996) and hypothesized that people with phobias manifest cognitive dysfunctions: namely, attentional and judgmental biases. Whereas attentional bias refers to an individual's hypervigilance to stimuli perceived as threatening, judgmental bias refers to an individual's preponderance to exaggerate the link between fearful stimuli and aversive consequences (Tomarken, Sutton and Mineka, 1995). These cognitive biases have been found to exist in both specific and social phobias.

Aetiological theories to explain these biases have included neuropsychological and developmental perspectives. It has been hypothesized, for example, that the right hemisphere mode of information processing is responsible for such cognitive biases in specific phobias (Merckelbach, Muris and de Jong, 1990, cited by Merckelbach *et al.*, 1996). From a developmental perspective, it has been demonstrated using a modified Stroop task (Kindt, Bierman, and Brosschot, cited by Merckelbach *et al.*, 1996) that attentional bias to spider stimuli is present in a control group as well as in highly fearful children. The authors of these findings have suggested that, whereas attentional bias to spiders is developmentally normal in children, as children develop into adults, this bias should be inhibited. Those children, therefore, who subsequently develop a phobic response to spiders may have failed to inhibit this bias.

UCS Revaluation or Neoconditioning Perspective

UCS revaluation theory also offers a cognitive perspective on conditioning theory. Unfortunately, it is yet to be applied to the research on childhood phobia but its concepts are nonetheless interesting and its application to childhood phobia can be inferred. This theory maintains that the acquisition of a phobia (conditioned response - CR) is not dependent on a simple reflex association between the conditioned and unconditioned stimulus. Rather this association is informed and mediated by an individual's underlying cognitive processes. The theory draws two important implications from the traditional theory of conditioning: first, it proposes that the CS triggers "some kind of internal representation of the UCS" which guides the CR; and second, that an individual's evaluation of the UCS representation will affect the strength and quality of the CR (Davey, 1989).

UCS revaluation is seen to occur in humans in at least two ways. For example, a laboratory experiment has demonstrated how participants have revalued an unconditioned stimulus more positively when informed that the UCS will be less strong thereon (e.g. Davey, 1983, cited by Davey, 1989). It has been found that UCS revaluation occurs in humans when the information they receive about the UCS is social as well as verbal (Davey, 1989). Another example of UCS revaluation (again tested in the laboratory) involves how an individual observes and evaluates his or her response to an unconditioned stimulus. In favour of this hypothesis, results from studies have suggested that those participants who believed their unconditioned response was stronger than that of other participants demonstrated a greater resistance to extinguishing that response subsequently (Davey, 1987, cited by Davey, 1989).

One strength of this model is that direct comparisons can be made between findings from UCS revaluation and animal studies. More centrally, the model integrates a number of features key to a variety of phobia models: for example, the instructional and vicarious factors from Rachman's three pathways theory which are seen to impact on the development of the CS-UCS pairing (Davey, 1989). Finally, the model calls to our attention the importance of cognitive processing in human conditioning, something which has been somewhat neglected in the animal conditioning literature (Davey, 1989).

The UCS revaluation model has also been termed "the neoconditioning perspective." Both revisions of the traditional conditioning theory place emphasis on the concept of "latent inhibition" and, in doing so, help remedy their predecessors' failure to account for the absence of phobia in some individuals following the association of a CS and aversive UCS (Merckelbach *et al.*, 1996). Latent inhibition refers to the process whereby the CS is presented in isolation before it is paired with the aversive UCS (Davey, 1989). Davey (1989) has found that patients who have received non-threatening dental treatment for an extended period of time before experiencing a trauma in this environment were less likely to become phobic about visiting the dentist.

Evolutionary Perspective

Non-associative versus associative learning

The investigation of the aetiology of childhood phobias has been extended beyond the associative, conditioning framework to include a non-associative, Darwinian perspective - a view which threatens the validity of Rachman's theory. According to this view, individuals will experience a fearful response to an aversive stimulus which has evolutionary significance on their first contact with that stimulus (Menzies and Clarke, 1993). Menzies and Clarke hypothesized that it is normal for such a fearful response to decrease over time as the individual becomes habituated to the stimulus through a series of non-traumatic experiences. This habituation does not, however, occur for those individuals who do not subsequently encounter the conditioned stimulus in nonaversive circumstances.

In support of their hypothesis, Menzies and Clarke found that 56% of parents whose children had water phobia thought that their children had been fearful of water from the outset (that is, without experiencing any aversive associative event). Only 2% of parents believed that their children's phobia was the result of a direct conditioning event; and none of the parents considered either information or instruction as a significant pathway in the acquisition of their child's phobia. These findings have been substantiated in a study which found that all parents failed to assign the onset of their child's phobia to any of Rachman's three pathways (Graham and Gaffan, 1997, cited by King *et al.*, 1998a).

Family systems theory

A diversity of family systems hypotheses have been put forward in an effort to explain the aetiology of childhood phobias (see Bolton, 1994, for a review). It is well established that family functioning plays a significant role in childhood phobia, and that this possibly interacts with genetic influences and parental modelling (Bolton, 1994). A strength, therefore, of family systems theory is its recognition of the child's relationship to his or her family system and of how this system interacts with other aetiological factors (e.g.

behavioural theories of conditioning - see King and Ollendick, 1997). This interaction is evident in the systemic concept of how difficult family relationships may "block the transfer of control" and so reduce treatment efficacy (Ginsburg, Silverman and Kurtines, 1995). A limitation of family systems theories in general, however, is that no systemic theory has yet succeeded in integrating the various ideas about the role of the family in the aetiology of childhood phobia (Carr, 1999).

Biological Models

Eysenck's "incubation effects"

It has already been said that environmental, biological and constitutional perspectives on childhood phobia are not independent factors but viewed in the literature as interactive. This interaction is illustrated by Eysenck's theory that an individual's personality dimensions inform his or her tendency to develop any type of problem (for example, a phobia) (Eysenck, 1967, cited by Herbert, 1994). These personality dimensions, thought to be in part inherited (i.e. genetic), help determine the learning patterns of an individual as he or she develops. In other words, the individual's inherited personality affects his or her environment. The theory further maintains that certain combinations of personality qualities (i.e. of introversion/ extraversion and neuroticism) lead to an increased likelihood of acquiring a phobia. This acquisition occurs via conditioning but the child is only susceptible to this acquisition if his or her autonomic nervous system is particularly reactive (that is, the child has a high score on neuroticism).

A strength of Eysenck's theory is its integration of biological, constitutional and environmental factors. By placing emphasis, furthermore, on biological/ constitutional factors (the individual's personality), it also helps account for "incubation effects": that is, how an initial fear response may become increasingly intense over time even in the absence of further trauma. Nonetheless the theory has been heavily criticized. For example, there is little evidence to suggest that individuals' phobias can be conditioned in laboratory settings (Herbert, 1994).

Pathophysiologic models

A series of pathophysiologic models have been developed to account for the acquisition of phobias. These include the notion that phobias result from abnormalities that control activity in the amygdala (Hugdahl, 1998, cited by Pine and Grun, 1999). There is not space in this essay to do justice to any of these models. It is important, however, to note that these models have succeeded in explaining how phobias are acquired via fear conditioning of brain circuitry. All these theories have to date, however, failed to integrate the extensive range of findings from laboratory and clinical settings (Pine and Grun, 1999).

A study carried out towards the start of this decade (Kendler, Neale, Kessler, Heath and Eaves, 1993, cited by Kendler, Karkowski and Prescott, 1999) suggested that genetic factors with heritabilities had a relatively modest influence on the acquisition of certain phobias. In a population of female twins, the acquisition of agoraphobia, social phobia and animal phobia due to genetics was found to lie somewhere between 30 and 40%. This finding was contrasted by a subsequent study (Neale, Walters, Eaves and Kessler, Heath and Kendler, 1994, cited by Kendler *et al.*, 1999) which looked at situational and blood-injury phobia. Here twin resemblance appeared to originate in familial-environmental factors, accounting for approximately 30% of proneness to develop a phobia.

A recent study, however, concluded that the heritability of phobias may be estimated as much higher than was previously the case when the unreliability of assessment procedures was taken into account (Kendler *et al.*, 1999). In this study, total heritability rose for all types of phobia from 32 to 55%; for agoraphobia from 39 to 61%; and for social phobia from 30 to 50%. Family environment was no longer found to be a significant factor in influencing the aetiology of either situational or blood-injury phobias. Instead it was seen to influence animal phobias alone. The study's findings placed emphasis, however, on the significance of environmental risk factors in the aetiology of phobias in general, and reported estimates for "the role of true individual-specific environment" of between 40 and 60%.

A strength of this model is that it takes into account both genetic and environmental explanations of phobia acquisition, and has corrected for measurement error when seeking to substantiate this theory empirically. But the theory as it stands has serious limitations. Firstly, the theory has been put forward based on evidence which has only taken into account the phobia acquisition of Caucasian females. Secondly, the authors of this study used a broader definition of phobias than is set out by DSM criteria (Kendler *et al.,* 1999).

EVIDENCE BASE FOR THEORIES IN CLINICAL PRACTICE

The evidence base to support the use of childhood phobia theories in clinical practice is determined by various methodological limitations. These have been summarized as follows: a paucity of well controlled experimental studies; a large number of case reports or single case studies; an absence of research carried out on clinical populations; an emphasis on children with situational fears; limited use of formal diagnostic procedures; limited assessment procedures; and poor systematic follow-up procedures (Silverman and Rabian, 1994). It is important to bear these limitations in mind in the light of the clinical interventions discussed below.

Psychoanalytic interventions

The aim of psychoanalysis is to offer an interpretation of the defensive, repressed feelings and the associated neurotic anxiety (Carr, 1999). The evidence base to support this approach for children with phobias is very limited but one recent clinical trial has been carried out on 352 children and adolescents presenting with a series of emotional disorders, including phobias (Target and Fonagy, 1999). Outcome was measured by a change in the child's diagnosis and overall adaptation. Results showed that, over a period of six months, 72% of participants improved in adaptation, and only 24% fulfilled diagnostic criteria for a specific disorder at the end of treatment. The intervention program was found to be the most effective for specific phobias.

Behavioural interventions

The evidence base to support the use of behavioural theories in clinical practice is exemplified by the range of behavioural strategies derived from principles of classical, vicarious and operant conditioning (King and Ollendick, 1997). These strategies will be reviewed independently but research has shown that behavioural interventions are most effective when they draw from the range of behavioural theories in a complex and interactive fashion (King and Ollendick, 1997).

Systematic desensitization

Systematic desensitization conceptualizes phobias as classically conditioned responses which can be unlearned via a process of counterconditioning. Participants are presented with fear-producing stimuli in conjunction with a nonaversive stimulus. Early application of the classical conditioning theory to clinical practice was illustrated by Jones (1924, cited by King and Ollendick, 1997) who exposed Peter to the feared object (a rabbit) in conjunction with food (a stimulus which elicited a positive response), thus eliminating his fear.

More recently, however, systematic desensitization has depended on eliciting the "relaxation response" as the counter, inhibiting response, often using imaginal representation (Wolpe, 1958, cited by King and Ollendick, 1997). Once a hierarchy of the aversive stimulus has been developed, this relaxation response is elicited in conjunction with each graded step on the hierarchy. The evidence suggests that, when imaginal representation is employed, the intervention is more effective with older children (e.g. Ollendick, 1979, cited by King and Ollendick, 1997).

A series of uncontrolled case studies has pointed to the efficacy of treating a range of childhood phobias using this approach (e.g. dogs, dark, dentists, water and insects) (reviewed by King and Ollendick, 1997). Several group studies have also been carried out to evaluate the approach and have consistently found that systematic desensitization is more effective than no treatment or waiting-list control conditions (e.g. Mann and Rosenthal, 1969, cited by King and Ollendick, 1997).

Emotive Imagery

Emotive imagery is a variant of systematic desensitization founded on the principle of reciprocal inhibition. In this approach, the child is required to imagine an exciting story which elicits a positive response and so counters their fear produced by the aversive stimulus (King, Molloy, Heyne, Murphy and Ollendick, 1998). In addition to several case reports supporting this approach, a multiple baseline across subjects design study has also been carried out (King and Ollendick, 1989, cited by King *et al.,* 1998). Two out of three children who had been referred to a clinic for severe nighttime fears were found to show considerable behavioural improvement and able to sleep on their own at night further to treatment using emotive imagery.

The evidence base for this approach is, however, still limited. Controlled evaluations have not yet been conducted except when treating darkness phobia; plus, research methodologies to date have not identified the particular mechanism(s) which help reduce the phobia (King *et al.,* 1998). It should also be noted that emotive imagery may not only be making use of behavioural theories of childhood phobia, but also of cognitive theories.

Flooding

Flooding is also derived from classical conditioning theory but, by contrast with the graded approach of systematic desensitization, it involves extended exposure to the fear-producing stimuli in the absence of the original unconditioned stimuli (King and Ollendick, 1997). Few studies are known to have evaluated this approach. One case study reported the successful outcome of this intervention when treating an 11-year old boy who was afraid of loud noises (Yule, Sacks and Hersov, 1974, cited by King and Ollendick, 1997), but the current evidence base lacks the support of controlled studies.

Modelling

Modelling applies vicarious conditioning principles to clinical practice and emphasizes the role of observational learning in treating children's phobias. In brief, modelling involves the demonstration of nonfearful behaviour in the feared situation that the child may learn an appropriate response to cope with the feared stimulus. A combination of uncontrolled case studies (e.g. Dash, 1981; MacDonald, 1975; both cited by King and Ollendick, 1997), multiple baseline studies (e.g. Matson, 1983, cited by King and Ollendick, 1997) and experimental analogue studies (e.g. Bandura and Menlove, 1968, cited by King and Ollendick, 1997) have demonstrated the efficacy of this approach and, therefore, of the use of vicarious conditioning principles in clinical practice. A comparison of results across studies has revealed that film modelling is the least effective, participant modelling the most effective (i.e. where the child interacts with the therapist-model) and that live modelling (i.e. where the child observes the model "live) lies somewhere in between (Ollendick and King, 1998). In these studies, however, non-clinically referred children have been evaluated.

Cognitive-behavioural procedures

Cognitive-behavioural interventions are particularly popular for treating social phobia though this research has tended to focus on adult samples (see Barlow, Esler, and Vitali, 1998 for a review). The research considered below will therefore be in reference to specific phobias only. Cognitive-behavioural interventions make use of a range of procedures which seek to change perceptions, thoughts, images and beliefs by challenging and reshaping dysfunctional cognitions (Kendall and Gosch, 1994). Strategies include training in self-control and self-instruction (see Morris and Kratochwill, 1991 for a review). At present, however, this approach, being the most recent, has received the least amount of research (Morris and Kratochwill, 1991). One uncontrolled case study of a five-year old with a phobia about thunder storms reported a successful outcome following the use of cognitive-behavioural strategies both at the end of treatment and twelve months later (Matthey, 1988, cited by King and Ollendick, 1997). Treatment included self-statements as well as more purely behavioural strategies. Because of this integrated approach, it is difficult to evaluate whether the cognitive aspect of the intervention was effective in its own right.

Other studies have demonstrated the effects of cognitive-behavioural strategies using a multiple-baseline design (Friedman and Ollendick, 1989; Ollendick, 1995; both cited by King and Ollendick, 1997). More notably, a randomized controlled trial has also been carried out (Graziano and Mooney, 1980, cited by King and Ollendick, 1997). In this study, children were taught verbal coping skills and results strongly pointed to the efficacy of this intervention. In summary, although more controlled research is still needed, the evidence base suggests the use of cognitive-behavioural theories in clinical practice. It should be noted, however, that an array of factors contributes to the efficacy of this approach: for example, pitching the interventions at an age-appropriate and cognitively-appropriate level (King and Ollendick, 1997).

Psychopharmacological Interventions

The application of biological theories to clinical practice is suggested by the psychopharmacological interventions which have been developed. For example, benzodiazepines are sometimes prescribed for children presenting with anxiety-related symptoms. The benzodiazepines counter the anxiety experienced by children which has been biologically linked to the amygdala in the brain's limbic system (Biederman, 1991, cited by Bernstein, 1994). The number of studies which have examined the usefulness of anti-anxiety medication in children is, however, extremely limited, and those studies which do exist have used small sample sizes (see Bernstein, 1994 for a review). Furthermore, it is difficult to find any literature on the use of such medication for childhood phobias. It seems probable that the use of medication for a child with a phobia is unlikely.

Family systems interventions

Given the substantial evidence that modelling and parenting style are often crucial in transmitting anxiety patterns from parents to children (McFarlane, 1987, cited by Carr, 1999), it appears essential that theories of childhood phobia are translated into clinical practice. The evidence base to support family interventions is as yet small but increasing (Estrada and Pinsof, 1995). An early family behavioural intervention proved to be useful when mothers with phobias of children presenting with phobias were themselves taught with coping strategies to deal with their own phobias (Windheuser, 1977, cited by King and Ollendick, 1997).

More recently, applying their theoretical explanation of childhood phobia ("blocking the transfer of control") to practice, Ginsburg and colleagues (1995) have developed a family intervention program based on teaching parents contingency management strategies. It has much in common with "the Family Anxiety Management model" (FAM). FAM has been evaluated in a controlled group study with 79 anxiety-disordered children, many of whom had phobias. The children receiving FAM were found to improve significantly more than those children who acted as waiting-list controls (Dadds, Heard, and Rapee, 1992, cited by King and Ollendick, 1997).

DISCUSSION

A range of theories has been advanced to explain childhood phobias, the breadth of which seems indicative of their complex aetiology. In this essay, a variety of theories has been discussed and considered in relation to their strengths and limitations. Freud's case of little Hans represented the earliest understanding of how phobias are acquired (Freud, 1909, cited by Carr, 1999), but this psychoanalytical explanation of childhood phobias has been somewhat neglected by the research subsequently. Behavioural theories, by contrast, have received particular emphasis in the literature, first developed from principles of classical conditioning (Watson and Rayner, 1920, cited by King *et al.*, 1998a) and later progressing to include a cognitive component (e.g. Davey, 1984; Rachman, 1976, cited by

King *et al.,* 1998a). The claimed scientific status of these behavioural theories has been contrasted with a much-cited limitation of psychoanalytic theory, that it is not scientifically based (Carr, 1999).

The behavioural hypothesis that childhood phobias are learned through associative processes has been challenged by an evolutionary perspective on phobia acquisition: namely, that individuals will experience a fearful response to an aversive stimulus that has evolutionary significance until the individual becomes habituated to that stimulus (Menzies and Clarke, 1993). Findings to support this theory were discussed (e.g. Graham and Gaffan, 1997, cited by King *et al.,* 1998a).

Systemic explanations that have been advanced to explain childhood phobias have broadened the focus from the child to the role of family functioning in phobia acquisition and maintenance (Bolton, 1994). The role of the family in childhood phobias has implications for the nature-nurture debate; and whether or not the environment or genetics is responsible for phobia acquisition and maintenance. Most studies, however, have emphasized that environmental and genetic/ biological factors tend to interact with one another rather than function independently (Spence and Dadds, 1996).

The evidence base that supports the application of these theories to clinical practice has also been discussed in the light of studies' empirical strengths and weaknesses (Morris and Kratochwill, 1991). Because of space limitations, however, it has not been possible to provide a comprehensive review of the literature; and because of gaps in the literature itself, social phobia has also been neglected. Despite these limitations in the current research, however, it is evident that the range of theories on childhood phobias, combined with their potential use in clinical practice, presents any clinical psychologist working in this area with a diverse and exciting theory-practice base.

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Older Adults Essay

Year II

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Discuss the difficulties of distinguishing depression and early stage dementia and evaluate ways in which these difficulties might be addressed.

INTRODUCTION

The issue of distinguishing depression and early stage dementia has been described by Lezak (1995) as "probably the knottiest problem of differential diagnosis." Underpinning this problem is, therefore, the all-too-easy potential for clinicians to misdiagnose one condition for the other. It has been suggested, on the grounds of available empirical evidence, that between 1% and 31% of patients who receive a diagnosis of progressive dementing illness may in fact be suffering from depression with associated cognitive deficits (Katzman, Lasker and Bernstein, 1988, cited by Kaszniak, 1996a). The consequences of such misdiagnosis often carry serious clinical implications: in particular, the failure to intervene appropriately, whether psychologically, pharmacologically or both (Kaszniak, 1996a).

Recent evidence suggests that the diagnosis of dementia has improved. Whereas previously mistaken diagnoses were reported to occur in between 10% and 50% of cases (Gurland and Toner, 1983, cited by Kaszniak and Christenson, 1994), subsequent studies demonstrated the improved accuracy of diagnosing the most common type of dementia, Alzheimer's Disease (e.g. Molsa, Paljarvi, Rinne, Rinne and Saks, 1985, cited by Kaszniak and Christenson, 1994). This improvement has in part been attributed to the development and application of more specific diagnostic criteria for dementia types (Kawas, 1990, cited by Kaszniak and Christenson, 1994). The development has not, however, been without its limitations: superseded by a tendency among professionals to overdiagnose dementia (Gatz and Pearson, 1988, cited by Kaszniak and Christenson, 1994), depression in older adults has, in turn, been underdiagnosed and undertreated (Bair, 1998).

The terms "depression" and "dementia" need defining. Neither term, it should be noted, offers a unitary concept. With regard to depression, it has been frequently observed that its manifestation is varied and dependent upon the combination of presenting symptoms (e.g. Kaszniak and Christenson, 1994). Not only is there "a spectrum severity" of depressive disorders, but individuals also differ according to whether they suffer from late or early onset depression (Bair, 1998). Despite this, it is generally agreed that its characteristics include low mood, lethargy, indecisiveness and reduced ability to think or concentrate (Kozac-Campbell and Hughes, 1996)

The term "dementia" does not refer to the name of a disease, but rather to "a clinical syndrome and general state of a particular [individual]" (Hasegawa, 1991). Characterized by the impairment of memory and intellectual functioning in adults, it is sufficient to interfere with social or occupational functioning (Kasniak, 1996a). It is progressive, has an organic basis, and is often accompanied by a variety of psychiatric symptoms and behavioural problems (Hasegawa, 1991). Finally, while the dementia syndrome has been linked to over 70 causes of brain dysfunction, the two most common types of dementia are Alzheimer's Disease and Vascular Dementia, respectively.

There is considerable uncertainty about the prevalence rates for both dementia and depression in older adults. One review estimated that approximately 15% of people in the community above 65 years of age suffer from depression (Copeland, Dewey, Wood, Searle, Davidson and McWilliams, 1987, cited by Ballard, Bannister and Oyebode, 1996) and that between 5% and 10% suffer from dementia (Cooper, 1991, cited by Ballard *et al.*, 1996). It further suggests that, given these estimates, it could be anticipated that approximately 1% of the population would have both dementia and depression concurrently by chance (Ballard *et al.*, 1996). Another estimate of prevalence figures across studies has distinguished between severe and mild-to-moderate dementia, suggesting that 6% of people above 65 years have severe dementia, and 10-15% have mild-to-moderate dementia (Cummings and Benson, 1992).

The uncertainty that underpins these prevalence figures is indicative of the difficulties involved in distinguishing depression and early stage dementia. In this essay, many of these difficulties will be discussed in the context of the shift which has taken place in the literature concerning the differential diagnosis of dementia and depression. That is, whereas historically the differential diagnosis of dementia and depression in older adults involved an either/ or approach (Kaszniak and Christenson, 1994), it is now recognized that dementia and depression frequently co-exist. Ways in which these difficulties might be addressed will then be evaluated.

The literature to date has tended to focus on the main type of dementia, Alzheimer's Disease, and at times to use the terms "Alzheimer's Disease" and "dementia" interchangeably. It has also tended to ignore the distinction between early and later stages of dementia. This essay will necessarily be guided by these conventions, but will endeavour to draw attention to those studies that have identified early stage dementia in particular.

DIFFICULTIES IN DISTINGUISHING DEPRESSION AND DEMENTIA

Dichotomous versus continuous view of depression and dementia

It has frequently been observed that depression and dementia are difficult to distinguish from one another because of the overlap of cognitive impairments in the two conditions (e.g. Swanwick, Rowan, Coen, O'Mahony, Lee, Lawlor, Walsh and Coakley, 1996; Yaffe, Blackwell, Gore, Sands, Reus and Browner, 1999). Shared symptoms include: poor concentration, low energy, disrupted sleep patterns and diminished interest in activities. Ambivalence about the cause of these symptoms has, in the past, left the clinician or researcher with the dilemma: "Is it dementia or depression?" In the past decade, however, this dilemma has shifted to represent a more continuous conceptualization of depression and dementia. The question is no longer "is it dementia *or* depression?" but rather "is it dementia or depression or both?" (Reifler,1992).

Origins and development of the term "pseudodementia"

This shift has been reflected in the origins and subsequent development of the term "pseudodementia." The term pseudodementia dates back to the mid-nineteenth century when the "irreversibility" of dementia was an essential diagnostic criterion, suggesting the need for a concept which signified "reversible" cognitive decline (Emery and Oxman, 1994). Wells (1979) has defined pseudodementia as "the syndrome in which dementia is mimicked or caricatured by functional psychiatric illness." In its original conception, the term was "purely descriptive", carrying "no diagnostic weight"

(Kiloh, 1961, cited by Wells, 1979). It was informed by a series of dichotomous parameters such as irreversibility/ reversibility; structural/ functional and organic/ nonorganic aetiology, and presented the clinician with an either/ or option when diagnosing his or her client.

While the term has withstood the test of time (Sachdev and Kiloh, 1994), subsequent controversy around its use has highlighted the difficulties of distinguishing depression and dementia. Numerous contradictions about pseudodementia exist in the literature, largely because of an absence of reliable operational criteria, a lack of validated instruments and scales, and the diversity of the population studied (Yousef, Ryan, Lambert, Pitt and Kellett, 1998). The viewpoint therefore arose that the originally conceptualized dichotomous parameters might be called into question and qualified.

The concept of pseudodementia was expanded to include a range of subtypes of pseudodementia, which were said to form five points (prototypic groups) along "the spectrum of depressive dementia" (Emery and Oxman, 1994). While it is not the purpose of this essay to consider these subtypes, their development is indicative of the fact that distinguishing depression and dementia ceased to be an either/ or option. This was emphasized by the fact that the concept of dementia no longer required irreversibility as a diagnostic criterion (Hasegawa, 1991).

Co-existence of depression and dementia

Central to the conceptualization of the above subtypes was the idea that dementia and depression may now co-exist. One estimate across studies has suggested that up to 30% of patient with dementia can also show signs of depression (Muller-Spahn and Hock, 1996). Another review of published prevalence estimates of depressive syndromes in dementia noted that prevalence figures ranged from 0 to 86% with the greater amount of studies reporting rates between 17% and 29% (Teri and Wagner, 1992). Linked to the difficulty, therefore, of the possible co-existence of depression and dementia is the risk that, in those cases where a person has already received a diagnosis of probable Alzheimer's Disease, it is likely that symptoms of depression may be missed (Kaszniak, 1996b).

Although the co-existence of depression and dementia has been acknowledged, the issue of the prevalence rates for the co-morbidity of the two conditions remains unresolved (Alexopoulos and Abrams, 1991). These difficulties may have arisen because of the variety of sampling rating methods used, and the varied criteria used to diagnose depression. Clients themselves have been said to vary as to whether they report depression or not according to the setting they are in (Alexopoulos and Abrams, 1991). Difficulties of accurately distinguishing depression and dementia, not to mention identifying their co-morbidity, are therefore evident.

Association of the severity of dementia and depression: can one predict the other?

The acknowledgement of the possible co-existence of depression and dementia extended the debate to include the issue of the relationship between depression and the *severity* of cognitive impairment in dementia sufferers (Ballard, Bannister and Oyebode, 1996). Empirical evidence regarding this sought to hypothesize about the causal relationship between depression and dementia according to the degree of cognitive impairment.

For example, a significant association between depression and less severe cognitive impairment has been reported in several studies (e.g. Reifler, Larson and Hanley, 1982, cited by Ballard *et al.,* 1996). This finding has not, however, been supported by findings from other studies where no association was found (e.g. Fitz and Teri, 1994; Verhey, Rozendaal, Ponds and Jolks, 1993). In contradiction of both sets of these findings, a relationship has also been reported between depression and more severe cognitive impairment (e.g. Rovner, Broadhead, Spencer, Carson and Folstein, 1989, cited by Ballard *et al.,* 1996). Other studies have reported an association between mild cognitive impairment in individuals with depression and mild dementia but more severe cognitive impairment in depressed individuals with moderate cognitive impairment (Fitz and Terri, 1994).

The variability of these findings adds to the complexity of the debate regarding the difficulties of distinguishing depression and early stage dementia. It has been argued that the absence of any key association between the degree of cognitive impairment and depression calls into question earlier assertions that depressed mood is a feature of early stage dementia. This may be because previous studies have used biased sampling procedures (Allen, Jolley, Comish and Burns, 1997). Other methodological reasons as to why research in this area may have been limited include the use of small sample sizes, retrospective designs, non-population based samples and case-controlled designs (Yaffe *et al.*, 1999).

In summary, it remains to be seen whether depression is an early manifestation of Alzheimer's Disease or whether it increases vulnerability through another mechanism (Devanand, Sano, Tan, Taylor, Gurland, Wilder, Stern and Mayeux, 1996). Either way, the notion that depression may well be a predictor of early stage dementia is a popular one, and one that requires further exploration (Muller-Spahn and Hock, 1996).

EVALUATION OF WAYS IN WHICH DIFFICULTIES MIGHT BE ADDRESSED

A wealth of research has been carried out in an attempt to address the difficulties of distinguishing dementia and depression for either clinical or research purposes. As might be expected, results from this research are by no means conclusive, and there are still no definitive biological markers for the most common types of dementia save through autopsy (American Psychological Association [APA], 1998). Nonetheless, a range of methods are available by which to assess for dementia versus depression.

It should be noted, however, that approaches used to address these difficulties have tended to focus solely on the differential diagnosis of dementia and depression. In this way, current research does not yet seem to have caught up with the debate about related complex issues (as discussed above) such as the possible co-morbidity of dementia and depression. At best it appears to have paid occasional lip service to such issues. This focus in the literature will be reflected in the research discussed below.

It has been argued that "neuropsychological evaluation and cognitive testing remain the most effective differential diagnostic methods in discriminating pathophysiological dementia from age-related cognitive decline, cognitive difficulties that are depression-related, and other related disorders" (APA, 1998). Despite the empirical evidence for this assertion (as discussed below), it is important to remember that, given the complexity of the topic, the process of differential diagnosis should ideally be "an interdisciplinary endeavour" (Bair, 1998). Between these disciplines, a variety of methods may be drawn upon when assessing for dementia versus depression. For example: history taking, physical and laboratory examination; screening tools; informant interviews (for both clients and caregivers); neuropsychological and cognitive testing; and biological approaches such as neuroimaging.

An evaluation of these approaches will form the next part of this essay. When evaluating these approaches, it is important to hold three key issues in mind, as summarized by Blackmun (2000). Firstly, the severity of the depression or dementia may have an impact upon participants' cognition in published studies. Secondly, results are affected by the measure used to assess for depression. And thirdly, the sensitivity and breadth of examination will affect the end evaluation. For example, a relatively superficial mental status screening tool has been found to be less sensitive than a neuropsychological battery of tests (Blackmun, 2000).

History taking and screening tools

The clinical interview has been described as the "mainstay" for the evaluation and diagnosis of depression in older adults (Kaszniak and Christenson, 1994). It has even been suggested that the early stages of dementia are largely identified from an individual's history (Bair, 1998). For this reason, a detailed clinical interview is essential and may well provide the spring board from which further assessments are carried out. Screening tools are often implemented at this stage, and a small number of tools have been designed for particular use with older adults. Although screening tools are not diagnostic, they may help confirm "the diagnostic impression", particularly when used in combination with carers' reports (Lundquist, Bernens and Olsen, 1997).

Because it is well validated and easy to administer, the Mini Mental State Examination (MMSE) is a popular starting point when screening for dementia among primary care clinicians (Lundquist *et al.,* 1997). The tool has, however, been criticized for a variety of reasons and should be used with caution. Because it has a strong verbal bias, individuals with significant language difficulties are likely to perform poorly on the examination despite having a good memory and being well oriented in time and place. Conversely, individuals with a high IQ in the early stages of dementia may not be identified (Hestad, Ellertsen and Klove, 1998). While a strength of the tool is its capacity to monitor the progression of dementia over time, it is not specific to the assessment of dementia and is relatively insensitive to subtle changes in cognition.

Two instruments have been designed for the specific assessment of older adults with dementia. The Dementia Mood Assessment Scale (Sunderland, Alterman, Yount, Hill, Tariot, Newhouse, Mueller, Mellow and Cohen, 1988, cited by Ballard *et al.,* 1996), derived from the Hamilton Rating Scale for depression, has achieved modest concurrent validity and good interrater reliablity. It is, however, very limited by its small sample size, lack of sensitivity and specificity data (Ballard *et al.,* 1996).

The Cornell Depression Scale (Alexopoulos, Abrams, Young and Shamoian, 1988, cited by Ballard *et al.,* 1996) contains nineteen items. It has been reported to have good interrater reliability and internal consistency, but is again let down by an absence of sensitivity and specificity data (Ballard *et al.,* 1996). A strength of the scale is that it has operationalized rules which enable clinicians to differentiate, for example, between the loss of interest linked to dementia and the loss of interest linked to depression. Unfortunately, however, these rules are unclear when trying to determine which report is the more accurate: the client's or the carer's (Ballard *et al.,* 1996).

Only two scales have been specifically designed to assess depression in older adults, namely, the Geriatric Depression Scale (GDS: Yesavage, Brink, Rose, Lum, Huang, Adey and Leirer, 1983) and the Schwab-Gilleard Depression Scale (SGDS: Gilleard, Wilmott and Vaddadi, 1981, cited by Richardson and Hammond, 1996). The SGDS is a short self-report index used to assess depression in older adults. This has been found to have good internal consistency and reliability as well as good concurrent and discriminant validity (Richardson and Hammond, 1996). The authors concluded, therefore, that the scale was reasonably insensitive to dementia, implying that it was not confounded by the presence of any organic impairment. They emphasized, however, that further research was needed to determine the best method of using the SGDS: that is, with carers or with clients.

The GDS similarly has the advantage over other screening tools for depression (with possible memory impairment) in that it has been specifically designed for older adults. Several studies, however, have reported that it potentially yields false negative results: that is, clients have been found more likely to underreport depressive symptoms than clinicians or caregivers (e.g. Teri and Wagner, 1991, cited by Kaszniak and Christenson, 1994). This finding has highlighted the need for interviewing caregivers, as discussed below.

More recently, a scale has been developed to identify "the pseudodementia syndrome" (Yousef, Ryan, Lambert, Pitt and Kellett, 1998). The scale comprised a checklist of 48 items, out of which 44 demonstrated significant power to discriminate between organic dementia and depressive pseudodementia. It was concluded that the scale corrected for some of the limitations of the MMSE such as overestimation of individuals' errors within the normal average (Yousef *et al.,* 1998). A limitation of the study was, however, that participants had been diagnosed retrospectively. It may have been that some participants who had originally presented with depression may have gone on to develop dementia. While the scale offers an exciting new measure in the context of differentiating between depression and dementia, the authors emphasized that the results could not be generalized beyond the population used in the study until further research had been carried out.

Informant and Caregiver Interviews

The limitations of screening tools with clients have highlighted the importance of interviewing caregivers (Lundquist *et al.,* 1997). Again, however, caution is required as caregivers have also been found to be biased when reporting the client's symptomatology (Kaszniak and Christenson, 1994). While there is a lack of standardized interviews for informants, one study has described the development and validation of an informant interview for the diagnosis of dementia and depression in older adults, adapted from the Geriatric Mental State Schedule (IDD-GMS: Lewis, Hinchcliffe, Katona and Livingston, 1998).

The study reported that the scale had good reliability and validity and was able to differentiate between participants with dementia or depression or neither. The authors acknowledged, however, that, given the overlap of symptoms for dementia and depression, the scale may have been limited in terms of its specificity and discriminant validity for the diagnosis of depression. Nor did the scale address the difficulty of the fact that dementia and depression may co-exist.

Neuropsychological assessment

The importance of neuropsychological assessment in the differential diagnosis of dementia and depression has been well validated (see Kaszniak and Christenson for a review, 1994). Research has found that certain patterns of neuropsychological test performance, especially those concerning different aspects of memory (e.g. rate of forgetting, free recall versus recognition), help differentiate the cognitive effects of dementia and depression (Kaszniak, 1996b). Nonetheless, findings from such assessments must always be treated with caution. As mentioned above, the long-term prognosis of clients presenting with symptoms of depression and dementia may vary greatly, and neuropsychological assessment may not aid prognosis (Nussbaum, Kaszniak, Allender and Rapcsak, 1995).

Memory Measures

Episodic, semantic and autobiographical memory

Two key problems in using memory measures to identify dementia are that, firstly, memory deficits are associated with normal ageing and secondly, that memory is not a unitary process (Robbins, Elliott and Sahakian, 1996). Nonetheless, a variety of studies have investigated to what extent different aspects of memory functioning help discriminate a differential diagnosis of dementia and depression. It has been suggested, for example, that individuals with Alzheimer's Disease have a particularly poor memory for events (i.e. episodic memory) when assessed using either a recognition or recall test format. This deficit is likely to increase as the disease progresses (Robbins *et al.*, 1996). The findings are not clear-cut, however, because, firstly, individuals have been assessed using very different paradigms and, secondly, it is possible that episodic memory is a heterogeneous concept.

The impact of cognitive impairment and depression on autobiographical memory in older adults has also been investigated using the Autobiographical Memory Test, the Brief Assessment Schedule Depression Cards (BASDEC), Geriatric Depression Scale (GDS) and the MMSE (Phillips and Williams, 1997). Findings from this study demonstrated that autobiographical specificity decreased as the levels of cognitive impairment increased. No association, however, was found between specificity of autobiographical memory and depression, suggesting that retrieval difficulties were not on account of attentional problems due to mood, but rather because of a structural limitation. A weakness of the study was, however, that depression was not studied separately from cognitive impairment. Before generalizing the findings from this study, therefore, this piece of research would need to be extended.

Delayed word recall (DWR), free recall, rate of forgetting and recognition testing

A comparison of individuals with mild degenerative dementia, major depression and "normal" individuals reported that both individuals with dementia and depression demonstrated learning deficits (Hart, Kwentus, Taylor and Harkins, 1987). Whereas individuals with dementia, however, showed a significantly more rapid rate of forgetting after learning, those individuals with depression did not. This suggested that, while memory was impaired in both disorders, each involved different psychobiologic mechanisms (Hart *et al.*, 1987). In another study, which compared the same three types of individuals, it was concluded that individuals with depressive dementia performed worse than individuals with degenerative dementia on tests of free recall, delayed recall, and verbal delayed memory, but not on tests which measured delayed visual memory (Speedie, Rabins, Pearlson and Moberg, 1990, cited by Emery and Oxman, 1994).

Delayed word recall (DWR) was developed especially to aid the diagnosis of early Alzheimer's Disease (Corkin, Growdon, Nissen, Huff, Freed and Sagar, 1984; Welsh, Butters, Hughes, Mohs and Heyman, 1992; both cited by O'Carroll, Conway, Ryman and Prentice, 1997). The results of one study (O'Carroll *et al.*, 1997), however, were disappointing. In this study, although significant differences in mean DWR recall and recognition scores between the depressed and Alzheimer groups were found, separation of these two groups remained poor. Surprisingly, the MMSE was found to achieve better separation of the two groups, although there was still 16% overlap. In conclusion, these findings highlighted the inadequacy of DWR as a measure for the differential diagnosis of depression and early Alzheimer's Disease (O'Carroll *et al.*, 1997).

The results of this study provided a contrast, however, with those of another study, which looked at the accuracy of an extended version of the DWR test in discriminating between individuals with very mild Alzheimer's Disease and depressed individuals in the community (Coen, Kirby, Swanwick, Maguire, Walsh, Coakley, O'Neill and Lawlor, 1997). The study concluded that: (i) DWR measures are sensitive to early stage Alzheimer's Disease; and (ii) the DWR measures used in the study were able to discriminate early stage AD individuals and depressed individuals in the community. The authors did, however, point out that this discriminative capacity would probably be lower for more severely depressed individuals.

Visuoconstructional drawing ability

Rosenstein (1999) has carried out two studies in an attempt to assess the use of visuo-constructional drawing ability in the differential diagnosis of dementia and depression, as measured by the Rey-Osterrieth Copy (RO) (Rey, 1941 and Osterrieth, 1944, cited by Spreen and Strauss, 1991). The first study was a retrospective cross-sectional study of 200 participants which looked at the relationship between depression (using the Beck Depression Inventory or Geriatric Depression Scale) and visuoconstructional drawing ability; and the second was a prospective longitudinal study of 20 psychiatric inpatients matched with 20 non-depressed normal controls. No significant relationship was found in either study.

By contrast, however, a matched control group of 20 neurologically compromised participants performed significantly worse on the RO than both the normal and depressed groups, suggesting that poor performance on the RO is not necessarily a result of depression. The author argued that the RO may, therefore, be a useful means of distinguishing depression and dementia. This argument was supported by the additional finding that, where participants' scores on the BDI had improved, this was not paralleled by improved performance on the RO.

Patterns of performance on neuropsychological tests - qualitative information

It has been suggested by Sweet, Newman and Bell (1992) that qualitative information provided by an individual's performance on a neuropsychological test may assist the differential diagnosis of dementia and depression. These authors drew attention to the fact that depression does not account on its own for symptoms of aphasia or a true "Stroop" effect, but rather leads to a mere slowness on Stroop trials. Similarly, they have remarked that depressed individuals tend not to suffer from two deficits in conjunction with one another: for example, both impaired recall and recognition; impaired recall of easy and difficult word pairs; or incidental and intentional learning. Further research would, however, need to be carried out for these observations to be validated.

Related to this, desRosiers (1992) has observed that depressed individuals tend to be more cautious than individuals with Alzheimer's Disease during recognition testing. This is evident in the contrast between the negative response set in depressed individuals and a bias of false positive errors by individuals with Alzheimer's Disease. In addition, individuals with dementia have been found to be less likely to complain about memory difficulties than depressed individuals. They are more likely, however, to give more "I don't know answers" (Young, Manley and Alexopoulos, 1985, cited by Desrosiers, 1992). This finding should be treated with caution because it contradicts Wells' (1979) earlier observations.

Finally Kretschmar, Kretschmar and Stuhlmann (1989, cited by Rosenstein, 1999) have highlighted that depressed individuals demonstrate a greater degree of inconsistency in their task performance of equal difficulty than individuals with Alzheimer's Disease. This observation opens up the possibility of discriminating depression and dementia when comparing individuals' performances across a variety of neuropsychological tests.

Language

Less research has been carried out to date on the role of language in the differential diagnosis of depression and dementia (Emery and Oxman, 1994). Findings in this area are again mixed. One study found no difference between individuals with depressive dementia and primary degenerative dementia on the correct naming of a series of items and the speed of response (Speedie *et al.*, 1990, cited by Emery and Oxman, 1994).

Likewise, another study reported no significant differences between age-matched individuals with depressive dementia and with Alzheimer's Disease on a variety of language measures such as repetition, confrontation naming, auditory word recognition or reading commands (Emery, 1988, cited by Emery and Oxman, 1994). Interestingly, however, simpler linguistical tasks such as a responsive speech task (e.g. "How many days in a week?") and a sentence completion task did yield differences between the two groups (Emery and Breslau, 1989, cited by Emery and Oxman, 1994).

In contradiction of these null or weak findings, it has been argued that language assessment may have a role in distinguishing between depression and early stage dementia after all (Stevens, Harvey, Kelly, Nicholl and Pitt, 1996). These authors tested four groups of individuals attending a memory clinic (individuals with Alzheimer's Disease, individuals with Vascular Dementia, the 'worried well' and the depressed) using a battery of seven linguistical tasks. They posed two key questions relevant to this essay: "Do all aspects of language function show change in early dementia?" and "Do language assessments facilitate differential diagnosis between depression and dementia?"

The study reported that both dementia groups scored towards the lower end of or below the normal range in all tests except one, suggesting deficits in semantic language function and auditory retention and recall. Similarly, the study concluded that the only language task that did not yield significantly different mean scores was a task of visual recognition. The study was limited, however, by relatively small sample sizes (no group was greater than 19 participants). Also, it had already differentiated the four groups based on MMSE scores alone, suggesting that the groups were relatively easy to differentiate from one another. It would be necessary to repeat the study, therefore, possibly using less clear-cut diagnostic groups.

Attention

It has been argued that those cognitive processes which require greater attention and effort tend to be most impaired in individuals with depression as opposed to individuals with dementia (Kaszniak, 1996b). Again, however, the literature has reported inconsistent findings. While recent research has supported the idea that depressives fail to encode as much as normal controls, "distractibility" has also been cited as a symptom of individuals suffering from Alzheimer's Disease (Wells, 1979). Contradicting this, more recent research has suggested that "distractibility" is less likely to be a feature in early stages of dementia (e.g. Reisberg, Ferris, Borenstein, Sinaiko and deLeon, 1986, cited by Desrosiers, 1992). If further research could support this hypothesis, then attentional difficulties may be a useful way of differentiating between depression and early stage dementia.

Premorbid IQ/ Discrepant Analysis

The role of discrepancy analysis has also been investigated in terms of its clinical utility for the differential diagnosis of depression and dementia (O'Carroll, Curran, Ross, Murray, Riddle, Moffoot, Ebmeier and Goodwin, 1994). Two groups of individuals suffering from major depression and Alzheimer's Disease were assessed respectively using measures of current and premorbid abilities. The study found a significant overlap in both groups of participants' test scores, suggesting that this method could not be recommended for use in clinical practice.

Biological Approaches

Given space constraints in this essay, only a limited overview will be provided of some of the biological approaches used to help differentiate between depression and dementia. In general, biological methods employed in this area of clinical practice and research tend to be based on non-invasive neuroimaging techniques and molecular neurobiology (see Muller-Spahn and Hock, 1996, for a review). It has been noted that such techniques may rule out causes other than dementia or depression for presenting symptomatology, but that it would be unlikely that an individual would be diagnosed with dementia or depression on the basis of imaging techniques alone (Lundquist *et al.*, 1997).

Other biological markers such as Flash Visual Evoked Potential (FVEP) and REM sleep have been studied with regard to their role in differentiating between depression and dementia. FVEP latencies have proved to be a relatively sensitive measure of cognitive dysfunction in one study that compared individuals with very mild Alzheimer's Disease and normal controls (Swanwick *et al.*, 1996). It was noted, though, that further measures may need to be used if this approach were to have a role in distinguishing very mild Alzheimer's Disease from cognitive impairment secondary to depression.

The use of REM sleep as a biological indicator of dementia versus depression has generally proven more useful in individuals who are suffering from severe depression and moderate to severe dementia (Ballard *et al.*, 1996). In one such study, although it was possible to differentiate 86% of individuals with depression versus dementia, this still left 14% of individuals incorrectly classified, a significant number given the dangers of misdiagnosis (Dykierek, Stadtmullter, Schramm, Bahro, van Calker, Braus, Steigleider, Low, Hohagen, Gattaz, Berger and Riemann, 1998).

DISCUSSION

The wide-ranging difficulties of distinguishing depression and early stage dementia have been considered in the first section of this essay. These difficulties were discussed largely within the context of a shift that has taken place in recent years: namely, the shift from the sometime dichotomous view of the two disorders towards a more continuous view. It has been argued that this shift mirrored the change in the use of the term “pseudodementia.” Whereas originally pseudodementia incorporated the concept of dementia as an irreversible disease, this conceptualization gradually moved towards a view that no longer conceived dementia as irreversible (Emery and Oxman, 1994). Further difficulties linked to this shift have also been considered such as the possible co-existence of depression and early stage dementia (Muller-Spahn and Hock, 1996).

The importance of finding ways to address these difficulties has been emphasized, not least because of the risks associated with misdiagnosis such as the implementation of inappropriate interventions (Small, 1998). A variety of approaches that have been developed to address these difficulties have been discussed in this essay. While a particular emphasis was placed on the role of neuropsychological assessment in this area, the value of multidisciplinary assessment was also underlined (Kaszniak and Christenson, 1994).

A discussion about a range of studies that have investigated the validity of various approaches revealed the variability of findings and, therefore, the difficulty in drawing any definitive conclusion about superior methods of assessment. One reason for this variability is probably the heterogeneity within the diagnostic groups of individuals with depression and/ or dementia as well as the variety in the sources of the participants in the studies (Wragg and Jeste, 1989). It is clear that, despite the wealth of research that already exists concerning the differential diagnosis of dementia and depression, further research is needed. This research would need not only to clarify many mixed findings, but also to find ways of addressing the difficulties surrounding *dual* as well as *differential* diagnosis.

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Specialist Essay

Year III

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To what extent do psychological models help us explain the impact on families of caring for a child with chronic illness, and how useful have these models proved in informing interventions for children and their families?

INTRODUCTION

Chronic illness is commonly defined as "an illness that can last for an extended period, at least three months, often for life, and cannot be cured" (Midence, 1995). More specifically, it tends to impede an individual's daily functioning, and may result in his or her hospitalization for over one month per year (Hayes, 1997). The range of illnesses included within this definition extends from psychosomatic illness to diseases with an organic or genetic aetiology (Zimmermann Tansella, 1995). As such, the breadth of studies of chronic illnesses in children is considerable. One review identified nineteen illnesses that have been the focus of research in the past three decades (Williams, 1997). The review was by no means exhaustive, but its identified range included: asthma, cancer, cardiac disease, cerebral palsy, cystic fibrosis, Crohn's disease, diabetes, end-stage renal disease, epilepsy, juvenile rheumatoid arthritis (JRA), rheumatic disease and sickle cell disease. In this essay, several of these illnesses will be referred to but, in keeping with more recent research, an assumption will be made that the findings regarding the impact on the family of a specific childhood chronic illness are often generalisable (Ginsberg, Klonoff and Russo, 1995). This assumption will be discussed in more detail below.

Given the breadth of chronic illnesses prevalent among children, it is perhaps not surprising that the literature has struggled to establish consistent incidence rates of childhood chronic illnesses. This struggle has not been supported by the varied interpretations of the definition of chronic illness cited above: whereas some researchers have included chronic disability in their population surveys (e.g. Hayes, 1997), others have not (e.g. Taylor, 1994). Incidence rates in the UK have therefore ranged from 5% (Hobbs and Perrin, 1985; Rutter, Tizard and Whitmore, 1970; both cited by Zimmermann Tansella, 1995) to 20% (Cadman, Boyle, Szatmari, Oford, 1987, cited by Zimmermann Tansella, 1995; Gortmaker and Sappenfield, 1984, cited by Midence, 1995). In 1984, three million families were reported to be severely affected by caring for children with a chronic illness (Gortmaker and Sappenfield, 1984, cited by Williams, 1997). In the U.S., the range appears to be even greater, and has been identified by one review as extending from 5 to 29% (Newacheck and Taylor, 1992). Figures quoted by population studies must therefore be interpreted with caution but, this note of caution aside, the range of incidence rates does seem to point to the complexity of studying chronic illnesses in children.

This complexity is heightened when childhood chronic illness is considered in the context of the family system (Hayes, 1997). The purpose of this essay will be to explore the extent to which psychological models have helped explain the complex interplay between childhood chronic illness and its impact on the family. It will be argued, however, that the inconsistency of the findings, combined with the sometimes confusing degree of overlap between models, renders an evaluation of these models very difficult. In an attempt to illustrate some key differences in models, firstly, a brief historical overview will be given of the several shifts that have taken place in this area of research. These shifts may be summarized as: first, the move away from the traditional, psychosomatic (or psychopathological) model towards the disease-specific coping approach (see Ginsberg, Klonoff and Russo, 1995 for a review); and second, towards an interactional model of disease. This latter model, it will be seen, by contrast with the psychopathological model, "assumes psychological normalcy in chronically ill children" (Russo, 1986, cited by Ginsberg, Klonoff and Russo, 1995).

It will then be evident from the discussion below that a variety of models have been developed to help explain the degree of impact on families caring for a chronically ill child. At first glance, these models appear to be wide-ranging. They include, for example, a psychosocial approach, transactional models of stress and coping (Zimmermann Tansella, 1995), developmental models (Deatrick, 1997), post-traumatic stress models (Stuber, 1995) and attachment theory (Byng-Hall, 1997). This essay will seek to illustrate that the literature has tended to incorporate all models within a broad social-ecological or systemic framework, and that these two frameworks are themselves interdependent. While a range of psychological models will therefore be discussed individually, it will be emphasized that these models all stem from the broader and related perspectives of a social-ecological framework and family systems theory. Finally, the usefulness of these models in informing interventions will also be discussed.

PSYCHOLOGICAL MODELS AND CHILDHOOD CHRONIC ILLNESS

Historical Overview

One review of the psychological literature on children suffering from a chronic illness has argued that "two distinct and dichotomous approaches" are apparent in the body of research in this area (Ginsberg, Klonoff and Russo, 1995). These two approaches were summarized by the authors as an historical shift that took place from a traditional, psychodynamic approach (also known as the psychopathology model) towards the more recently favoured "interactional" or biopsychosocial model. In brief, the psychopathology model sought to identify personality traits within family members that helped predict a psychopathological response to a child's chronic illness. For example, asthma was reported to be associated with an increased risk of emotional difficulties in mothers and dysfunctional parenting (Werry, 1972, cited by Ginsberg *et al.*, 1995). In essence, this approach was thought to be "disease-specific" in that the impact of a chronic illness on a family was construed as dependent on the specific nature of the illness. As the authors of the review point out, however, because the data in most studies are correlational, it is not possible to make inferences about the causal relationship between the illness and an individual's response to that illness.

This approach was superseded by studies that focused on the coping mechanisms employed by individuals to manage the stresses unique to his or her (or his or her child's/ sibling's) chronic illness (Ginsberg *et al.*, 1995). Still located within a disease-specific approach, accounts were often descriptive (e.g. Kazak, 1989; Wallander and Thompson, 1995). It is only in recent years that more rigorous, theoretical models have been developed to help predict psychosocial adjustment of children with a chronic illness and their families (Davis, Brown, Bakeman and Campbell, 1998). This area of research has illustrated the importance of examining both the common factors across chronic illnesses and features specific to a certain disease within a theoretical framework. There is an increasing body of empirical evidence that points to the suggestion that parents' quality of adjustment to caring for a child with a chronic illness may be comparable across diseases (e.g. Thompson, Gil, Gustafson, George, Keith, Spock and Kinney, 1994). This model makes the assumption that children with chronic illnesses and their families are "psychologically normal" (Russo, 1986, cited by Ginsberg *et al.,* 1995). In this essay, however, the difficulties of drawing any such conclusion will be considered further.

Social-ecological approach

Bronfenbrenner's ecological model (1989, cited by Holaday, 1997) has been adapted by researchers to help explain the quality of family functioning in those families who are caring for a child with a chronic illness (e.g. Hayes, 1997). Bronfenbrenner's model consists of four levels: the macrosystem, ecosystem, mesosystem and microsystem. An analysis of the macrosystem helps identify those cultural beliefs and values that are inherent, for example, in health care systems or everyday interactions that impact on the lives of families of children with chronic illnesses (Holaday, 1997). The ecosystem has been defined as "one or more settings that do not involve the developing person (or family) as an active participant, but one in which events occur that affect, or are affected by, what happens in the setting containing the developing person (or family)" (Bronfenbrenner, 1979, p.25, cited by Holaday, 1997). For example, in terms of caring for a child with a chronic illness, the degree of access to required services may depend on the organization of that service (Holaday, 1997).

The mesosystem level comprises "the interrelations of two or more settings in which the developing person (family) actively participates" (Bronfenbrenner, 1979, p.25). And finally, the microsystem level has been defined as "a pattern of activities, roles, and interpersonal relations, experienced by the developing person (family) in a given setting with particular physical and material characteristics" (Bronfenbrenner, 1979, p.22, cited by Holaday, 1997). The literature to be discussed below - all derived from aspects of family systems theory - may be located within this final level of the model. The family systems approach has often been considered a social-ecological correlate (Kazak, Meeske, Penati, Barakat, Christakis, Meadows, Casey and Stuber, 1997; Williams, Williams, Hanson, Graff, Lavonne, Liebergen and Karlin-Setter, 1999). This is perhaps not surprising in light of the range of factors that have contributed to it, as shall be seen below.

Family systems model

The family systems perspective of chronic illness was first proposed by Kazak (1989, cited by Thompson, Armstrong, Kronenberger, Scott, McCabe, Smith, Radcliffe, Colangelo, Gallagher, Islam and Wright, 1999). The model is informed by a biopsychosocial perspective (Miller, 1995) and is said to comprise a range of factors: namely: illness parameters such as type of illness, duration and severity; child parameters such as age, gender and coping methods; and social-ecological parameters, such as socio-economic status, parental adjustment and family functioning (Wallander and Thompson, 1995). Despite evidence in some childhood chronic illnesses in favour of an association between disease severity and psychological adjustment (e.g. Lavigne and Faier-Routman, 1993, cited by Chaney, Mullins, Frank, Peterson, Mace, Kashani and Goldstein, 1997), the majority of studies disqualify this relationship (e.g. Thompson, Gustafson, Hamlett and Spock, 1992). Most studies have illustrated that child, parent and sibling adjustment are primarily influenced by social-ecological factors (e.g. Thompson, Gil, Burbach, Keith and Kinney, 1993; Walker, Ortiz-Valdez and Newbrough, 1989, cited by Chaney *et al.*, 1997).

Key factors in the model: family functioning and psychosocial adjustment

Research guided by the family systems model has tended to explore the association between aspects of family functioning and family members' psychosocial adjustment to caring for a child with a chronic illness (e.g. Diseth, Emblem and Vandik, 1995). In this sense, the model has contributed to our theoretical understanding of what is meant by "the *impact"* of childhood chronic illness on the family. In brief, it has conceptualized the idea of "impact" in terms of a family's ability to adjust to or cope with a child's chronic condition (Midence, 1995). Researchers have frequently failed to define or differentiate these concepts. One researcher, however, compared the two, and argued that, even when researchers do not define these terms, they appear to imply "the individual's ability to manage external and internal demands, conflicts and feelings of distress" (Midence, 1995). The external demands will only be referred to briefly in this essay, but these refer to environmental factors, for example, financial pressures or the availability of social support (Zimmermann Tansella, 1995).

Other researchers have been more specific in their conceptualization of psychosocial adjustment. For example, it has been defined as "a composite construct" that consists of various indices of impaired psychological or social adaptation to illness (Zimmermann Tansella, 1995). For the child, these include emotional and behavioural problems, social competence and self-concept; and in parents, these include physical and mental health status, life satisfaction and social support (Zimmermann Tansella, 1995). Because of the emphasis on the relationship between family members' psychosocial adjustment and family functioning, research in this area has sometimes been referred to as "the psychosocial approach" (Midence, 1995), but it is important to recognize that this research in fact falls within the broader framework of family systems theory.

Family systems theorists have hypothesized that a positive family environment (good family functioning) can lessen the impact of constant stressors (Moos and Moos, 1994, cited by Soliday, Kool and Lande, 2000). Factors that underpin good family functioning are said to include: high cohesion (characterized by the supportiveness of family members to one another); expressiveness (characterized by the ability to express emotions openly); and low levels of conflict (Soliday, Kool and Lande, 2000). One criticism of research in this area is that it has generally focused on mother's reports of family functioning and their own psychosocial adjustment (Thyen, Terres, Yazdgerdi and Perrin, 1998). A smaller number of studies, however, have also looked at paternal and sibling reports (e.g. Eiser, 1994; Timko, Stovel and Moos, 1992). This research, it will be seen, has yielded contradictory findings and varies in its ability to predict the impact on families of caring for a child with a chronic illness.

Parent, child and sibling psychosocial adjustment

A large body of research has been generated concerning the impact of a child's chronic illness on the mother. Research on the whole has demonstrated that mothers of chronically ill children are more likely to suffer from mental health problems than mothers of healthy children (Howlin, 1988, cited by Mescon and Honig, 1995; Midence, 1995). These findings suggest that a child's chronic illness affects maternal mental health, but it does not help explain why this should be so. One proposed explanation is based on the hypothesis that positive family functioning has a predictive influence on family members' psychosocial adjustment. For example, it has been found that mothers of chronically ill children reported higher levels of depression and impaired physical health in addition to less family cohesion and less involvement in social activities (Thyen *et al.*, 1998).

The hypothesis has also been explored in relation to a child's adjustment to his or her chronic illness. It has been found, for example, while some children with sickle cell disease suffer from psychological problems, others are well adjusted. This finding has led to the conclusion that perhaps differences in family functioning factors (for example, cohesion) are responsible for these seemingly contradictory findings (Kaslow and Brown, 1995). Supporting this conclusion, it has been found that children with a chronic illness are more likely to adjust well to their condition in terms of self-perceived competence (e.g. Hauser, Jacobson and Wertlieb, 1985, cited by Zimmermann Tansella, 1995) and self-esteem (Wallander, Varni, Babini, Banis and Wilcox, 1989, cited by Zimmermann Tansella, 1995) if they are part of cohesive and actively social families (Perrin, Ayoub and Willett, 1993, cited by Zimmermann Tansella, 1995). Similar findings have been reported in children with sickle cell disease (Moise, 1986, cited by Midence, 1995).

These findings are, however, limited as they are based on correlational data, meaning that any causal inference is assumptive. Moreover, a small number of studies have also failed to find any support for the hypothesis that family functioning is predictive of maternal adjustment (e.g. Davis, Brown, Bakeman and Campbell, 1998). The limitations of this research are further highlighted in view of the fact that identified characteristics of family functioning are often based on maternal reports only. For example, families identified as high in conflict in two studies on children with sickle cell disease were based on mothers' reports of their child's behaviour problems (Thompson, Gil, Burbach, Keith and Kinney, 1993; Thompson *et al.,* 1999).

The danger of interpreting child adjustment based on maternal reports is evident in the light of a growing number of studies that have pointed to the reciprocal relationship between a child's and his or her mother's psychosocial adjustment. Known as "the transactional process", these studies point to the need for caution when interpreting maternal reports of family functioning (Chaney *et al.,* 1997). Despite some contradictions in the research (e.g. Kovacs, Iyengar, Goldston, Obrosky, Stewart and Marsh, 1990, cited by Chaney *et al.*), the evidence has tended to suggest that a mother's psychological adjustment influences her child's adjustment and vice-versa. For example, in a study of children with congenital heart disease, it has been found that maternal perceptions of her parenting skills are associated with her child's psychological functioning rather than the actual severity of the cardiac defect (DeMaso, Campis, Wypij, Bertram, Lipshitz and Freed, 1991). Unfortunately, this study makes no claims to the generalisability of these findings.

By contrast with the body of research about mothers and paediatric chronic illness, there is very little research that has been carried out on the impact of a childhood chronic illness on fathers (Chaney *et al.,*1997). A common finding is that fathers of chronically ill children are less prone to mental health difficulties than mothers (e.g. Bristol, Gallagher and Schopler, 1988; Eiser and Havermans, 1992; both cited by Chaney *et al.,* 1997). This may be a reflection of the tendency for mothers to be the primary carer or, less obviously, an indicator of the fathers' requirement to respond in a more problem-focused way in order to manage the increasing financial burden imposed on the family by a child's chronic illness (Shapiro, 1983, cited by Chaney *et al.,* 1997). This view has, however, been contradicted by the results of a longitudinal study, which demonstrated that when parental adjustment is investigated for a range of symptoms, mother and father levels of adjustment are comparable with one another (Chaney *et al.*, 1997).

Empirical investigations about the interrelationships between paternal psychosocial adjustment and the child's and/or mother's functioning are also notably absent from the literature (Chaney *et al.*, 1997). One study reported an inverse relationship between paternal and maternal adjustment (Chaney *et al.*, 1997). That is, as fathers' levels of adjustment decreased, mothers displayed improved adjustment (i.e. less distress). Child and father adjustments were, however, positively correlated: this departure from the negative correlation between mother and father adjustments highlights the complex nature of the interactions within the family system.

In general, the "received" view of the impact of caring for a chronically ill child on parents is a negative one (Hayes, 1997). It has been reported that as much as 56% of parents of chronically ill children suffer from psychological difficulties, including depression, anxiety and tiredness (Bouma and Schweitzer, 1990, cited by Wamboldt and Levin, 1995). It is difficult, however, to draw general conclusions across chronic illnesses, as the research has often suggested differences in parental adjustment within specific illnesses. One study, for example, found that parents of children with congenital heart disease reported higher levels of stress than both parents of healthy children and parents of children with cystic fibrosis (Goldberg, Morris, Simmons, Fowler and Levinson, 1990). Lewis and Khaw (1982, cited by Ievers and Drotar, 1996), by contrast, found no significant difference in family functioning between parents of children with cystic fibrosis and parents of healthy children. The negative impact on marital relations, also often cited (Burr, 1985; Johnson, 1985; Perrin and MacLean, 1988; all cited by Midence, 1995), has again been over-simplified. Research findings have also indicated that some parents report increased marital closeness subsequent to having a chronically ill child (Midence, Fuggle and Davies, 1993, cited by Midence, 1995).

Finally, the research on the impact on healthy siblings of having a chronically ill child in their family is also mixed. The majority of studies, however, have demonstrated the increased vulnerability of healthy siblings to a range of internalizing and externalizing problems (see Williams, 1997 for a review). Several studies have reported that siblings are more vulnerable to social isolation, resentment of the sick child (Lobato, Barabour, Hall and Miller, 1987, cited by Zimmermann Tansella, 1995), school difficulties, aggression and hyperactivity (Drotar and Bush, 1985; Dyson, 1989; both cited by Zimmermann Tansella, 1995). Perhaps even more striking than this is the finding that healthy siblings of children with sickle cell disease reported higher levels of depression and coping difficulties than their chronically ill siblings (Treiber, Mabe and Wilson, 1987, cited by Kaslow and Brown, 1995).

The emerging picture of the impact on families of caring for a chronically ill child is, therefore, far from clear-cut. Some researchers have even concluded that families of chronically ill children demonstrate a good level of family functioning despite the difficulties they face (Midence, 1995). This inconsistency in the literature may be a reflection of flaws in the research: namely, small samples, a focus on specific chronic illnesses, few comparison studies or replications, and methodological limitations (Hayes, 1997). These limitations are heightened by the tendency in the literature to blur the boundary between family research and parent research, assuming that the latter is representative of the whole family (Hayes, 1997).

This mix of findings, combined with the methodological flaws in the research, naturally limited the extent to which the family systems model has effectively explained the impact of childhood chronic illness on families. The next research challenge was, therefore, to make sense of these findings within a more rigorous theoretical framework as opposed to the broader systemic framework. As expressed by one author: "The increased risk of poor adjustment in sick children and their siblings and parents but the wide variation in adjustment point to the need to identify factors which mediate the differential outcome of psychosocial adjustment" (Zimmermann Tansella, 1995, p.299). A range of models, still located within a systemic framework, that have sought to account for these mediational factors will be considered in the next section of this essay.

Life cycle theory and developmental perspectives

A developmental perspective on childhood chronic illness is incorporated within Rolland's Family Systems Illness Model (1994, cited by Deatrick, 1997), and was previously developed by other researchers (e.g. Duvall, 1977; McGoldrick and Carter, 1982; both cited by Zimmermann Tansella, 1995). It emphasizes the importance, when a chronic illness is first diagnosed, of recognizing the developmental life cycles of every family member as well as the developmental life cycle of the whole family.

This importance is founded on the premise that caring for a child with a chronic illness will impact on every family member's individual developmental goals, thus influencing the family's ability to adjust to living with a child or sibling with a chronic illness (Zimmermann Tansella, 1995). The model further proposes that, subsequent to the onset of the illness, the stage of the illness itself is also essential to our understanding of family functioning. It maintains that illness always imposes a "centripetal pull" on the family, which is exacerbated by illness severity. If, therefore, the onset of illness occurs at the life cycle stage of a family when family members are seeking autonomy (known as the centrifugal period), the onset of a chronic illness disrupts a family's natural course of development, thus reducing its capacity to adjust and cope (Zimmermann Tansella, 1995).

The combination of life cycle theory and a developmental perspective has also been termed "role theory" (Williams, 1997). Its hypothesis is simply that family roles are reciprocal: if, therefore, a family member becomes ill, the role pattern is automatically changed and expectations shift. The family's ability to cope is dependent on their redistribution of family resources and re-establishment of family roles and activities (Friedman, 1992, cited by Williams, 1997).

This impact on family life is often seen to affect parent, sibling and child personal and social development (Williams, 1992, cited by Williams, 1997). For example, one study found that mothers of chronically ill children tended to give less care to healthy siblings; and that these healthy siblings in turn were more likely to give care to their chronically ill sibling (Williams, Lorenzo and Borja, 1993). As participants in this study were, however, Filipino it would be necessary to replicate this study in the UK to determine whether it had cross-cultural implications. This note of caution aside, the developmental perspective on family adjustment to a child's chronic illness is noted for its contribution to models of stress and coping (Zimmermann Tansella, 1995), and these will be considered next.

Transactional model of stress and coping

Research in the last decade has made use of stress and coping models to help define the potential risk and resource factors in families caring for a child with a chronic illness (e.g. Sloper and Turner, 1993). Based on Lazarus' and Folkman's (1984, cited by Zimmermann Tansella, 1995) "process model of stress and coping," the models hypothesize that adjustment is in part determined by the factors of illness, family and personality traits; and that all of these factors, either individually or jointly, contribute to family members' coping strategies and adjustment (Zimmermann Tansella, 1995).

The stress and coping model in the context of families and childhood chronic illness has been supported by findings from several studies. For example, a range of individual coping resources has been found to predict good parental adjustment. These include: optimism (Scheier and Carver, 1985, cited by Zimmermann Tansella, 1995), a low neuroticism score, extroversion and self-help skills and an internal locus of control (Sloper and Turner, 1993). These findings have been replicated more recently in a study on mothers of children with congenital heart defects, which reported an association between maternal adjustment and employment of active coping strategies (Davis, Brown, Bakeman and Campbell, 1998).

Consistent with previous research (e.g. Thompson *et al.,* 1993), this study found that the association between maternal adjustment and coping resources was not related to type of illness, and so demonstrated a strength of the model in that it can be applied across diseases. Interestingly, the study did not provide support for the role of family functioning in predicting maternal adjustment. These findings should, however, be interpreted within the context of the study's limitations: namely, a small sample size, reliance on maternal reports, a bias towards psychopathological measures of adjustment; and a cross-sectional design (Davis *et al.*, 1998). Future research that utilizes this model will need to employ a longitudinal design if the model's predictive influence is to be validated.

Attachment theory

Attachment theory has made several contributions to ideas about the impact of childhood chronic illness on the family, many of which link to developmental models described above. Just as in developmental or role theory, the onset of illness in a child elicits new behaviour patterns in the family, so has childhood illness been described as "one of the phenomena that elicits attachment behaviour" (Byng-Hall, 1997). According to attachment theory in the context of systemic psychotherapy, therefore, when a child becomes ill, he or she is disposed to seek care from other family members. If attachments are insecure, one of two scenarios may occur: either the child's illness does not elicit appropriate care-giving behaviour or, inversely, the child's illness justifies the maintenance of overly close bonds (Byng-Hall, 1997).

The idea that illness affects attachments within families (in particular, between the primary carer and child) has been explained by an interpretation of Erikson's model of childhood development (Mescon and Honig, 1995). Depending on the stage of the chronically ill child's development, his or her attachments may be affected. For example, in the first stage of Erikson's theory (Basic Trust versus Mistrust - 0-1 years), the chronically ill infant may be subject to a series of painful medical procedures, admissions into hospital, separation from parents and parental anxiety. As a result, parental contact with the infant is disrupted, and secure attachment threatened (Mescon and Honig, 1995). These disruptions to the attachment process are potentially repeated throughout the child's development, later threatening autonomy, independence and positive self-concept (Mescon and Honig, 1995).

Support for the hypothesis that attachments between parents and children may be threatened has been suggested by research into the narratives of parents who have cared for a chronically ill child. It is well established that when an individual is talking about an important attachment figure and his or her narrative becomes incoherent, this is often illustrative of an insecure attachment to that figure (Main, 1991, cited by Byng-Hall, 1997). One study examined the narrative styles of 91 parents of children with either epilepsy or cerebral palsy (Pianta, Marvin, Britner and Borowitz, 1996). They found that half the parents demonstrated an incoherent narrative style when talking about their child, indicative of insecure attachments as well as unresolved trauma. This final idea - that a child's chronic illness may be traumatic for a family - brings us to a recent development in the child and family chronic illness literature: that of post-traumatic stress models.

Post-traumatic stress models

Studies in recent years of childhood cancer survivors and their parents have proposed that the diagnosis of cancer and subsequent treatment are better conceptualized as traumatic rather than simply stressful (Stuber, 1995). This proposal is in keeping with the *Diagnostic and Statistical Manual of Diseases (4th edition)* (DSM-IV, APA, 1994) which, in its qualifying criteria for post-traumatic stress disorder, includes the event of learning that one's child has a life-threatening disease (Kazak *et al.*, 1997). In support of this, it has been found that mothers and fathers of children who have survived childhood cancer report significantly higher post-traumatic stress symptoms than parents of children who have never been chronically ill (Kazak *et al.*, 1997). Interestingly, however, no differences were found between the children who had survived cancer themselves and comparison children.

This apparent lack of a traumatic impact on the children themselves by contrast with the parents is possibly explained by a subsequent post-traumatic stress model (Wamboldt, Weintraub, Krafchick, Berce and Wamboldt, 1995). This model has suggested that it is not the current stress of caring for a child with a chronic illness that mediates parental adjustment but rather the influence of a prior trauma in one or both of the parents' experiences. In other words, previous unresolved parental trauma is reactivated by the current trauma of their child's chronic illness. This impedes their ability to manage the anxiety associated with their child's illness, thus reducing the family system's capacity for coping. One study in support of this hypothesis reported that, contrary to expectation, prior experience of caring for a child with asthma was associated with poorer asthma management by parents in subsequent episodes (Morey and Jones, 1993). At present, the literature lacks research into the impact of prior unrelated traumas, with the exception of occasional case examples (Wamboldt *et al.*; 1995), but the model offers an exciting development to our understanding of differential factors that influence family adjustment to paediatric chronic illness.

PSYCHOLOGICAL INTERVENTIONS

Now that the extent to which psychological models help us to explain the impact on families of caring for a child with chronic illness has been discussed, the degree to which these models have so far been useful in informing interventions will also be considered. Perhaps, not surprisingly, it has been widely stated that interventions with families caring for a child with a chronic illness should aim to meet systemic needs at a community level (for example, medical and education requirement) as well as a family level (for example, seeking social support) (Frank, Hagglund, Schopp, Thayer, Vieth, Cassidy, Goldstein, Beck, Clay, Hewett, Johnson, Chaney and Kashani, 1998). Unfortunately, recommendations in the literature about appropriate ways in which to intervene with families have rarely to date been investigated by empirical research (Zimmermann Tansella, 1995).

For example, the developmental/ family life cycle literature recommends an openness in systemic therapy on the part of the therapist when questioning the family about their experiences (Barth, 1996). It fails, however, to support this recommendation with empirical evidence. Similarly, other researchers have made assumptive recommendations for clinical practice based on the current knowledge base about the impact of childhood chronic illness on families. For example, in view of the research that indicates the interactions between individual adjustment, family transactional patterns and disease processes, the need for systemic or biopsychosocial interventions has again been emphasized (Wertlieb, 1993).

One exception to this gap in the research is the Sickle Cell Disease (SCD) Project (Kaslow and Brown, 1995). A systemic venture, the project is guided by a psychoeducational perspective and incorporates both a risk-resistance-adaptation perspective (Wallander *et al.,* 1989, cited by Kaslow and Brown, 1995) and the transactional stress and coping model (Thompson *et al.,* 1993). Sessions range from six to twelve in number and all family members attend where possible. Sessions are structured and topics covered include the following: educating family members about sickle cell disease; teaching preventive health care strategies that may serve as resistance factors; pain management techniques to enhance child and family coping; enhancing intrapersonal variables; and investigating socioecological resistance factors. Research is currently at early stage but preliminary findings have suggested that families have felt more capable of handling their child's difficulties and dealing with the health-care system (Kaslow and Brown, 1995).

The adaptive-practice model has been advocated by one researcher, the purpose of which is to improve physician-family relationships through a four-stage process of directing, supporting, teaching and finally collaborating with families (Feldman, Ploof and Cohen, 1999). This approach has, however, been criticized on the grounds that it is a linear, non-dynamic model that may as such be insensitive to the developmental needs of the family when they meet with doctors (Cooley and McAllister, 1999). Again, no empirical evidence exists to support either view-point. In sum, current psychological models - in particular, those that fall within a systemic framework - are guiding clinical practice. This guidance is, however, based on the assumption that the findings accounted for by these models may be directly translated into clinical interventions. In fact, research at the level of intervention is still in embryonic form, and it is not currently possible to determine the efficacy of utilizing these psychological models to inform interventions.

DISCUSSION

Childhood chronic illnesses are vast in number, and the psychological models that have sought to date to explain the impact of caring for a child with a chronic illness on families also represent an ever-growing body of research. In many ways, the range of models discussed in this essay - their commonalities as well as their differences - have reflected the difficulty of accounting for the relationship between paediatric chronic illness and family psychosocial adjustment with any one model.

No one model or theory has yet been able to provide a full account of the nature and extent of the impact of childhood chronic illness on the family. Perhaps this is why the literature has tended to incorporate its range of models within the broader framework of family systems theory. There is an obvious advantage to this approach: a consistently systemic emphasis on the child's illness reduces the danger of any one individual within the family (in particular, the child) becoming "psychopathologized" as perhaps endorsed by the traditional psychosomatic perspective. Despite this advantage, however, the broader systemic accounts of individuals' psychosocial adjustment to chronic illness did not explain the range of adjustment responses. In the light of this, it appears critical that the research continues now to build on those models (for example, the transactional models of stress and coping and post-traumatic stress models) that tease out the mediational factors in differentiating individual psychosocial adjustment processes.

It has been pointed out that future research needs to carry out intervention studies that seek to support children's adjustment to chronic illness through augmenting family cohesion and reducing family conflict (Thompson and Gustafson, 1996). The argument of this essay has to some degree supported this recommendation. Given the complex and often contradictory nature of the findings in relation to family functioning and family members' psychosocial adjustment, it would seem that this recommendation might be over-simplified. The challenge of intervention studies will be to identify the range of mediational factors that contribute to family adjustment; and to intervene at the level of any of these. It might be that some families are more vulnerable because of prior experiences of trauma; and others are more vulnerable because of poor family functioning prior to the child's illness. Perhaps individual family members vary in their patterns of vulnerability. All these are questions for future research.

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CLINICAL DOSSIER

Adult Mental Health Summary of Placement Experience

Placement location: Morden Hall Medical Centre and Psychology Department, Springfield Hospital
Trust: South West London Community NHS Trust
Dates: October 1998 - April 1999
Supervisor: Jane Street

The placement was split between primary care and a psychiatric hospital. Settings included a GP practice, an acute psychiatric admissions ward and a hospital outpatient clinic. Methods of assessment included interviews, standardized questionnaires (e.g. BDI, BAI), scaling techniques and psychometric testing (e.g. WAIS-R; WMS-R). Interventions were primarily carried out within solution-focused and cognitive-behavioural frameworks.

A total of 11 clients were seen on this placement. Clients ranged from 18 to 52 years and were from a variety of socioeconomic and ethnic backgrounds. Clients' presenting issues were diverse and included depression, anxiety, anger, bereavement, physical disability, addiction to sexual behaviours, sexual abuse, relationship issues and borderline personality disorder. A service-related project was also undertaken on this placement.

Adult Mental Health Case Report Summary

The cognitive-behavioural management of depression and anxiety in a 52-year-old woman

Assessment: DH was a 52-year-old white female referred by her GP for depression following a three-year period of increasing stress at work. Her main concerns included: low mood, poor concentration, low self-esteem, panic attacks and fear of leaving home unaccompanied. At the time of initial assessment, DH was on long-term sick leave from work.

Formulation: DH's presenting difficulties were formulated within a cognitive-behavioural framework, which proposes that some early experiences lead to the formation of dysfunctional assumptions, and that these assumptions may remain dormant until triggered by a critical incident.

DH's increased work load in her job was conceptualized as a critical incident in her life, which triggered negative automatic thoughts about her not being able to cope. These thoughts were related to her core beliefs about herself as "a coper" and "a perfectionist" which, in earlier life, had led to the formation of her conditional assumptions (e.g. "I must cope", "I must be perfect"). Cognitive distortions such as the overestimation of the consequences of not coping at work helped maintain the problem, and led to her avoidance of situations where she was fearful of not coping.

Interventions: DH was seen for weekly sessions over a four-month period. Interventions included behavioural strategies (e.g. monitoring and scheduling activities), cognitive techniques (e.g. detection of automatic thoughts, reality testing of automatic thoughts) and graded exposure tasks.

Outcome: DH made considerable progress during therapy. Her scores on the BDI and BAI indicated significant decreases in her levels of depression and anxiety. Her panic attacks and avoidance of situations had decreased, and her mood and concentration had improved. The efficacy of cognitive-behavioural therapy for DH was discussed.

People with Learning Disabilities Summary of Placement Experience

Placement location: Baltic Road Clinic

Trust: Invicta Community Care NHS Trust
Dates: April 1999 to October 1999
Supervisor: Enrique Valles

The placement was within a community team for people with learning disabilities. Experience was gained working with professionals within a multidisciplinary team, as well as with carers and managers from residential homes and day centres.

13 clients were seen in total on this placement with an age range of three to 71 years. Methods of assessment included interviews with clients, families and carers, behavioural observation and standardized measures (e.g. Vineland Adaptive Behaviour Schedule, Bene-Anthony Family Relations Test). Interventions were carried out primarily within a behavioural framework, though psychodynamic and systemic theories were also drawn upon.

A wide range of experience with clients was gained, including clients with challenging behaviour, hypomanic episodes, psychotic delusions and hallucinations, self-injurious behaviour, anger management problems and autism. Interventions were conducted with individuals, staff groups and carers.

People with Learning Disabilities Case Report Summary

Assessment and intervention of a 30-year-old man with moderate learning disabilities and challenging behaviour.

Assessment: DC was a 30-year-old white male with moderate learning disabilities and "autistic characteristics", though he had never been formally diagnosed as autistic. DC was referred by his GP because care workers in his residential home had concerns about his "aggressive" and "erratic" behaviour. In the year prior to the referral DC had experienced several significant losses, including the death of his grandfather and clients leaving the home. DC's assessment comprised: a review of his medical and Clinical Psychology records, interviews with staff at his residential home, meeting individually with DC and observation of DC in his residential home setting.

Formulation: DC's difficulties were conceptualized within a behavioural framework. The onset of his challenging behaviour appeared to have been triggered by several significant losses in his life the previous year which, because of his learning disabilities, he struggled to understand or express, except through maladaptive behaviours. Functional analysis of DC's behaviour suggested that his aggressive behaviours often followed periods of anxiety. Staff's negative responses to these behaviours tended to have the adverse consequence of positively reinforcing these behaviours, particularly given that DC's environment was largely under-stimulating and he had few opportunities for positive interactions with staff.

Interventions: Interventions included management of the antecedents of DC's behaviour (for example, helping decrease DC's level of anxiety) and management of the consequences of his behaviour (e.g. encouraging staff to respond consistently to DC's behaviour). Efforts were also made to increase the level of DC's stimulation during the day and the frequency of his positive interactions with staff members.

Outcome and Evaluation: The frequency and intensity of DC's aggressive behaviours were reported to decrease, and his level of daily stimulation was improved. Limitations of the intervention were also discussed, in particular, the need for a broader systemic approach.

Children, Adolescent and Family Summary of Placement Experience

Placement location:	Child and Adolescent Psychology Department, Cotswold House, Sutton Hospital
Trust:	South West London and St George's Mental Health NHS Trust
Dates:	October 1999 to April 2000
Supervisor:	Emma Meldrum

The placement was based within a child and adolescent psychology department. Experience of liaising closely with professionals from a variety of disciplines was gained on this placement.

A total of 15 clients were seen on this placement with an age range of three to 15 years. Methods of assessment included interviews with children and their families, standardized questionnaires (e.g. CDI, Culture-Free Self-Esteem Inventory), neuropsychological tests (e.g. WISC-III, WORD) and behavioural schedules (e.g. ABC charts and sleep diaries). Interventions were carried out within systemic, cognitive-behavioural, behavioural and solution-focused frameworks. Attachment theory was also drawn upon in the process of formulation. Clients' presenting problems incorporated a range of issues. These included: parental separation, sleep difficulties, chronic constipation, personality change and anger management problems following a head injury, attention deficit hyperactivity disorder, physical abuse, bullying, low self-esteem and obsessive compulsive disorder.

In addition to clinical work, a case presentation was given to the child psychology team, and a presentation on practice effects was given (jointly with another trainee) to a neuropsychology specialist interest group in the region.

Child, Adolescent and Family Case Report Summary

Assessment of a 12-year-old girl with learning disabilities and a history of physical abuse

Assessment: EW was a 12-year-old girl of mixed ethnic origin referred by her GP for emotional and behavioural problems (for example, "occasional violent outbursts" that included screaming, crying and hitting). She was also reported to have been physically abused by her father in her early life, and to have learning difficulties. At the time of assessment, EW's mother was concerned that she was unable to control her temper with her children, and the family's support network was very limited. Assessment was carried out using clinical interview, examination of a series of reports, a telephone conversation with EW's class teacher and assessment of EW's general intellectual functioning.

Formulation: EW's difficulties were initially formulated within a biopsychosocial model. Predisposing factors included: EW's learning difficulties; and the trauma of being physically abused. Maintaining factors included EW's hypersensitivity to her surroundings and the family's limited social support network. Findings from the neuropsychological assessment revealed that EW fell within the moderate range of learning difficulties. It was further hypothesized that EW's presentation best fitted a general formulation of post-traumatic stress disorder.

Interventions: Interventions included liaising with Social Services about current child protection issues, accessing a wider support system for EW and her family, and co-ordinating services involved in EW's care.

Outcome: The nature of EW's difficulties were discussed with EW's mother together with findings from the neuropsychological assessment. This helped improve EW's mother's understanding of her daughter's difficulties and, as a result, she was more able to monitor her style of language and approach in managing EW's behaviour. Because of the complexity of EW's difficulties, EW was referred to the Child Mental Health Team (a Tier 3 service) for further intervention.

Older Adults Summary of Placement Experience

Placement location: Springfield Hosptial
Trust: South West London Community NHS Trust
Dates: April 2000 to October 2000
Supervisor: Sara Turner

The placement was based within two community mental health teams for older adults. Settings included a psychiatric day hospital ward, a long-term psychiatric ward, individuals' homes, residential and nursing homes and day centres.

Methods of assessment included interviews with clients and carers, behavioural observations, standardized questionnaires (e.g. BDI) and neuropsychological tests. Interventions were primarily within a cognitive-behavioural framework but drew on a range of theories, including solution-focused, systemic, bereavement and attachment models.

A total of 6 clients with an age range of 70 to 95 years were seen on this placement for individual work, either working with clients on their own or with their carers. Clients presented with a wide range of problems that included bereavement, panic attacks, depression, challenging behaviour, various dementias, somatization disorder and psychotic episodes. 10 clients were also assessed (whose main presenting issue was either anxiety or depression) regarding their appropriateness for a solution-focused group. Five of these clients attended the group over an eight week period, which was co-facilitated with a Clinical Psychologist.

In addition to direct clinical work, the trainee gained experience in auditing two nursing homes. A clinical case presentation was also given to members of one of the community mental health teams.

Older Adults Case Report Summary

Assessment of a 70-year-old lady with possible semantic dementia

Assessment: AA was a 70-year-old lady who was referred by the Consultant Psycho-Geriatrician for an assessment of her current intellectual and memory functioning. She was reported to have experienced increasing word-finding difficulties in the past three to four years. Assessment was carried out using clinical interview, a review of AA's medical records and neuropsychological testing of AA's general intellectual and memory functioning.

Formulation: Neuropsychological testing revealed a lateralization of AA's general intellectual and memory functioning. Her verbal abilities were significantly impaired by contrast with her non-verbal abilities. Similarly, her auditory memory was considerably lower than her visual memory. It was hypothesized that AA's difficulties had had a sudden onset, possibly due to one or more vascular episodes. The hypothesis that AA was suffering from semantic dementia was also considered.

Interventions and outcome: The results of the neuropsychological assessment were discussed with AA, who was in part able to use the information to make sense of her difficulties. At the time of writing the report, it had also been agreed with AA that six sessions would be spent developing strategies to help support her with her word finding difficulties. It was also recommended that AA was re-assessed in 12 months' time to establish whether her symptoms were deteriorating.

Child Psychotherapy Summary of Placement Experience

Placement location:	Craig Croft Clinic, Chelmsley Wood
Trust:	Solihull Health Care NHS Trust
Dates:	October 2000 - April 2001
Supervisor:	Hazel Douglas

The placement was within a child psychology department which included several child psychotherapists. The trainee was supervised by a Clinical Psychologist who was also a qualified Child Psychotherapist, and so gained specialist experience in psychoanalytic supervision.

14 clients, with an age range of four to 15 years, were seen on this placement, either individually or in the context of their families. Two of these clients were looked-after children. Methods of assessment included interviews, Kleinian play techniques and drawing. Formulations and interventions were carried out primarily within a psychodynamic framework, though systemic and behavioural theories were also drawn upon. Children presented with a wide range of problems that included: separation anxiety and attachment problems, anger management problems, bereavement issues, behavioural problems, foam and sponge eating, sexual abuse, eating difficulties and post viral fatigue. In addition to working on her own, the trainee gained experience in co-working with child psychotherapists as well as liaising with early intervention services.

Child Psychotherapy Case Report Summary

Psychoanalytic play therapy with a looked-after 13-year-old boy who is thought to have been sexually abused.

Assessment: JF was a 13-year-old boy who was placed in long-term foster care following the court's decision that he was at risk of being sexually abused by his step-father and that his mother was unable to protect him. He was referred by his social worker because of his expressed anger with all those he perceived as responsible for the split of his family, in particular, social services and his sister. The assessment was carried out using clinical interview, play and drawing.

Formulation: JF's difficulties were formulated within a psychoanalytic framework with a particular emphasis on object relations theory. Following Kleinian theory, his play was conceptualized as an acting out of his internal world. In essence, it was hypothesized that JF was unable to tolerate any feelings of ambivalence regarding his mother and, consequently, employed the unconscious defence mechanisms, splitting and projective identification, as a means of "splitting off" his good feelings about his mother from his bad feelings. These bad feelings were in turn disowned and attributed to his sister. Feelings of countertransference raised within the trainee were also considered.

Interventions: The intervention process was broadly considered in three phases. These included: building a therapeutic relationship with JF; exploration of some key themes through Kleinian play therapy and drawing; and seeking to provide JF with a tolerable ending.

Outcome and evaluation: A key outcome of the therapeutic process was JF's gradual shift towards considering a more ambivalent perspective: for example, entertaining mixed feelings about his mother, but not feeling overwhelmed by this. The appropriateness of Kleinian play therapy as an approach for JF was evaluated.

Summary of Children with Developmental Disabilities/ Child Neuropsychology Placement Experience

Placement location:	Department for Children, Young People and their Families, Orchard House.
Trust:	South Warwickshire Combined Care NHS Trust
Dates:	April 2000 to October 2001
Supervisors:	Jacky Knibbs and Wendy Phillips

The placement incorporated work within two settings: a child development centre for children under five years and a child and adolescent mental health service. Work with clients in the CDC primarily involved assessment of children's developmental difficulties as part of a multidisciplinary team assessment. Methods of assessment included: interviews with parents/ foster carers, behavioural observations, standardized questionnaires (e.g. Child Behaviour Checklist, CHAT, CARS) and neuropsychological tests (e.g. Griffiths). Procedures designed to elicit specific skills such as joint attention were also conducted. Findings were written up in report form and discussed at the appropriate case conference attended by both professionals from the multidisciplinary team and parents/ carers. A total of six children were seen in this setting. Children's difficulties included: autistic spectrum disorder, global developmental delay and Down's syndrome.

Work with clients in the CAMHS setting focused on children with autistic spectrum disorder, sometimes co-morbid with ADHD. A total of four clients were seen in this setting, aged between five and ten years. Methods of assessment in this context included interviews with children and their families and structured behavioural observations (e.g. Attwood's social skill observation schedule). Interventions included the use of social stories, an intervention specifically designed for children with Asperger's Syndrome. Experience was also gained in the neuropsychological assessment of a ten-year old girl who presented with memory difficulties. Psychometric tests included: TROG, WISC-III, WORD and the Children's Memory Scale. Experience was also gained in co-facilitating a parent group for parents of children on the autistic spectrum.

RESEARCH DOSSIER

Clients' Views of a Psychology Service in a Primary Health Care Setting

Service Related Research Project

Year I

August 1999

Acknowledgements: With thanks to Jane Street and Jonathan Foulds for their support and supervision; and also to Morden Hall Medical Centre for allowing and supporting this project.

A copy of this report was passed onto the GP Practice (see Appendix A for letter regarding Practice's receipt of report).

ABSTRACT

A Psychology Service based in a Primary Healthcare setting in South London was evaluated using a postal Client Satisfaction Questionnaire (Nguyen, Clifford Attkisson and Stegner, 1983). A secondary aim of the study was to compare two psychological services offered at the GP Practice: an "Advice Clinic" in which clients self-refer and receive a one-off consultation; and the "formal referral" service in which clients are formally referred by their GP. Overall, clients reported total satisfaction 86.5% of the time. However, a particularly low response rate from Advice Clinic clients meant that no meaningful comparison could be drawn between the two services. Methodological implications of the evaluation and possible improvements for future evaluations of this kind are discussed.

1. INTRODUCTION

1.1 Literature Review

Client satisfaction is one of several measures of service outcome (Eaton, 1996). It is derived from surveys of client populations (Larsen, Clifford Attkisson, Hargreaves and Nguyen, 1979, cited by Eaton, 1996) and is a popular method of evaluating services in the NHS. The benefits of such evaluation have been summarized as "[ensuring] effective action and continuous improvement" (Ovretveit, 1992, cited by Hutchings and Pope, 1998).

Despite the popularity of client satisfaction surveys in the NHS, attempts to define the term "client satisfaction" have been few; and the development of psychological models to explain the term have been limited (Pascoe,1983). A handful of researchers in the late 1970s, early 1980s (e.g. Fox and Storms, 1981; Gutek, 1978; both cited by Pascoe, 1983) recommended (a) examining the cognitive meaning of satisfaction for respondents and (b) seeking to understand the "central fact of satisfaction", respectively. Pascoe (1983) has cited the Linder-Pelz model (1982) as the exception to this failure to define "client satisfaction". Linder-Pelz (1982) defined client satisfaction as a positive attitude or, more specifically, as a "general evaluation or feeling of favourableness toward the object in question" (Fishbein and Azjen, 1975, cited by Pascoe, 1983).

Despite these earlier attempts to place client satisfaction in a theoretical framework, recent research in this area has tended to use the term without any effort to define it (e.g. Blakey, Sinclair and Taylor, 1994; Gaston and Sabourin, 1992; Hutchings and Pope, 1998). This has left evaluations of this kind open to a wide range of interpretations by researchers, services and clients alike. The present study draws upon the work of two researchers in an effort to inform our understanding of the term "client satisfaction": firstly, that of Linder-Pelz (see above); and secondly, that of Lebow (1983). Lebow has defined client satisfaction as clients' perception of the adequacy of treatment and, in addition, of particular aspects of treatment such as the quality of care.

Studies of satisfaction with mental healthcare have yielded general satisfaction rates of between 70 and 90 per cent (reviewed by Stallard and Chadwick, 1991, cited by Blakey, Sinclair and Taylor, 1994). These findings have tended, however, to be based on return rates of no more than 50 to 60 per cent. Caution is essential, therefore, when interpreting data derived from client satisfaction questionnaires (Stallard and Chadwick, 1991, cited by Blakey, Sinclair and Taylor, 1994) whose response rate is low.

1.2 Context

The Clinical Psychology service in the present study was established in February 1993. At this point, it offered one model of psychological intervention, which I have termed the "formal referral" service. In this model, clients were formally referred by their GP to the Psychology Service in the Practice; their case was allocated to one of the psychologists; they were assessed and, if appropriate, went on to receive further sessions of therapy.

In June 1993, a second model of psychological intervention was set up, known as "The Advice Clinic." Similar services have been set up elsewhere in the UK (White, 1998). Clients were not formally referred but were rather self-referred by "booking in" a one-off, half-hour session with the Clinical Psychologist at the Practice. The service was originally advertised by a poster in the waiting room but subsequently relied on "word of mouth" publicity or occasionally via the informal suggestion of a

GP to the client. The waiting list for this service was approximately four to six weeks by comparison with an eight to twelve week waiting list for clients who are referred formally by their GP. Its aim was to provide an open access, early intervention and possibly preventive service to:

(a) those clients whose difficulties did not appear complex enough to be appropriate for a full referral
(b) those clients who were uncertain about the advantages of psychological intervention
(c) those clients who preferred not to discuss their problems with their GP.

Street, 1994.

The "advice" session was generally a one-off consultation but sometimes led to further sessions.

1.3 Rationale

While the Advice Clinic service was evaluated in June 1994, the "formal referral" service had not to date been evaluated. A need was, therefore, identified by the Head of Department for the Clinical Psychology service at the GP Practice to be evaluated as a whole. This need was particularly prominent given the shift over the past decade in Clinical Psychology towards providing a service in Primary Care (Marzillier, 1992). Because this shift was relatively recent, the knowledge base of clients' satisfaction with Psychology services in Primary Care was limited. It was seen appropriate to increase the service's knowledge of how clients value such a Psychology service. As the service offered two models of psychological intervention, it was decided that these different models should be evaluated separately as well as part of the same service.

1.4 Aims

The primary aim of the present study was to ascertain clients' views of a Psychology Service in a Primary Healthcare setting using a standardized Client Satisfaction Questionnaire (Nguyen, Clifford Attkisson and Stegner, 1983). Based on previous findings in the literature (see Lebow, 1983, for a review), it was anticipated that the satisfaction ratings would be high. Methodological weaknesses were taken into account when choosing the study's methodology (see Hutchings and Pope, 1998) but had to be weighed up with pragmatic issues such as financial and time constraints.

A secondary aim of the study was to compare the satisfaction of those receiving these two models of Psychology Service delivery in a Primary Healthcare setting whose main distinction lay in the amount of clinical contact time clients had had with a psychologist. While studies in mental health services have yielded general satisfaction rates of between 70 and 90%, less positive results have been found where the amount of clinical contact time has been brief (Blakey, Sinclair and Taylor, 1994).

Satisfaction ratings and length of treatment have been found to be significantly positively related (Farris Kurtz, 1990), although these findings are not consistent across earlier studies (Lebow, 1983). Consequently, it was hypothesized that those who attended the Advice Clinic would rate their satisfaction as lower than those who attended the "formal referral" service.

Finally, gender, age, reason for referral and the termination status of clients' files were to be compared with clients' total satisfaction ratings, given findings in the literature that these client characteristics interact with client satisfaction. No specific hypotheses were made, however, because of the inconsistency of these findings (see Lebow, 1983).

2. METHOD

2.1 Measure

The service was evaluated using a standardized measure, the Client Satisfaction Questionnaire (CSQ-8) (Nguyen, Clifford Attkisson and Stegner, 1983) (see Appendix B), which has been developed as a client satisfaction measure. It is the most widely used of all client satisfaction measures in mental health services. It is inexpensive, can be applied to a range of settings, has good construct validity, and high internal consistency and reliability (Lebow, 1983).

The questionnaire contained eight items which clients were required to respond to on a 4-point scale. A total score could be yielded by adding together the raw eight scores. Questions concerned the following aspects of clients' contact with the Psychology Service: the quality and kind of service received; the extent to which the service has met clients' needs and helped the client deal more effectively with their problems; whether clients would recommend the service; the amount of help received; overall satisfaction; and whether clients would return to the service if necessary. Each item had space for "additional comments."

2.2 Setting

The evaluation of the Psychology Service took place in a GP Practice in South London which served a population of 11,700. A six-month period from April 1997 to September 1997 was evaluated. This period was chosen to maximize the number of clients whose files had now been closed. During this period, a Clinical Psychologist, a Counselling Psychologist and a Clinical Psychologist in training were in post.

2.3 Sample

The original sample included all those clients who had had an offer of an appointment within the six-month period stated above. This sample was subsequently reduced to 54 clients (22 male and 32 female) as, of the 64 questionnaires sent, one client returned the questionnaire unanswered, and nine clients had left the Practice since their Psychology file had been closed. Within the reduced sample of 54 clients, no significant difference was found between the "formal referral" and "advice clinic" clients in age, gender, reason for referral or termination status of clients' files. The sample was finally reduced to 28 clients as 26 clients failed to respond to the questionnaire.

2.4 Procedure

The questionnaire was sent together with a covering letter and a stamped-addressed envelope on the 31st March 1999 (see Appendix C). It was requested that clients responded by the end of April 1999. There was no follow-up letter for non-respondents. The letter emphasized that the clients' responses would be treated with the strictest confidence.

The questionnaire was not anonymous so that data regarding clients' background characteristics could be compared with clients' satisfaction ratings. Data concerning clients' background characteristics were taken from the Psychology appointment book held by the reception of the Practice and from clients' files.

3. RESULTS

3.1 Client background characteristics

Table 1 summarizes clients' background characteristics. Due to small sample sizes, those clients who had initially attended the advice clinic but who went on to receive longer-term therapy in the "formal" service were grouped in the "formal referral" service category. This was to help make more meaningful comparisons. The two groups were compared on these background characteristics.[1] No significant differences between the groups were found in gender, age, reason for referral or termination status of clients' files.

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[1] Fisher's exact test was used to compare the groups where the data was categorical, and small sample sizes invalidated the use of a Pearson Chi-square analysis. The two groups were compared on age using the non-parametric Mann-Whitney test as, when examined, clients' ages were not normally distributed.

Table 1. Clients' background characteristics.

	Advice clinic	Formal referral service	Statistic	p-value
<u>Gender</u> N (%)				
Male	4 (80)	8 (34.8)	FI (n=28)	.133
Female	1 (20)	15 (65.2)		
<u>Age</u> (yrs) mean (s.d)	48.8 (13.1)	44.7 (14.3)	-	-
<u>Age</u> (yrs) N (%)	2 (40)	12 (52.2)	FI (n=28)	1.00
18-45	3 (60)	11 (47.8)		
46-80				
<u>Reason for referral</u> N(%)				
Anxiety/ depression	1 (20)	15 (65.2)	FI (n=28)	.133
Relationship problems/ other	4 (80)	8 (34.8)		
<u>File termination status</u>				
Closed - did not attend	0 (0)	4 (26.7)	FI (n=19)	.53
Formally discharged	4 (100)	11 (73.3)		

<u>Note</u> 8 clients were excluded from the analysis of the termination status of clients' files because either their case was still open or they had been referred onto a different service.

3.2 Client Satisfaction Ratings

3.21 Reliability of Client Satisfaction Ratings

Kronbach's alpha was calculated in order to establish the reliability of clients' satisfaction ratings on the questionnaire. Alpha was found to be high (Alpha = 0.91), which indicated that a computation of the total satisfaction score would be meaningful.

3.22 Clients' Total Satisfaction Ratings

Of the 28 clients who responded, 2 responded anonymously[2]. Total satisfaction was reported by respondents 28.6% (i.e. where clients had rated all aspects of the service as "excellent")[3]. 60.8% of respondents rated all aspects of the service as either "excellent" or "good"[4]. In total, therefore, 89.4% of respondents rated the service as "good" or above. No clients rated any aspect of the service as poor.

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[2] A process of elimination revealed that the two anonymous respondents had attended the formal referral service.

[3] "Excellent" is an approximation of "very satisfied" etc.

[4] "Good" is an approximation of "mostly satisfied" etc.

3.23 Client satisfaction ratings within items

All clients achieved a mean satisfaction rating of at least 3.2 and a median satisfaction rating of at least 3.0. The means and medians of clients' satisfaction ratings are illustrated in Table 2.

Table 2. Satisfaction ratings within items.

Item No. and summary	Mean	Standard Deviation
1. Quality of service	3.57	.57
2. Whether service met expectations	3.46	.58
3. Whether service met needs	3.25	.70
4. Would client recommend service?	3.54	.58
5. Satisfaction with amount of help	3.39	.69
6. Deal with problems effectively	3.46	.64
7. Overall satisfaction	3.46	.69
8. Would client come back if need be?	3.54	.64

3.24 Client satisfaction ratings between two groups

It was not possible to compare the two groups on total satisfaction scores because the large difference in group sizes would have made any statistical analysis meaningless.

3.25 Client satisfaction ratings compared with background characteristics

Table 3 summarizes client satisfaction ratings compared with background characteristics. The two clients who responded anonymously have been omitted from all analyses where necessary. The termination status of clients' files could not be analysed statistically because of small groups. No difference was found in clients' total satisfaction scores between men and women, the age bands of 18-45 years and 46-80 years, reasons for referral, or the termination status of clients' files.

Table 3. Client satisfaction ratings compared with background characteristics and termination status of files (i.e. closed because did not attend or formally discharged).

	Total satisfaction score: Mean (st.dev.)	Statistic	P-value
Gender			
Male	19.2 (.97)	Mann-Whitney U = 67 (n=26)	.485
Female	20.1 (1.28)		
Age (yrs)			
18-45	18.6 (5.17)	Mann-Whitney U = 71.5 (n=26)	.512
46-80	20.8 (3.31)		
Reason for referral			
Anxiety/ depression	19.6 (5.3)	Mann-Whitney U = 70 (n=26)	.508
Relationship problems/ other	19.8 (3.0)		
Termination Status			
Closed because DNAd	18.25 (3.30)		
Formally discharged	19.80 (4.84)		

3.3 Response Rates

Table 4 summarizes the response rate to the questionnaire according to the type of service clients received, background characteristics of clients.

Table 4. Response rate to CSQ-8 compared with background characteristics and termination status.[5]

	Replied[6]	Did not reply	Statistic	p-value
Type of service N(%)				
Advice	5 (31.2)	11 (68.8)	FI (N=52)	0.047 (one-tailed)
Formal	23 (60.5)	15 (39.5)		
Age (years) N (%)				
18-45	12 (37.5)	20 (62.5)	FI (N=52)	0.04
46-80	14 (70.0)	6 (30.0)		
Gender N (%)				
Male	10 (50)	10 (50)	FI (N = 52)	1.0
Female	16 (50)	16 (50)		

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[5] Unless stated, the tests of significance were two-tailed.

[6] Two clients responded anonymously and are therefore omitted from analyses regarding age and gender.

The table illustrates that clients who attended the advice clinic responded to the questionnaire significantly less than clients who had attended the "formal referral" service.

Qualitative Analysis

Out of 28 respondents, 13 responded to the "any additional comments" sections to varying degrees (leading to a total of 29 qualitative responses). From this information, three types of responses (positive, negative and ambivalent) were identified. 18 responses were rated positively; six were rated negatively; and five suggested an ambivalent response. These are summarized below: [7]

Positive Responses

- Therapist's attitude: e.g. relaxed, kind, understanding
- Opportunity for outside and professional support.
- Client's sense of having been empowered to deal with problems.
- Appreciation of "practical" help.
- Flexibility of psychological input. E.g. at times of crisis, client spoke on telephone to psychologist.
- Opportunity to express concerns to a non-judgmental outsider.

Negative Responses

- Long waiting list.
- Dislike of theoretical model of intervention. E.g. cognitive-behavioural therapy.
- Absence of follow-up.

Ambivalent Responses

- Sense of failure that client did not achieve what s/he wanted by the end of therapy despite "pleasant and professional" service.
- Fear that other needs may arise in future, though client "alright" at present.

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[7] A full summary of clients' qualitative responses can be found in Appendix D.

4. DISCUSSION

As expected, the rate of client satisfaction was high: that is, clients responded with total satisfaction 86.5% of the time. This percentage repeated findings cited by previous studies (e.g. Blakey, Sinclair and Taylor, 1994; see also Lebow 1983 for a review) and indicated clients' overall satisfaction with the service. Unfortunately, it was not possible to compare the two services statistically but nonetheless the higher total satisfaction rating reported by "formal referral" (82.4%) clients to "advice clinic" clients (80%) was consistent with the hypothesis.

While the response rate to the questionnaire could be seen as low (51.9%), this response rate was similar to that found in other studies (see Lebow, 1983). Given the gap between clients' attending the service and receiving the questionnaire, this response rate could, therefore, be seen as quite high. At the same time, it offered a threat to the validity of the finding that clients had evaluated the service positively, and the implications of this will be discussed. But, despite methodological difficulties encountered during the study, it is helpful to view these difficulties as challenges of evaluating a mental health service in the NHS as opposed simply to methodological weaknesses.

As Nguyen *et al.* (1983) have pointed out, client satisfaction ratings are readily affected by a variety of factors, including social desirability bias (Edwards, 1957, cited by Nguyen *et al.*, 1983), ingratiating response set (Scheirer, 1978, cited by Nguyen *et al.*, 1983) and the researcher bias (Gordon and Morse, 1975, cited by Nguyen *et al.*, 1983). The possibility of these biases calls into question the legitimacy of using client satisfaction questionnaires as an outcome measure of mental health services. This notion has, however, been challenged empirically by Gaston and Sabourin (1992) who investigated the relationship between clients' satisfaction ratings on the CSQ-8 and clients' scores on the Marlowe-Crowne Social Desirability Scale. No correlation was found and it was concluded that client satisfaction represents a valid measure of outcome in psychotherapy. It would be interesting to repeat this study in the context of a Clinical Psychology Service and examine whether the same conclusion could be drawn.

The low response rate to the questionnaire raised the possibility that non-respondents had a negative attitude to the service and had therefore chosen not to respond at all (Johanson, Gips and Rich, 1993). This possibility has been supported by the finding that, when initial non-respondents have been followed up, they tend to respond less positively (Murphy, 1980, cited by Lebow, 1983).

Specific causes of failing to respond have been somewhat neglected (Johanson *et al.*, 1993). While the particularly low response rate of clients who had attended the Advice Clinic meant that no meaningful comparison of client satisfaction could be made between the "Advice Clinic" and "Formal Referral" service, the low response rate of Advice Clinic clients offered a point of interest in itself. This finding replicated that of other studies which, having failed to find a relationship between client demographics and failure to respond, have nonetheless found a positive correlation between responding and length of treatment (reviewed by Lebow, 1983).

It remains speculative as to why this was so. One possibility is that clients who have received briefer intervention may have had a less positive experience and felt unable to say so; or it may be that they were less motivated to respond as they had been less engaged with the service. Given that clients who do not respond have been found to be less satisfied (Murphy, 1980, cited by Lebow, 1983), it is possible that clients who attended the Advice Clinic were less satisfied than clients who received more sessions of psychological intervention. Another possibility may therefore be that clients felt that they could not rate their satisfaction fairly after such a brief time.

The possibility that clients may have failed to respond because they were concerned about saying anything critical raises the methodological issue of anonymity. This was potentially a shortcoming of the study as clients were all patients of the GP Practice and would probably be having further contact with the service. This difficulty has been highlighted in the research where anonymity has been found to interact with expressed levels of satisfaction in mental health services. Soelling and Newell (1983) compared clients' ratings on the CSQ-8 for clients who had been given anonymity with the ratings of clients whose identity had not been anonymous and found that clients reported a lower degree of satisfaction when allowed to respond anonymously. This lack of anonymity could have been avoided by asking clients to fill in an additional sheet regarding their background characteristics but it was felt that additional forms to fill in may have deterred clients from responding.

A strength of the present study, however, was the fact that clients rated their satisfaction in written form. This was important as satisfaction testimonies and ratings have been found to be higher when given in oral form (Nguyen *et al.*, 1983). Furthermore, in the present study, two clients chose to respond anonymously but they still rated their satisfaction highly. Clearly no conclusions can be drawn from a sample of only two people, but the observed trend was interesting.

Given less restrictive time and financial constraints imposed on the study, it would also have been an advantage had the study aimed to maximize client response rate, for example, following the "multiple method" model which, having sent a letter, follows this up with a telephone call and, if necessary, a visit (Atherton Day, Dunt and Day, 1995). Other efforts to enhance response rates have included material incentives, a second letter, and postcards (Woodruff, Edwards and Conway, 1998). These methods do, however, have ethical implications, particularly in the present study since clients are all patients at the GP Practice. It could, therefore, be seen as a strength of the study that clients were not "harassed" into responding.

The information gathered from clients' qualitative responses suggested a largely positive response to what was generally described as a professional, understanding and enabling service. Nonetheless, these responses also highlighted a need for the issue of follow-up appointments to be examined. In addition, while neither the "formal referral" service waiting list nor the Advice Clinic waiting list was generally higher than 12 weeks, the fact that some clients expressed a dissatisfaction with this waiting time suggested this issue should be explored further in a future evaluation.

In summary, this study has pointed tentatively to a positive evaluation of the Clinical Psychology Service in the GP Practice evaluated. It has also highlighted the challenges of carrying out a client satisfaction survey in the NHS. Given the methodological difficulties encountered by this study, possible improvements for future evaluations of this kind include: a shorter time period between the closure of clients' files and follow-up; the questionnaire and initial letter to be followed up with a letter and questionnaire two weeks later; questionnaires to be anonymous; an optional demographics sheet to be enclosed with the questionnaire; and an independent person in the service (i.e. non-psychologist) to carry out the evaluation.

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6. Appendices

Appendix A; Letter from GP practice

Appendix B: Client Satisfaction Questionnaire (CSQ-8)) (Nguyen, Clifford Attkisson and Stegner, 1983).

Appendix C: Letter to clients about evaluation, enclosed with questionnaire.

Appendix D: Qualitative responses to CSQ-8.

Appendix A: Letter from GP practice

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Appendix B: Client Satisfaction Questionnaire (CSQ-8)) (Nguyen, Clifford Attkisson and Stegner, 1983).

Client Satisfaction Questionnaire

Name..
Number of times saw psychologist (one or several):..................................

Please indicate your answer by circling the appropriate response.

1. How would you rate the quality of the service you received?

4	3	2	1
Excellent	Good	Fair	Poor

Any additional comments... ... ...
... ...
... ...

2. Did you get the kind of service you wanted?

1	2	3	4
No, definitely not	No, not really	Yes, generally	Yes, definitely

Any additional comments... ... ...
... ...
... ...

3. To what extent has this service met your needs?

4	3	2	1
Almost all of my needs have been met	Most of my needs have been met	Only a few of my needs have been met	None of my needs have been met

Any additional comments... ... ...
... ...
... ...

4. If a friend were in need of similar help, would you recommend our service to him/her?

1	2	3	4
No, definitely not	No, I don't think so	Yes, I think so	Yes, definitely

Any additional comments... ... ...
... ...
... ...

5. How satisfied are you with the amount of help you received?

4	3	2	1
Very satisfied	Mostly satisfied	Indifferent or mildly dissatisfied	Quite dissatisfied

Any additional comments………………………………………………………………………

…………………………………………………………………………………………………

…………………………………………………………………………………………………

6. Has the service you received helped you deal more effectively with your problems?

1	2	3	4
No, they seemed to make things worse	No, they really didn't help	Yes, they helped some	Yes, they helped a great deal

Any additional comments………………………………………………………………………

…………………………………………………………………………………………………

…………………………………………………………………………………………………

7. In an overall, general sense, how satisfied are you with the service you received?

4	3	2	1
Very satisfied	Mostly satisfied	Indifferent or mildly dissatisfied	Quite dissatisfied

Any additional comments………………………………………………………………………

…………………………………………………………………………………………………

…………………………………………………………………………………………………

8. If you were to seek help again, would you come back to our service?

1	2	3	4
Definitely not	No, I don't think so	Yes, I think so	Yes, definitely

Any additional comments………………………………………………………………………

…………………………………………………………………………………………………

…………………………………………………………………………………………………

Thank you for taking the time to complete this questionnaire.

Appendix C: Letter to clients about evaluation, enclosed with questionnaire.

31st March 1999

Dear

I see from our records that you have seen a Clinical Psychologist at *** in the past two years.

Staff at *** continually aim to provide relevant and high quality services to patients in the *** community. Together with ***, Clinical Psychologist at ***, we are currently assessing the effectiveness of our psychological services. Please find enclosed a brief questionnaire that we would like you to complete and send back to us in the stamped addressed envelope.

We appreciate your time, effort and co-operation and look forward to receiving your replies by April 30th 1999.

Please note that your response will be treated with the strictest confidence and will in no way affect any future service that you receive in the Practice.

Yours sincerely,

Joanna Chapman
Clinical Psychologist in Training

Appendix D: Qualitative responses to CSQ-8

Qualitative responses to Item 1: How would you rate the quality of service you received?

Client No.	Qualitative Response	Quality of response (positive, negative or ambivalent)
1.	Therapist's attitude was positive yet relaxed; flexible time – i.e. needs-led – not allotted long or short appointment.	Positive
3.	Was treated with kindness and understanding.	Positive
4.	If it was not for psychologist's help, I would not have got so far as I have today.	Positive
5.	Found it very helpful but sadly lady I saw has now left practice.	Positive
12.	Had to wait long time to be seen.	Negative
13.	Good in the sense that it was pleasant and professional, rather than it achieved what I hoped – which is undoubtably down to me, more than because there was any shortcoming in the service.	Ambivalent

Qualitative responses to Item 2: Did you get the kind of service you wanted?

Client No.	Qualitative Response	Quality of response (positive, negative, or ambivalent)
2.	I felt very fortunate to have this level of help; going it alone was slow and difficult.	Positive
12.	I came away feeling someone really cared.	Positive
13.	I went with my preference for cognitive therapy despite reservations about its appropriateness (which proved to be founded) – feel that there may have been a way of suggesting other positive actions that could be taken and what should happen after visits ceased.	Negative

Qualitative responses to Item 3: To what extent has this service met your needs?

Client No.	Qualitative Response	Quality of response (positive, negative or ambivalent)
1.	Some other needs may arise in the future.	Ambivalent
4.	Anything not covered by the Psychologist was covered by Springfield.	Ambivalent
6.	I no longer have ANY of my original problems.	Positive
9.	One of the biggest problems still occurs from time to time but since having counselling I am much more able to deal with it.	Positive
12.	It was great while I was seeing the psychologist, but I needed a top-up now and again. I did not want to bother the doctor so I would give way to my depression.	Negative
13.	I believe it was felt my problems were such that I would benefit from extended therapy.	Negative

Qualitative responses to Item 4: If a friend were in need of similar help, would you recommend our service to him/ her?

Client No.	Qualitative Response	Quality of response (positive, negative or ambivalent)
2.	I have done so.	Positive
9.	I have recommended counselling to several people since receiving this help.	Positive
10.	No. But it could depend on individual needs as to whether they could be helped.	Ambivalent
13.	Although I don't feel I gained much long-term benefit, I do not feel that this was a result of significant shortcomings in the service, and as everyone responds in a different way, my view would be it would be worth a try!	Ambivalent

Qualitative responses to Item 5: How satisfied are you with the amount of help you received?

Client No.	Qualitative Response	Quality of response (positive, negative or ambivalent)
2.	Help was practical, constant and effective.	Positive
4.	Psychologist made meetings very flexible; sometimes talked to me on the 'phone when things got really bad.	Positive
7.	Without the support of n, I would not have been able to be as well as I am now.	Positive

Qualitative responses to Item 6: Has the service you received helped you deal more effectively with your problems?

Client No.	Qualitative Response	Quality of response (positive, negative or ambivalent)
2.	Service helped me back to health and to return to work, albeit part-time.	Positive
9.	Being able to express worries to a non-judgmental person who could look from a different perspective was very helpful.	Positive

Qualitative responses to Item 7: In an overall sense, how satisfied are you with the service you received?

Client No.	Qualitative Response	Quality of response (positive, negative or ambivalent)
10.	The problem I have been experiencing was not improved by suggestions from the psychologist, she was really just advising what I needed to do, which is what I really know and not really overcoming phobia.	Negative
13.	I felt that the service fell down in terms of any follow-up – given that cognitive therapy didn't help and I wasn't in a position to undertake long-term psychotherapy, I was not given any suggestions as to where I could turn next for further help and support – I felt like I was back to square one.	Negative

Qualitative responses to Item 8: If you were to seek help again, would you come back to our service?

Client No.	Qualitative Response	Quality of response (positive, negative or ambivalent)
5.	In my case – a widow and elderly and with a fair amount of problems, both health and finances, when all becomes hard to cope with, it's good to know the service is there.	Positive
8.	If it was not for this service I do not think I could have coped.	Positive
11.	I do not think I would still be here if it were not for the support I have received.	Positive

Psychological Adjustment of Children Involved in Bullying: A Review of the Literature

Literature Review

Year III

Introduction

The concept of bullying in childhood has come under the umbrella of several other concepts. These include: peer aggression (Crick and Grotpeter, 1996; Dodge, Coie, Pettit and Price, 1990; Perry, Kusel and Perry, 1988); peer rejection (Asher and Wheeler, 1985; Boivin, Hymel and Bukowski, 1995; Cairns, Cairns, Neckerman, Gest and Gariepy, 1988); peer victimization (Graham and Juvonen, 1998; Hawker and Boulton, 2000a; Kochenderfer and Ladd, 1996); social exclusion (Leary, 1990); and peer abuse (Olweus, 1995a). The diversity of these terms is indicative of the diversity of the phenomenon of bullying itself. No wonder that difficulties have arisen in attempts to provide a clear definition of bullying; or indeed to provide consistent prevalence figures of bullying in schools.

The nature of these difficulties will inform the first part of this review through a discussion of the varied definitions, prevalence rates, gender and age differences, and theories of bullying. The review will tend to employ the term "bullying" where possible; but where authors have chosen a different terminology, particularly where this terminology reflects different aspects of bullying behaviours, these terms will be used instead. Unfortunately, there will not be space in this review to consider any of these terms in detail. As a general point, however, it is important to observe that often the differences in terminology reflect the different emphases of definitions employed by authors. These different emphases will be evident in the discussion that follows concerning the individual factors of bullies and victims. The role of ethnicity in bullying will also be considered.

The second section of this review will consider a body of research that has reported on the associations between emotional and, to a lesser extent, behavioural problems in primary and secondary school children involved in bullying. It will draw attention to the shift which has taken place over the past years from considering the psycho-social problems of victims only, to that of bullies also, and finally to a category of children identified as bully-victims (i.e. children who bully others as well as are bullied themselves). This shift, it will be argued, reflects an increasingly complex and subtle understanding of what it means to be involved in bullying. Interventions that have been developed to address the issue of bullying will be outlined briefly.

Definitions of bullying

Definitions of bullying over the past decades have tended to emphasize central aspects of the relationship between a bully and his or her victim. These aspects have been said to include: first, "aggressive behaviour or intentional 'harmdoing'" on the part of one or more students towards another; second, an individual's repeated exposure to these acts over a period of time; and third, an imbalance of power between the individuals in question (Olweus, 1978, 1994). In the light of the above criteria, bullying has been defined as a "subset of aggressive behaviour" (e.g. Boulton and Underwood, 1992; Smith and Thompson, 1991). Key to this behaviour are: "the distress the victim experiences, the abuse of power by the bully, and the intentionality of the act" (Byrne, 1994). The unprovoked nature of the "abuse" has also been frequently documented (Dawkins, 1995; Forero, McLellan, Rissel and Bauman, 1999).

Such definitions would appear to suggest a consensus in the literature on how to define bullying. Many researchers, however, have pointed to the inconsistencies between definitions, and argued that such inconsistencies often frustrate the task of aggregating and drawing conclusions from research findings (Besag, 1989). A lack of agreement about the general definition of bullying has drawn attention to the following issues: is bullying primarily a physical act (e.g. Arora and Thompson, 1987, cited by Siann, Callaghan, Lockhart and Rawson, 1993) or does it extend to behaviour such as covert social exclusion and teasing (Smith, 1991, cited by Siann *et al.*, 1993)? Should there be an emphasis on group as well as one-to-one bullying (Pikas, 1975, cited by Siann *et al.*, 1993)? And is the duration of the bullying period relevant to the definition of bullying (Olweus, 1978)?

The first of these issues has arisen as a result of a shift in the literature over the past decade to consider "indirect" and "relational" bullying in addition to "direct" or physical bullying (Atlas and Pepler, 1998; Birkinshaw and Eslea, 1998; Craig, 1998). Indirect aggression has been defined as "aggression which is enacted through a third party or so that the aggressor cannot be identified by the victim" (Bjorkqvist, 1994, cited by Hawker and Boulton, 2000a) whereas relational aggression has been defined as behaviour which harms others through hurtful manipulation of their peer relationships or friendships" (Crick and Bigbee, 1998). It has been noted that verbal bullying may be either direct, indirect or relational: it may be relational when words are used in an attempt to exclude another (Hawker and Boulton, 2000a).

A further shift has taken place in the last 10 to 15 years concerning the conceptualization of bullying behaviours. Irrespective of the emphasis that different researchers have chosen to place on their definitions of bullying, it has been argued that it is over-simplistic to conceive bullies and victims as polar opposites on a continuum (Rigby and Slee, 1993). As a result, bullying behaviour may co-exist with anxiety (Stephenson and Smith, 1989) or friendly behaviour (Slee, 1995); and the susceptibility to being bullied may include provocative acts on the part of the victims that lead to others' aggression towards them (Slee, 1995). In brief, some children who often bully others are themselves bullied (Besag, 1989): hence the term "bully-victims" (e.g. Mynard and Joseph, 1997).

Prevalence rates

Prevalence rates of children involved in bullying have been found to vary. This variation has in part been accounted for by: differences between countries (Boulton and Underwood, 1992); differences in sampling and methodological procedures (e.g. Boulton and Underwood, 1992; Slee, 1993); age and gender differences (Mellor, 1997; Siann, Callaghan, Glissov, Lockhart and Rawson, 1994); differences in definitions of bullying (Siann *et al.*, 1994); and cultural differences and school factors (Dowdney, 1993). Despite this variability, there is some consensus in the literature that between 10 and 30% of children are victims of bullying at any one time (Boulton and Smith, 1994; Mellor, 1990; Olweus, 1991).

Furthermore, comparable prevalence rates are often cited despite any or some of the above differences. For example, a large British survey of 6,758 primary and secondary school children in Sheffield reported that 27% of junior school children and 10% of secondary children are bullied sometimes or more often (Smith, Bowers, Binney and Cowie, 1993). It concluded that these findings were similar to those cited from studies carried out in Spain, the Netherlands and Japan; and that less similar, yet still significant figures, had been cited in studies carried out in Scotland and Norway.

Such generalizations should, however, be interpreted with caution. Work, for example, carried out by Olweus (1987, cited by Boulton and Underwood, 1992) in Scandinavia, has demonstrated that the incidence of bullying varies between Norwegian and Swedish schools.

It has frequently been noted that the incidence of bullying appears to decrease with age (e.g. Olweus, 1987, cited by Boulton and Underwood, 1992; Rigby and Slee, 1992; Whitney and Smith, 1993). Until recently, reasons for this decline have been taken at face value: namely, that younger children are involved in bullying more than older children; and that older children are less likely to be bullied. Smith and Levan (1995) have, however, specifically researched the question of *why* younger children report more bullying than older children and, aside from the above explanations, they have hypothesized that younger children have a more inclusive definition of bullying which would account for their higher reports of bullying.

The literature tells a similar story with regard to the findings that have been reported about gender differences in bullying. Whereas previously it was concluded that boys were more likely to bully others than girls (Olweus, 1978, 1991; Stephenson and Smith, 1989; Whitney and Smith, 1993), this conclusion has subsequently been qualified. It is now generally agreed that boys do not necessarily bully others more than girls but rather that girls tend to engage in different types of bullying. That is, whereas boys are more likely to be involved in physical or direct bullying, girls tend to employ relational or indirect bullying (Siann *et al.,* 1994).

Methodologies

As already noted, methods of examining the incidence of bullying among school children have varied considerably. Such methods include: naturalistic behavioural observations (Atlas and Pepler, 1998); peer and/ or teacher nominations (Parkhurst and Asher, 1992); anonymous self-report questionnaires (Austin and Joseph, 1996; Neary and Joseph, 1994; Olweus, 1996); semi-structured interviews with children (Williams, Chambers, Logan and Robinson, 1996; Wolke, Shulz and Stanford, 1999, *unpublished*); and pictorial questionnaires for infant school pupils (Smith and Levan, 1995).

All of these methods have advantages and limitations, and researchers have varied in their bias towards different methodologies. Peer nominations is a method whereby peers nominate classmates whose behaviour patterns fit certain bullying criteria. Self-report measures are said to be advantageous over this methodology because: they are able to include bullying episodes which it is not possible for peers to know about; they can be used in settings where peers are not available for assessment (e.g. clinical assessment); they require less time; and they are easier to administer (Crick and Bigbee, 1998). Nonetheless, some researchers have questioned the validity of self-reports of being bullied, arguing that some children tend to over-report their victim status (e.g. Perry, Kusel and Perry, 1988). Given, however, the current paucity of research that has systematically compared self-report and peer nomination methods, it is not possible to make conclusive statements about the validity of self-report measures (Crick and Bigbee, 1998).

Interviews have been thought to yield rich data, but some researchers have issued caution about this method which may encourage children to give defensive answers, thus masking whether or not they are in fact involved in bullying (Ahmad and Smith, 1990, cited by Neary and Joseph, 1994). It is perhaps not surprising that the same authors, reviewing a range of methods, concluded that anonymous self-report questionnaires (such as the Olweus Student questionnaire [1996]) were the best method for establishing the incidence of bullying in children.

Theories of bullying

Theories that have been proposed in an effort to account for bullying and victimized behaviours have tended to be informed by a range of social perspectives. A variety of information processing models have been put forward (e.g. Crick and Dodge, 1999; Dodge, Pettit, McClaskey and Brown, 1986, cited by Pellegrini, 1988; Smith *et al.*, 1993; Sutton, Smith and Swettenham, 1999a). It has been argued that some children may fail to interpret social signals correctly, or at least be limited by their range of social response options (Smith *et al.*, 1993). In the context of bullying, these authors suggested that bullies may have "deficits" comparable to those of aggressive children, and that victims may lack the ability to be socially assertive and join in a group (Smith *et al.*, 1993).

Other researchers, however, have contested the notion that the social information processing skills of bullies are in some way deficient (Sutton, Smith and Swettenham, 1999a, 1999b). They have proposed that bullies, far from lacking social skills, are equipped with a "superior theory of mind", thus enabling them "to understand or manipulate the minds of others" (Sutton *et al.*, 1999a). This proposal has received a mixed response. While significant differences between the social information processing model and the "theory of mind" perspective have been acknowledged, at the same time it has been maintained that the two perspectives are highly consistent with one another (Crick and Dodge, 1999). Concerns nonetheless have been raised that so-called "superior" cognitions may be argued to result in "inferior behaviour" (Crick and Dodge, 1999).

Other theories have attempted to explain the link between being bullied or bullying others with adjustment difficulties/ maladaptive behaviours. Attribution theory, for example, which seems to bear some relation to other social process models of peer victimization, has considered how middle school children who think of themselves as victimized may be vulnerable to adjustment difficulties such as loneliness, social anxiety or low self-esteem (Graham and Juvonen, 1998). It has been suggested that the relationship between "self-perceived" victimization and maladjustment is in part informed by an internal locus of control: the tendency to attribute blame to oneself about external events (Graham and Juvonen, 1998).

Social rank theory has also been adapted to help explain the link between peer victimization and internalizing difficulties (Hawker and Boulton, 2000b). As a theory, its primary concern has been to explain the relationship between the aetiology of depression and associated internalizing difficulties with an individual's experience of powerlessness and sense of exclusion within a social context (Gilbert, 1992, cited by Hawker and Boulton, 2000b). Recent research on bullying in this area has led to the suggestion that the link between internalizing difficulties and victimization is the result of victims being "down-ranked" (for example, through name calling) or socially excluded from groups (relational victimization) (Hawker and Boulton, 2000b).

Less specific models of bullying and victimization have also been proposed. For example, the adaptation of a systemic-developmental perspective included a range of factors that may be responsible for the development of aggressive behaviour. These were: individual factors, inter-individual interactions, social relations, and cultural and ecological conditions (Cairns and Cairns, 1991, cited by Atlas and Pepler, 1998). The breadth of this theory is attractive. Not only does it encompass a range of theoretical perspectives, but also incorporates a variety of aspects of bullying definitions.
These aspects have been discussed at some length by Atlas and Pepler and will here be summarized briefly only. The systemic-developmental perspective is interested in the characteristics of bullies and victims as informed by Olweus' (1978) personality perspective. It also acknowledges the imbalance of power between a bully and victim which is thought to be central to the bullying relationship (Besag, 1989; Olweus, 1991). It extends the interaction between the bully and the victim to the context of other peers and teachers, highlighting the role of the teacher in bullying interactions (Olweus, 1978). And finally, it considers the social context in which bullying takes place: for example, the playground, the classroom and hallways, in decreasing order of probability (Whitney and Smith, 1993).

Individual factors of bullies and victims

One model of bullying not mentioned so far has located itself within a personality perspective. Attempts to define the characteristics of bullies and victims and, more recently, of bully-victims, has been a consistent area of interest in the literature on bullying. The work of Olweus (1978, 1991, 1995b), which has primarily been located within a personality perspective, has been described as "fundamental" in identifying some of these characteristics (Atlas and Pepler, 1998). Male bullies have been characterized as aggressive and physically strong, whereas male victims have been described as physically weak and timid with an anxious personality (Olweus, 1993). Olweus labelled these boys (who were generally socially isolated with low self-esteem) "whipping boys" (1978). He subsequently termed them "passive or submissive victims" (Olweus, 1994) and contrasted them with what he argued was a smaller group of victims, namely, "provocative victims" (Olweus, 1994).

Provocative victims, according to Olweus, tend to respond to social situations in both an anxious and aggressive way. Often hyperactive, it may be that what Olweus has labelled "provocative victims" have, in the literature, come to be known as "bully-victims." The clarity of these findings has been questioned, however, by subsequent research, which has found some bullies to be less confident, even more anxious (Stephenson and Smith, 1989).

The popularity of bullies has also been studied, and yielded mixed results. Whereas it has been found that bullies tend to be either as popular or almost as popular as their peers (Bjorkqvist, Ekman and Lagerspetz, 1982, cited by Olweus, 1994), a different profile has also been suggested: namely, that bullies are less popular than their peers, though not so unpopular as victims (Boulton and Smith, 1994; Lagerspetz, Bjorkqvist, Berts and King, 1982).

Children involved in bullying have also been compared on scales of psychoticism, extroversion and neuroticism. It has been found, for example, that children who bully others scored high on a psychoticism scale while victims scored low on the extroversion scale (Slee and Rigby, 1993). Despite using different personality scales, other research has reported similar results, with the additional finding that both bullies and victims obtained high neuroticism scores (Byrne, 1994). Finally, it has been argued that a key identifying characteristic of bully-victims is their "low levels of social acceptance". Interestingly, when bully-victims have been compared with bullies and victims on personality scales, they have obtained the highest scores on both the neuroticism and psychoticism scale (Mynard and Joseph, 1997). This finding suggests that it is insufficient to study merely the characteristics of bullies and victims, but that the characteristics of bully-victims need also to be included in the equation.

The role of ethnicity in bullying

It is not only the individual personality traits that have been hypothesized as impacting on whether one bullies others or is a victim of bullying, but the role of an individual's ethnicity has also been hypothesized as impacting on his or her involvement in bullying. Surprisingly little research has, however, been carried out in this area (Moran, Smith, Thompson and Whitney, 1993). These authors' study, which reported no effect of ethnicity on children's bullying and victimized behaviours, nonetheless found that only Asian children reported name-calling on the basis of their race. The finding was qualified, however, by the fact that it did not reflect general higher rates of bullying.

Similarly, another study carried out on several schools whose pupils were from a range of ethnic backgrounds, demonstrated that neither socio-economic status nor ethnic mix contributed to the frequency of bullying behaviours (Economic and Social Research Council, 1999). Both these studies were, however, limited by their methodology: that is, all participants were interviewed in the study by white researchers. For this reason, it was possible that the Asian children had been less forthcoming in their reports of being bullied when talking with white interviewers. One study carried out in two schools in outer London looked at teachers' views of bullying and ethnicity (Siann *et al.*, 1994). Contrary to the research expectations, only eight of the 20 teachers (four from each school) voluntarily referred to racism or ethnic group as causal factors in being bullied. It was suggested that a reason for this was that both by-standers and participants of bullying draw a distinction between bullying and racism. This distinction was described by the authors as follows: "[whereas] the subjective experience of feeling bullied relates to the internalization of an attack on one's personal adequacy, the experience of being bullied...tends to be interpreted as an attack on one's group membership rather than as an attack on one's personal inadequacy." The argument at this stage is, however, conjectural. Further research is clearly needed in this field to help clarify the enigma of why children from ethnic minorities have not to date reported being bullied more, contrary to the assumption that these children are an "at risk group" (Dowdney, 1993).

Emotional and behavioural problems

Irrespective of ethnicity or individual personality traits, over the past 15 years, researchers have shown an increased interest in the emotional and, to a lesser extent, behavioural problems of children involved in bullying. While particular emphasis has been given to those children who are the victims of bullying (see Hawker and Boulton, 2000a for a review), more recently the emotional problems of children who bully others have also been studied (e.g. Byrne, 1994; Boulton and Smith, 1994;

Rigby and Slee, 1993). The emotional problems of bully-victims (i.e. children who bully others as well as are bullied themselves) have been most neglected in the literature. Research, however, over the past four to five years has started to address this gap (e.g. Austin and Joseph, 1996; Craig, 1998; ESRC, 1999; Kaltiala-Heino Rimpela, Marttunen, Rimpela and Rantanen, 1999; Kumpulainen, Rasanen, Henttonen, Almqvist, Kresanov, Linna, Moilanen, Piha, Puura and Tamminen, 1998; Salmon and James, 1998). In this way, the literature has moved away from the implication that victims alone are at risk of adjustment difficulties.

Children from a broad age range have been studied, though most studies have focused on children from "the middle years" (i.e. between 8 and 13 years) (e.g. Boulton and Smith, 1994; Neary and Joseph, 1994; Slee, 1995). Other studies have looked at the emotional problems of adolescents who are either bullied themselves or bully others (e.g. Salmon and James, 1998). Studies have been carried out in a variety of countries, including Australia (e.g. Slee, 1995), Finland (e.g. Kumpulainen *et al.*), the United Kingdom (e.g. Salmon and James, 1998) and North America (e.g. Crick and Bigbee, 1998). Children's emotional problems have been investigated using a range of measures, in particular self-report measures. Given, therefore, the diversity of methodologies and sampling procedures for individual studies, difficulties in being able to generalize findings from one study are similar to those encountered in the bullying literature in general (as discussed above).

The "emotional problems" found to be positively correlated with those children identified as "victims" in the bullying literature tend to incorporate a large range of psycho-social adjustment difficulties. These include factors such as "loss of confidence" and poor self-esteem (Graham and Juvonen, 1998; Slee and Rigby, 1993; Smith *et al.,* 1993); "greater unhappiness at school" and isolation from peers or loneliness (Asher and Wheeler, 1985; Boulton and Smith, 1994; Graham and Juvonen, 1998; Slee and Rigby, 1993); physical health symptoms such as bedwetting, tummy aches and head aches (Forero *et al.,* 1999; Williams, Chambers, Logan and Robinson, 1996); anxiety (Craig, 1998; Crick and Grotpeter, 1996; Slee and Rigby, 1994;) and depression (Besag, 1989; Boivin, Hymel and Bukowski, 1995; Kaltiala-Heino *et al.,* 1999; Kumpulainen *et al.,* 1998; Kupersmidt and Patterson, 1991; Neary and Joseph, 1994; Salmon and James, 1998; Slee, 1995). Interestingly, a recent review has concluded that victims of bullying tend to report high levels of internalizing problems (for example, emotional distress, depression and loneliness), irrespective of the form of bullying to which they were exposed (i.e. direct, indirect or relational) (Hawker and Boulton, 2000a).

Some of these difficulties have also been associated with children who bully others. For example, bullies, like victims, have been found to experience greater unhappiness and dislike of school than children not involved in bullying (Rigby and Slee, 1993). Linked to this "unhappiness" is the recent finding that, in addition to victims, bullies and bully-victims also present with depressive symptomatology. Few studies have looked at all three categories of children involved in bullying (i.e. bullies, victims and bully-victims) in relation to their psycho-social adjustment, but some key studies will be considered here. While depression will be given a particular emphasis, other factors of children's psycho-social adjustment investigated by the studies (such as behavioural problems) will also be considered.

One English study has investigated the emotional and behavioural problems in a sample of 425 children aged 8 to 11 years in relation to their involvement in bullying (Austin and Joseph, 1996). It measured children's involvement in bullying using the Peer Victimization Scale (Neary and Joseph, 1994) and the Bullying Behaviour Scale (Austin and Joseph, 1996), scales which were immersed in the Self-Perception Profile for Children in an attempt to "reduce the saliency of items relating to victimization" (SPPC: Harter, 1985, cited by Austin and Joseph, 1996). The identification of children's emotional and behavioural problems was therefore based on the children's self-reports of these difficulties.

The study found that, according to the children's reports, bully-victims were most likely to be experiencing behavioural problems by comparison with bullies, victims and children not involved in bullying. Both victims and bully-victims obtained scores that were above the cut-off point for depression on the Birleson Depression Inventory (Birleson, 1981, cited by Austin and Joseph, 1996). These levels of depression were found to be similar to previously established levels of depression in children who had identified themselves as being bullied in the literature (Callaghan and Joseph, 1995; Neary and Joseph, 1994). Victims and bully-victims also obtained lower scores on factors relating to scholastic competence, social acceptance and global self-worth.

Interestingly, boys identified as "bullies only" obtained a higher depression score than girls who identified themselves as "bullies only." One explanation for this gender difference put forward by the authors was based on the view that aggressive children engage in less effective and less constructive communication strategies than non-aggressive children, meaning that they are more vulnerable to depression (Dumas, Blechman and Prinz, 1994). They hypothesized that this view applies more to boys who are aggressive than girls who are aggressive, thus surmising that the gender difference is a result of aggressive girls' ability to employ effective communication strategies regardless of their aggressive behaviour.

Similar work has been carried out in Canada (Craig, 1998). This study's findings were consistent with those of previous research in that victims reported higher levels of anxiety than bullies and children not involved in bullying (e.g. Neary and Joseph, 1994; Slee, 1995). It also concluded that children who identified themselves as bullies or victims and who engaged in a wide repertoire of aggressive strategies were more likely to report lower levels of depression and anxiety than children who employed a narrow range of aggressive strategies.

Another study carried out in Finland (Kaltiala-Heino *et al.*, 1999) using a sample of 410 adolescents aged between 14 and 16 years reported a series of findings. These included: that depression *and* severe suicidal ideation were more common among either bullies or victims; that depression occurred equally frequently among bullies or victims; and that depression was most common among bully-victims. It further reported that severe suicidal ideation was associated with being a bully or victim in girls, and with being a bully in boys. When depression was excluded from the analysis, bully-victims were found to be most vulnerable to severe suicidal ideation; and when depression was included in the analysis, bullies were found to be most vulnerable. In summary, it was found that bullies, then bully-victims, and finally victims were at the greatest risk of severe suicidal ideation. The authors concluded that the strong association between being either a bully, victim or bully-victim and depression and/or suicidal ideation highlighted the need for further investigations into "the social, psychological and environmental factors associated with bullying."

Another Finnish study (Kumpulainen *et al.*, 1998), which looked at all three categories of children involved in bullying is rare in that it examined both teachers' and parents' reports of emotional and behavioural problems in the primary school children involved in the research using Rutter's RA2 and RB2 scales (Rutter, 1967; Rutter, Tizard and Whitmore, 1970; both cited by Kumpulainen *et al.*, 1998) While this multi-informant approach was a particular strength of the study, a weakness was its method of measuring the incidence of bullying in its sample: it simply extracted two questions from the Olweus questionnaire, thus greatly reducing its validity. The breadth of the findings, however, reported by the study with regard to the emotional and behavioural problems of primary school children involved in bullying is almost unique to the field, and will therefore be given particular consideration.

The study reported that bully-victims (both boys and girls) scored highest on two factors of the Children's Depression Inventory (CDI: Kovacs, 1992), namely, interpersonal problems and ineffectiveness. It further reported that victims (both boys and girls) scored highest on the anhedonia and negative self-esteem factors of the CDI. Bully-victims who were girls were found to score highest on the negative mood factor, whereas for boys it was the victims who were found to score the highest on this factor. In general, victims were found to have more externalizing behaviour and hyperactivity than children not involved in bullying; though it was the bully-victims who were found most likely to exhibit hyperactive behaviour according to teachers' and parents' reports.

The authors contrasted this finding with that of Stephenson and Smith (1989) who found that hyperactivity was more associated with being a bully than with victims or bully-victims. Although in Kumpulainen *et al.'s* study (1998) this was not the case, the authors noted that the discrepancy in hyperactivity scores was not great between bullies and bully-victims. Female victims were also found to obtain high scores on the hyperactivity factor. These findings were interpreted to suggest that, consistent with the view of Boulton and Smith (1994), victims are not necessarily passive recipients of bullying, but may themselves engage in provocative behaviour that elicits being bullied. Clearly further research is needed to clarify the externalizing as well as the internalizing behaviours of children involved in bullying.

Social Skills

One aspect not investigated by the above study (i.e. Kumpulainen *et al.,* 1998) are the social skills of bullies, victims and bully-victims by comparison with children not involved in bullying. Limited research has to date been conducted in this area in relation to bullying. One study of primary school children in North Carolina concluded that aggressive behaviour is often linked to an absence of social participation (Dodge, Coie, Pettit and Price, 1990). It has also been found that bullies in a sample of adolescents were more likely to engage in antisocial or non-cooperative ways of behaving, but the association was only weak (Rigby and Slee, 1993). Nor was this finding replicated in a study of younger children, suggesting that the original association may have been informed by a developmental tendency (Slee and Rigby, 1993). Finally, it has been found that children involved in both relational and direct bullying have prosocial problems according to parents' reports on Goodman's (1997) Strengths and Difficulties Questionnaire (Wolke, Woods and Bloomfield, 1999, *in submission*).

Interventions

The finding that bullies, victims and bully-victims are all vulnerable to emotional and behavioural problems has led researchers to emphasize the need for effective intervention for these children (Roland, 1989, cited by Neary and Joseph, 1994). The need for "an interagency response" (Chesson, 1999) has been highlighted: namely, that greater liaison is needed between different agencies (e.g. schools, health and social services) if children are to be supported effectively with problems that arise from bullying. A range of intervention strategies/ programs have been developed in attempts to tackle the problem of bullying in schools. There is not space here to consider in any detail either the nature or reported efficacy of these interventions. A few key interventions will, however, be outlined.

Olweus (1991, 1993, 1994) has been a pioneer in the field of developing bullying interventions in schools. He has developed what he has termed "a whole school approach to bullying." The intervention program is applied to a school setting and aims to reduce aggressive behaviour whilst promoting favourable school, community and family attitudes to aggression. The program was first conducted between the years 1983 to 1985 in Norwegian schools. It concentrated on developing an anti-bullying awareness in schools and cognitive skills building. Several components informed this intervention. These included: providing schools with a detailed information booklet on bullying; providing parents with a portfolio of information and recommendations about children involved in bullying, whether as victims or bullies; providing schools with a video of vignettes about bullying which could be shown in the classroom; and providing schools with a questionnaire designed to assess the rate of bullying in schools and provoke wider debate in schools about bullying.

Research into the efficacy of this intervention program, carried out over a 30 month period using a quasi-experimental staggered cohort design, indicated that children reported both bullying others and being bullied significantly less than at the start of the project (Olweus and Alasker, 1991). Improvements overall were similar for boys and girls. There was, however, no reduction found in the rate of bullying that took place on the way to and from school. A general increase in pupil satisfaction with school life was observed, as suggested by positive responses to items such as "liking recess time."

Other interventions that have been reported include: teaching victims of bullying verbal and non-verbal response patterns that are non-reinforcing for bullies (e.g. responding with a sense of humour) (Perry, Williard and Perry, 1990); teaching "rejected children" (who are often the victims of bullying) behaviours such as cooperativeness, friendliness and supportiveness (Parkhurst and Asher, 1992); and developing children's prosocial attitudes to each other, at the same time "dispelling the myth" that "it is wrong 'to tell tales'" (Rigby and Slee, 1992).

Discussion

A review of the literature has highlighted the need for a consistent definition of bullying if studies are to be effectively compared with one another. The range of methodologies employed to examine the prevalence rates of bullying in schools similarly makes it difficult to draw comparisons across studies. Nonetheless, certain consistent findings have been found irrespective of methodological differences. As summarized by a recent review of peer victimization and psychosocial maladjustment, it is clear from the literature over the past two decades that victims of bullying suffer considerable psychosocial difficulties, including increased anxiety, depression, loneliness and poor self-esteem (Hawker and Boulton, 2000a).

In the light of the strength of these findings, the authors of this review have concluded that, "there is little need now for further cross-sectional studies of peer victimization and psychosocial maladjustment." They do concede that there are exceptions to this statement: a need remains, they argue, to improve the measurement of victimization and to address the issue of cross-cultural variance. The current review, however, puts forward the argument that these concessions are an underestimation of gaps in the literature that remain to be addressed.

Too much emphasis until now has been placed solely upon the emotional difficulties experienced by the victims of bullying. This is not to detract from the distressing experience of being bullied, but rather to highlight a need to redress the balance: that is, to investigate the emotional problems of bullies and bully-victims as well as of victims. Furthermore, while the internalizing behaviours of victims of bullying have been examined in some detail, the externalizing behaviours of children associated with an involvement in bullying (whether as bully, victim or bully-victim) remains to be clarified. Such clarification may be supported by a multi-informant approach (i.e. asking teachers and/ or parents) to the investigation of emotional and behavioural problems in children.

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Major Research Project

Year III

July 2001

Bullying in primary schools: Emotional and behavioural problems evident in bullies, victims and bully-victims

ABSTRACT

Background. Research has indicated strong relationships between children's experience of being bullied and their emotional and behavioural problems. However, few studies have examined the psychosocial difficulties of bullies and bully-victims (i.e. those that bully others as well as are bullied themselves). Furthermore, the majority of studies have relied on children's self-reports of their emotional and behavioural difficulties. This study aims to examine the relationship between children's bully-victim status (i.e. victim, bully, bully-victim or neutral) and their emotional and behavioural problems, as rated by their teachers. It also investigates the relationship between children's self-reported depressive symptomatology and their bully-victim status. The influence of gender and ethnicity on these relationships is also examined.

Method. The study was cross-sectional in design. 538 children aged between 9 and 11 years from four primary schools completed the Revised Olweus Bully-Victim Questionnaire (Olweus, 2000) and the Children's Depression Inventory (CDI: Kovacs, 1992). In addition, class teachers completed the Strengths and Difficulties Questionnaire (SDQ: Goodman, 1997) which is a measure of children's emotional and behavioural problems as well as of their prosocial strengths.

Results. 18% of children identified themselves as a victim of bullying; 3% of children identified themselves as bullies; and 1.9% of children identified themselves as bully-victims. Boys were more likely to classify themselves as bullies than were girls. On the SDQ, all children involved in bullying had increased overall emotional and behavioural problems as measured by the SDQ total deviance score, as well as increased hyperactivity problems and lower prosocial scores. Bullies and bully-victims were rated by teachers as experiencing increased conduct problems by comparison with victims and with children not involved in bullying. Victims and bully-victims reported significantly higher levels of depression than bullies on the CDI. Victims also scored significantly higher than neutrals on the SDQ emotional symptoms scale. No difference was found, however, between bullies' and neutrals' scores on the CDI or on the SDQ emotional symptoms scale. Gender, but not ethnicity, was found to influence victims' SDQ hyperactivity and conduct problems scale scores.

Conclusions. This study confirmed that children who are involved in bullying experience increased levels of emotional and/ or behavioural problems according to teacher and self-reports. In general, bullies were most likely to experience problems of an externalizing nature, whereas victims were most likely to experience problems of an internalizing nature. Bully-victims were identified as a particularly vulnerable group of children in respect of both emotional and behavioural problems. The theoretical and clinical implications of these findings are discussed.

INTRODUCTION

1. Background

Bully-victim problems in British schools have become a source of increasing national concern in recent years. Such concern has been reflected in professional research and public domains alike. In addition to the surge of empirical studies that have been carried out in this area in the past two decades (see Chapman, 2000, this dissertation, pp. 182 - 208 for a review), the issue of bullying has also, in the year 2000, been the subject of a nation-wide child safety campaign by the National Society for the Prevention of Cruelty to Children (NSPCC). In the previous year KIDSCAPE reported the findings of the first large-scale study to investigate the long-term effects of bullying (KIDSCAPE, 1999). They sampled a population of 1044 adults, and found that both men and women who had been victims of childhood bullying were more likely to report they could not trust people or were afraid of new situations as adults.

In the past twelve months, the public's awareness of the potential consequences of bullying has again been sharpened. The tragic murder of 10-year-old Damilola Taylor, a new immigrant from Nigeria, by his peers in November 2000 threw into relief public concern about gang bullying among children, with a particular concern and query about the possible racial motivation of such an attack. High-profile legal battles such as the case of Leah Bradford-Smart in the year 2000 have also drawn the public's attention to the potentially damaging effects of bullying on an individual's emotional as well as physical wellbeing.

Research indicates strong relationships between the experience of being bullied and psychosocial difficulties (see Hawker and Boulton, 2000a, for a review). However, several areas of research have yet to be adequately investigated, and will inform key objectives of the present study. Firstly, while research has emphasized victims' psychosocial adjustment difficulties, the experiences of bullies and bully-victims (i.e. children who bully others as well as are bullied themselves) have been much neglected. The behavioural problems of children have also been little investigated, though preliminary findings suggest that bullies' problems tend to be of an externalizing or behavioural nature, whereas victims' problems tend to be of an internalizing nature (e.g. Kaltialo-Heino, Rimpela, Rantanen and Rimpela, 2000; Kumpulainen, Rasanen, Hentonnen, Almqvist, Kresanov, Linna, Moilanen, Piha, Puura and Tamminen, 1998).

Previous failure to consider bully-victims has represented an important omission from research. Bully-victims have consistently been found to constitute a distinct group of children involved in bullying (e.g. Kumpulainen *et al.*, 1998; Mynard and Joseph, 1997). One recent study (N = 4, 263) reported that, of those adolescent students who acknowledged bullying others (7.4%), over one half also reported being victims of bullying themselves (Haynie, Nansel, Eitel, Davis Crump, Saylor, Ku and Simons-Morton, 2001). Research suggests that bully-victims experience the greatest number of difficulties - both internalizing and externalizing - in middle childhood (e.g. Kumpulainen, Rasanen and Puura, 2001; Wolke, Woods, Bloomfield and Karstadt, 2000) and also during adolescence (e.g. Kaltiala-Heino *et al.*, 2000; Haynie *et al.*, 2001).

The prosocial strengths and difficulties of children in the context of bullying have also been largely neglected, though recent research is demonstrating a theoretical and practical interest in this area (e.g. Crick and Dodge, 1999; Sutton, Smith and Swettenham, 1999a, 2001). Those studies that have sought to investigate children's emotional and behavioural problems according to their bully-victim status have almost exclusively ignored the role of ethnicity. Only a very small number of studies have examined adults' reports of children's emotional and behavioural problems. Further research is also needed on the clinical relevance of children's emotional and behavioural problems.

2. Definitions of bullying

Bullying has been defined in a variety of ways by researchers (Tattum and Lane, 1989, cited by Slee, 1993). Working definitions have largely focused on a range of physical and verbal bullying behaviours that include hitting, kicking, pushing and name-calling (Olweus, 1978, 1991). More recently, however, a new form of bullying has been identified: namely, "indirect" or "relational bullying" which refers to the social exclusion of one child by at least one other child (e.g. Atlas and Pepler, 1998;

Craig, 1998). Despite this broader, arguably more sophisticated conceptualization of bullying, it is widely agreed that bullying involves several components (see Dowdney, 1993). These include: a power differential between at least two individuals, whether physical or psychological; the wilful intent of one party to hurt another in the absence of any significant provocation; and the repetition of these acts over a period of time (Olweus, 1991).

3. Prevalence of bullying

The prevalence of bullying in primary and secondary schools is high - ranging from 10 to 30% (Dowdney, 1993) - with some evidence to suggest that the range of methodologies and definitions of bullying employed may have contributed to the variability of incidence rates (see Chapman, 2000, this dissertation, pp. 185-187).

Few studies have investigated the incidence of bullying using a method that does not rely only on self-reports. Where teacher reports have been investigated, it is generally found that teacher and self-reports vary greatly (Pakaslahti and Keltikangas-Jarvinen, 2000). One reason for this is that the children involved in bullying and the teachers occupy very different roles in relation to the bullying context. Whereas teachers, like peers, are in the position of observing bullying (Pakaslahti and Keltikangas-Jarvinen, 2000), it has been suggested that children involved in bullying are more likely to understand their motivation for their behaviour, and that this may influence their self-reports (e.g. Funder and Colvin, 1997). The present study sought to explore this difference between child and teacher reports of children's involvement in bullying.

4. Demographic influences upon bullying

A common finding is that bullying appears to decrease with age (e.g. Olweus, 1987; Rigby and Slee, 1991; Whitney and Smith, 1993). The influence of gender, by contrast, upon a child's involvement in bullying has yielded mixed findings. Some studies indicate that similar proportions of males and females are involved in bullying, whether as bullies, victims or bully-victims (e.g. Boulton and Smith, 1994; Kumpulainen *et al.*, 2001; Whitney and Smith, 1993; Wolke *et al.*, 2000).

Other studies, however, contradict these findings, and suggest that bullies and/ or bully-victims are more likely to be male than female (e.g. Olweus, 1993; Wolke and Stanford, 1999). It has been argued that this finding is due to the tendency of researchers to focus on direct bullying (that is, overtly aggressive behaviour) (Wolke and Stanford, 1999). In general, research has concluded that boys are more likely to engage in overtly aggressive behaviour than girls (e.g. Olweus, 1993; Wolke and Stanford, 1999). Because of this it follows that those studies which have defined bullying as overtly aggressive behaviour would yield a greater preponderance of male bullies. Supporting this argument, when both direct and indirect bullying are investigated, similar proportions of male and female bullies are often found (Crick and Grotpeter, 1996). The argument relates to sex-differences theory (e.g. Bjorkqvist, Lagerspetz and Kaukiainen, 1992, cited by Hawker and Boulton, 2000b; Crick and Grotpeter, 1995), but research is currently limited in its attempt to provide a more sophisticated theoretical explanation for these findings (Hawker and Boulton, 2000b).

The role of ethnicity in children's experience of being bullied marks a significant gap in the research. Preliminary findings have tended to baffle researchers, suggesting that, contrary to expectation, children's experience of being bullied is not associated with their ethnic background (Boulton, 1995; Economic and Social Research Council, 1999, *unpublished*; Moran, Smith, Thompson and Whitney, 1993). The methodological limitations of these studies, in particular the use of interviews and white researchers, have been proposed as one explanation for these non-significant findings (Moran *et al.*, 1993).

One finding that has been replicated by a small number of studies is that, although children of an ethnic minority background tend not to classify themselves as victims more than white children, children from black and Asian groups do tend to report being targets of *verbal bullying* (which relates to their ethnicity) more than white pupils (Boulton, 1995; MacDonald, Bhavnani, Khan and John, 1989; Moran *et al.*, 1993). It has been hypothesized that the target of racial name-calling may not perceive this as bullying, possibly because it relates to the individual's cultural background rather than his or her personal characteristics (Siann, Callaghan, Glissov, Leckhart and Rawson, 1994). Again, though, this hypothesis has not been substantiated empirically.

5. Emotional correlates of bullying

5.1. Victims, bullies and bully-victims

The emotional correlates of children who are involved in bullying have represented an important area of research in recent years. For a comprehensive review of victims', bullies' and bully-victims' emotional (and behavioural) problems, see Chapman (2000, this dissertation, pp. 191 - 196).

Victims' emotional difficulties have generally been assessed using self-report measures. The only meta-analytic review of this area of research has confirmed the strength of the relationship between being bullied and emotional problems (Hawker and Boulton, 2000a). These authors argue that this relationship may be theoretically accounted for by the finding that negative social experiences contribute to the development of depression and other types of psychosocial maladjustment. As an example, they cite Gilbert (1992) who draws on social rank theory to illustrate that depression is maintained by attacks on an individual's peer-group rank (which, according to Hawker and Boulton, 2000b, strongly resembles physical victimization). For a fuller account of social theories that have been proposed to explain the relationship between children's experience of being victimized and psychosocial difficulties, see Chapman (2000, this dissertation, pp. 187 - 189).

Despite the wealth of research, however, that has pointed to the psychosocial maladjustment of victims (in particular, difficulties such as depression, anxiety and low-self-esteem), considerably less attention has been paid to the psychosocial difficulties of children who bully others. Research in this area to date has given rise to seemingly conflicting results (Wolke *et al.*, 2000). On the one hand, bullies have been found to share in some of those difficulties experienced by victims: for example, feelings of unhappiness and dislike of school (Rigby and Slee, 1991). On the other hand, studies have varied in their reports of bullies' vulnerability to depressive and anxious presentations. While some researchers have found that bullies are less vulnerable than victims to depressive or anxious symptomatology (e.g. Austin and

Joseph, 1996; Craig, 1998), other studies have reported the opposite finding (e.g. Salmon and James, 1998). With regard to bully-victims, findings point more consistently to the increased vulnerability of these children by comparison with bullies or victims (e.g. Haynie *et al.*, 2001; Kumpulainen *et al.*, 1998; Wolke *et al.*, 2000). The present study sought to replicate the finding that bully-victims constitute a particularly vulnerable group, and to investigate the differential emotional difficulties of bullies versus bully-victims using child and teacher reports.

5.2. Variables influencing children's emotional problems

Few findings have been reported on the role of gender in children's involvement in bullying and their associated emotional difficulties. Within the literature on middle childhood, the picture is mixed. While findings from one study indicate that male bullies are more likely to suffer from depression than female bullies (Austin and Joseph, 1996), findings from another study suggest that female victims experience more emotional problems than male victims (Kumpulainen *et al.*, 1998). Studies that have investigated adolescent populations, by contrast, have yielded findings that suggest no gender differences in this area of research (e.g. Haynie *et al.*, 2000; Kaltiala-Heino *et al.*, 2000). These findings are surprising in the light of the research on children's emotional problems that indicates that the influence of gender is greater as children mature in age and acquire distinct gender roles (Ronen, 1998). Further research in this area is therefore needed.

Studies that have investigated the role of ethnicity in children's emotional problems in the context of being bullied are almost negligible. The present author is aware of only two unpublished studies to date that have shown an interest in this area (Butler, 2000a, *unpublished;* 2000b, *unpublished*). These studies sampled primary and secondary school populations respectively, and investigated the relationship between victimization, anxiety and depression, and ethnicity. No significant ethnic differences were found between victimization and anxiety in either study; nor was any significant ethnic difference found between victimization and depression in the sample of primary school children.

The results of the later study, however, - which sampled a population of 256 adolescents - revealed a significant interaction between victimization and ethnicity for depression (Butler, 2000b, *unpublished*). Interestingly, white children who were bullied were found more likely to suffer from depression than non-white children. The author hypothesized that ethnic identity may be a less significant factor in the relationship between victimization and mental health in younger children compared with older children. The present study sought to re-investigate the relationship between children's ethnicity, their involvement in bullying and their emotional problems.

6. Behavioural correlates of bullying

6.1. Victims, bullies and bully-victims

Research into the behavioural difficulties of children involved in bullying suggests that victims are more likely to experience behavioural problems than children not involved in bullying, but that bullies and bully-victims are more likely to experience a higher degree of behavioural problems than victims (e.g. Austin and Joseph, 1996; Kupersmidt and Patterson, 1991; Kumpulainen *et al.*, 1998; Wolke *et al.*, 2000). With a few exceptions, however, (e.g. Kumpulainen *et al.*, 1998; Wolke *et al.*, 2000), studies have generally relied on self-report. Where self-report measures have been used, the validity of findings is called into question as, when identifying children's behavioural problems, self-report measures are particularly unreliable, yielding a lower level of incidence than when parent or teacher measures are employed (Goodman, Ford, Simmons and Gatward, 2000a).

Bully-victims have been rated as having the greatest number of behavioural problems on all factors of Rutter's scales (Rutter, 1967; Rutter, Tizard and Whitmore, 1970) when using parent and teacher reports (Kumpulainen *et al.*, 1998) or just parent reports on the Strengths and Difficulties Questionnaire (Wolke *et al.*, 2000). Nonetheless, the research has struggled to differentiate the vulnerability of bullies from that of bully-victims in terms of specific behavioural difficulties. While a small number of studies indicate that bullies demonstrate an increased number of behavioural difficulties such as conduct and hyperactivity problems (Farrington, 1993, cited by Wolke *et al.*, 2000; Stephenson and Smith, 1987), other studies highlight the particular vulnerability of bully-victims in these areas (Austin and Joseph, 1996; Kumpulainen *et al.*, 1998, 2001). The present study sought to investigate the differential behavioural difficulties of these two groups of children involved in bullying.

6.2. Variables influencing children's behavioural problems

The influence of gender upon the association between children's bully-victim status and the behavioural correlates has received little attention in the research. One study reported that boys involved in bullying are more likely than girls to have problems with hyperactivity and poor prosocial skills (Wolke *et al.*, 2000). A finding from the same study did not, however, indicate that gender influences the relationship between children's conduct problems and their bully-victim status. This finding replicates that of earlier research (e.g. Verhulst, Koot and Berden, 1990; Kumpulainen *et al.*, 1998).

There is a paucity of research that has examined the role of ethnicity in the association between children's bully-victim status and their behavioural problems. The one study known to the present author did not identify any differences (Economic and Social Research Council, 1999). An aim of the present study was therefore to explore the role of ethnicity in the children's behavioural problems in the context of bullying. If differences were identified, findings could have implications for clinical interventions.

7. Social skills

Research on the social skills of children involved in bullying is in its early stages. With very few exceptions (e.g. Badenes, Estevan and Bacete, 2000), it has tended to focus on the social skills of bullies to the exclusion of victims and bully-victims. The extent to which bullies are socially skilled or unskilled has been a matter of debate (Crick and Dodge, 1999; Haynie *et al.*, 2001; Sutton, Smith and Swettenham, 1999a, 1999b, 2001). On the one hand, it has been suggested that "many bullies may in fact be skilled manipulators, not social inadequates" (Sutton *et al.*, 1999a). These authors have proposed that bullies possess a superior theory of mind who are able to manipulate not only their victims' thinking and behaviour but also that of their on-looking peers who may or may not intervene.

To date this hypothesis has scarcely been tested. One study, however, reports a positive correlation between the high performance of children aged between 7 and 10 years on a theory of mind task with the level of their leadership role in bullying (Sutton *et al.,* 1999b). These findings and related hypotheses have, however, been challenged. Crick and Dodge (1999) assert that "numerous studies" (as reviewed by Eisenberg and Fabes, 1998) have illustrated that "perspective-taking" (i.e. the ability to understand another person's perspective) is positively associated with prosocial behaviour. They conclude that, even if future research supports the hypothesis that bullies have superior "perspective-taking" skills, this finding will do little to predict the prosocial skills of bullies. In support of this conclusion, it has been found that bullies have fewer prosocial skills as reported by their parents (Wolke *et al.,* 2000) or by themselves (Haynie *et al.,* 2001).

This conclusion has, however, been complicated by findings that relate to the social skills of victims and/ or bully-victims (e.g. Badenes *et al.,* 2000; Wolke *et al.,* 2000). In the first of these studies – carried out on a Spanish sample of 313 children aged between 4 and 6 years - "peer rejected" children were not found to demonstrate a theory of mind deficit (Badenes *et al.,* 2000). It may have been expected that, if bullies possess a superior theory of mind, then "peer rejected" children would conversely possess an inferior theory of mind. Findings from this study may not, however, generalize to research on bullying as, while peer rejection and victimization are highly correlated concepts (Boivin, Hymel and Bukowski, 1995), they are not synonymous constructs. Furthermore, the peer rejected children in the Spanish sample were compared with children who were "positively liked" as opposed to children who bullied others. It is not therefore possible to compare bullies' and victims' theory of mind abilities on the basis of this study's findings.

Findings from the second study (Wolke *et al.,* 2000) – which differentiated between direct and indirect bullying – did not reveal the superior prosocial behaviours of bullies, as predicted by Sutton and colleagues (Sutton *et al.,* 1999a, 1999b, 2001). Rather this study reported that indirect bullies and bully-victims had significantly lower scores than victims and neutrals, indicating fewer prosocial behaviours, and that direct bully-victims also had significantly lower scores than neutrals. This suggested that bullies and bully-victims evidence social deficits when both direct and indirect bullying are measured. The present study examined the differential prosocial strengths of all groups of children involved in bullying using teacher reports on the Strengths and Difficulties Questionnaire (SDQ: Goodman, 1997). In this way it sought to examine the conflicting theories relating, in particular, to bullies' social skills.

8. Parent and teacher reports of children's emotional and behavioural problems

Parent and teacher reports of children's emotional and behavioural problems in the context of bullying have been insufficiently researched. In the absence of adult information, studies have largely relied on children's self-report (Wolke *et al.*, 2000). This can be problematic as the correlation between a child's self-nominated victim status and his or her psychosocial difficulties could be an attribute of shared method variance (Hawker and Boulton, 2000a). That is, a child who classifies him or herself as a victim may be more likely to report negative emotional symptoms because their negative feelings about one aspect of their life is likely to generalize to another (Hawker and Boulton, 2000a). One advantage, therefore, of a multi-informant approach in bullying research is that results have not been confounded by shared method variance.

Outside the context of bullying research, where adult reports have been investigated, research has indicated that adults tend to underreport children's emotional problems, but more accurately report their behavioural problems (Achenbach, McConaughy and Howell, 1987, cited by Wolke *et al.*, 2000; Schwartz, McFadyen-Ketchum, Dodge, Pettit and Bates, 1998). However, research on the inter-rater reliability of the SDQ (Goodman, 1997) has found that parent reports have better predictive value of children's emotional and behavioural difficulties than teacher and child reports, whilst teacher and child reports have similar predictive value (Goodman *et al.*, 2000a). Similarly, a Finnish study - in which parent and teacher reports of children's depressive symptoms were compared with children's self-reports - found that adult reports' of children's depressive symptomatology correlated well with children's reports (Puura, Almqvist, Tamminen, Piha, Rasanen, Kumpulainen, Moilanen and Koivisto, 1998).

In the context of bullying research, few studies have investigated the usefulness of adult reports but, where they have, similar anomalies have arisen. One Finnish study investigated a sample of 5,813 children with a mean age 8.4 years (Kumpulainen *et al.*, 1998). Children's depressive symptoms were examined using the Children's Depression Inventory (CDI: Kovacs, 1992) and children's emotional and behavioural problems were rated using Rutter's parent (Rutter *et al.*, 1970) and teacher measures (Rutter, 1967). Their findings suggested that adult and child reports are useful ratings of children's emotional problems, and that teacher and parent reports are useful ratings of children’s emotional and behavioural problems in the context of research on bullying. The present study sought to replicate this finding in a UK sample using teacher reports only. It also set out to extend the Finnish findings by using the SDQ (Goodman, 1997), an extended version of Rutter's scales (Rutter, 1967; Rutter *et al.*, 1970).

By contrast with findings from this Finnish study, a recent British study failed to identify any differences between children involved in bullying and children not involved in bullying according to parent reports of children's emotional symptoms, as rated on the SDQ (Wolke *et al.*, 2000). The study was conceptualized by the authors as a part-extension and part-modification of the Finnish study in that they used the SDQ (Goodman, 1997) instead of Rutter's scales (Rutter, 1967; Rutter *et al.*, 1970). 2201 children aged between 6 and 9 years were interviewed about their involvement in bullying and the researchers distinguished between direct bullying and relational bullying (Wolke *et al.*, 2000). In addition, all parents were asked to complete the parent version of the SDQ.

Unfortunately, Wolke and his colleagues' study did not require children to complete a measure of emotional/ behavioural difficulties themselves, thus preventing the possibility of comparing child and parent reports. Furthermore, only 82 per cent of parents returned the questionnaire. While this is a relatively high response rate for postal surveys (Johanson, Gips and Rich, 1993), chi-square analysis revealed that parents of bullies or bully-victims (involved in direct bullying) were less likely to respond than parents of victims or neutrals. This raised the possibility that bullies' and bully-victims' emotional and behavioural problems were underrepresented in the final sample, which may have accounted for the lack of any significant differences between children involved/ not involved in bullying in terms of their emotional problems. The present study was therefore a part replication, part extension of this study also in that it used the teacher version of the SDQ.

9. Clinical significance of research findings

A growing number of studies are reporting on the clinical significance of children's emotional and behavioural problems according to their bully-victim status (Kumpulainen *et al.*, 2001; Salmon, James, Cassidy and Javaloyes, 2000; Wolke *et al.*, 2000). This contrasts with previous studies that have reported on children's probability of obtaining higher or lower scores on an emotional or behavioural scale (according to their bully-victim status), but have failed to examine the clinical significance of these scores (i.e. which scores fall above a clinical cut-off point) (e.g. Crick and Bigbee, 1998; Forero, McLellan, Rissel and Bauman, 1999; Rigby and Slee, 1991; Salmon and James, 1998).

Those studies that have examined the clinical significance of children's scores have adopted one of three methodologies: screening measures that rely on children's self-reports (e.g. Austin and Joseph, 1996); screening measures that are completed by external sources (i.e. parent or teacher) (e.g. Kumpulainen *et al.*, 1998; Wolke *et al.*, 2000); and predictive diagnostic interview schedules which incorporate adult and/or child views (e.g. Kumpulainen *et al.*, 2001; Salmon *et al.*, 2000).

The majority of studies in this area have assessed the clinical significance of children's depressive symptoms according to their bully-victim status. These studies have largely relied on self-report screening measures of depression such as the Children's Depression Inventory (e.g. Kumpulainen *et al.*, 1998) or the Birleson Depression Inventory (Birleson, 1983: e.g. Austin and Joseph, 1996). Where, as in most cases, studies have only examined the emotional problems of victims, findings suggest that victims' scores frequently fall within the clinical range of depression (e.g.

Neary and Joseph, 1994; Slee, 1995). Unfortunately, however, the exclusion of bullies and bully-victims from these studies does not allow a comparison of children's clinical vulnerability across all three groups of children involved in bullying.

Studies that have measured the clinical significance of children's behavioural problems are even fewer in number, but at least two have the advantage of using diagnostic interview schedules: one in a Finnish sample of primary school children (Kumpulainen *et al.*, 2001) and the other in a sample of adolescents from a school for children with emotional and behavioural problems (Salmon *et al.*, 2000). As, however, in those studies where the clinical significance of scores was not considered (e.g. Stephenson and Smith, 1989), these studies have yielded conflicting findings regarding the differential clinical vulnerabilities of bullies and bully-victims.
In the Finnish study, while bully-victims were found most at risk for any one of several psychiatric disorders, they reported that bullies were most likely to meet the criteria for an actual diagnosis of attention deficit disorder, followed by bully-victims. Both groups' scores were above those of neutrals (Kumpulainen *et al.*, 2001). In the British study, findings revealed that bullies and bully-victims were most likely to fulfil the clinical criteria for externalizing disorders such as conduct disorders, which were often co-morbid with ADHD (Salmon *et al.*, 2000).

A strength of this latter study was the combined use of parent and adolescent reports of the adolescents' psychiatric difficulties (Salmon *et al.*, 2000). These findings should, however, be interpreted with caution as the sample was based on children attending a school for children with emotional and behavioural difficulties, and conduct disorder (co-morbid with ADHD) was found to be the most frequent psychiatric diagnosis whether children were involved in bullying or not (Salmon *et al.*, 2000).

SUMMARY OF AIMS

Primary aims

1. To investigate whether depression, as reported by primary school children on the Children's Depression Inventory (CDI: Kovacs, 1992), is associated with

bullying in bullies, victims and bully-victims, particularly in bully-victims, including the influence of gender and ethnicity on any associations identified.

2. To investigate whether emotional and behavioural difficulties in primary school children, as reported by class teachers on the Strengths and Difficulties Questionnaire (SDQ: Goodman, 1997), are associated with bullying in bullies, victims and bully-victims, particularly in bully-victims, including the influence of gender and ethnicity on any associations identified.
3. To investigate whether victims are more inclined to experience internalizing difficulties and bullies more likely to experience externalizing difficulties.
4. To assess whether bullies, victims and bully-victims are lacking in prosocial skills as reported by teachers on the SDQ: in particular, to investigate whether victims are more likely to experience problems in this area than are bullies.

Secondary aims

1. To assess whether child and teacher reports of children's involvement in bullying differ from one another: in particular, whether teachers identify a greater proportion of bullies than do the children.
2. To assess whether gender, ethnicity and age influence children's involvement in bullying: in particular, whether boys are more likely to be bullies than girls; and whether children of an ethnic minority background are more likely to be bullied than white children.

METHOD

1. Sample

1.1. Background characteristics of children

Participants were recruited from a cross-section of non-independent, primary schools in a suburban area. Socio-economic and ethnic demographic information about the general population was obtained from the Local Education Authority's "Statistical Profile for Education in Schools" (with the permission of the Principal Educational Psychologist). In this way, participating schools were matched on the basis of their socio-economic and ethnic demographics. A description of the sampling procedure undertaken, and details of the socio-economic and ethnic demographics of participating schools can be found in Appendix 1.

All children from chosen classes took part, with the exception of those children who were absent on the day of the study, who dissented from the study or whose parents/guardians did not give permission for them to participate. The frequencies of participants and non-participants are summarized in Appendix 2. In total, out of an original 600 children, six children (1.0%) did not participate because of parental dissent, 14 children (2.3%) chose not to participate, and 42 children (7.0%) were absent on the day of the study.

The final sample included 538 children from Years 5 and 6 in four schools. The mean age was ten years, one and a half months (range 9 - 11 years, 3 months). Schools "A" and "B" had three classes per year, whereas schools "C" and "D" had two classes per year. Children's characteristics are summarized in Table 1 overleaf.

Table 1. Characteristics of the participants.

	Frequency	Percentage (%)
Gender		
Male	282	52.4
Female	256	47.6
School		
A	151	28.1
B	150	27.9
C	118	21.9
D	119	22.1
Year Group		
Year 5	277	51.5
Year 6	261	48.5
Ethnic Origin		
Afro-Caribbean	18	3.3
Asian	28	5.2
Not otherwise specified	8	1.5
White	484	90.0

1.2. Background information about teachers

20 teachers (17 of whom were female, and all of whom were British white) completed the Strengths and Difficulties Questionnaire (SDQ: Goodman, 1997), as described in the measures section below). All teachers reported that their school had a bullying policy. 17 teachers reported that they used forums such as assemblies, circle time and PSHE (Personal, Social and Health Education) lessons in which to teach children about bullying. Two teachers did not provide any information about how these bullying policies were taught, and one teacher said that she had not read the bullying policy. Four teachers (20 %) said that they had attended a training course on bullying.

2. Procedure

2.1. Obtaining participants' informed consent and ethics approval

2.11. Participating schools: head teacher and teacher consent

Head teachers from seven schools were initially approached by telephone, and asked to take part in the study. Four head teachers expressed an interest in their school's participation, two dissented, and one explained that their school had recently taken part in research on bullying, so did not wish to participate. If the head teacher expressed an interest in their school's participation, this telephone conversation was followed up with a letter (see Appendix 3) and an information sheet (see Appendix 4) about the study. A meeting was then arranged with the head teacher to discuss the details of both children's and teachers' involvement in the study. At this meeting, head teachers were shown copies of the study's questionnaires. Following this process, all four schools agreed to participate in the study.

Written consent was obtained from all head teachers before the study was carried out in each school. Class teachers were also required to sign a consent form agreeing to their participation in the study (see Appendix 5). It should be noted that, in addition to the participation of these schools, a pilot study was carried out in one class from Year 6 of another school. As a result of this, it was possible to inform teachers how long their participation would involve. It was also decided that the Revised Olweus Bully-Victim Questionnaire (2000) was appropriate for a British cohort; and that it was appropriate to read the questionnaires aloud to the children.

2.12. Participating children: parental consent

All parents received a letter in advance that described the study with an opt-out slip which parents were able to return if they did not wish their child to participate (see Appendix 7). Children from each class were also given the option of participating or not participating before the study took place. The procedures for obtaining consent from head teachers, teachers, parents and children were approved by the University of Surrey Ethics Committee (see Appendix 8).

2.13. Preserving children's anonymity

To preserve each child's anonymity, all teachers were asked to assign an identification number to every child in their class. This identification number was written on both child and teacher questionnaires prior to completion to enable matching of the two child and one teacher questionnaires. The researcher was never given access to the children's names, and neither class teachers nor anyone other than the researcher were allowed to see the completed questionnaires. In this way, every child's confidentiality and anonymity was ensured.

2.14. Classroom administration/ child consent

Data were gathered in the classroom setting. Each class was informed of the purpose of the study, and what participation would involve. Issues of confidentiality and the anonymous coding procedure were explained simply and clearly, and it was checked with the children that they had understood these. The voluntary nature of the study was made clear to children and, as already reported, some children did choose not to participate.

Following this, class teachers handed out the booklet of questionnaires to the children (see measures section below). Once all booklets had been distributed, children were instructed to begin completing the cover sheet using either a pen or pencil. They were reminded not to write their name anywhere on the booklet (see Appendix 9 for instructions to children). Each section of the booklet was read aloud by the researcher. This aided children with reading difficulties without discriminating them from their peers. It was emphasized to children that they could ask a question at any time, and that they should inform the researcher if they were not able to keep up with the pace of administration.

Once the cover sheet had been completed, children were asked not to turn over, and were read a standardized definition of bullying (see Appendix 9), as provided by the Revised Olweus Bully-Victim Questionnaire. This procedure is specified by Olweus (2000). Children were again given the opportunity to ask any questions at this point. As outlined by Olweus (2000), the researcher explained to the children how to complete the questionnaire using the first item as an example on the white board. After completing the Revised Olweus Bully-Victim Questionnaire, children filled in the Children's Depression Inventory (CDI: Kovacs, 1992) (see Appendix 10). Again, items on the CDI were read aloud to the children.

During the period that children completed their questionnaires, teachers also completed their questionnaires. The child and teacher measures are described in the measures section below. The study was not conducted in any of the schools until at least 8 weeks after the Summer vacation: this was to allow time for class teachers to get to know the children in their class and for children's peer relations to re-develop after the long break. Children were instructed to complete the measures in silence, and without looking at their neighbours' responses.

Once questionnaires had been collected in and placed in a zipped case, children and teachers were thanked for participating in the study. Information was provided about who they could talk to or contact - either about bullying or any other issue that concerned them (see Appendix 11). Children were also given the opportunity to ask the researcher any questions.

3. Measures

3.1. Children's questionnaires

All children completed a booklet that included the following:

1. A cover sheet containing questions that identified each child's age (in years and months), their class and how long they had attended the school (see Appendix 12).
2. The Revised Olweus Bully-Victim Questionnaire (Olweus, 2000) (see Appendix 6).
3. The Children's Depression Inventory (CDI: Kovacs, 1992) (see Appendix 10).

3.11. The Revised Olweus Bully-Victim Questionnaire (2000)

The Revised Olweus Bully-Victim Questionnaire was used, consisting of 32 items. Seven items were omitted (as approved by Olweus, 2000) from the original 39-item questionnaire because of time constraints in administering the questionnaire. No items were excluded that classified a child's bully-victim status. Following Whitney and Smith's method (1993), a few minor modifications were made to language to facilitate children's comprehension of the items in a British context (see Appendix 13 for details). When completing this questionnaire, children were asked to consider each item in relation to their experience over the past two to three months. It was checked with children that they understood the length of time represented by "one month."

With the exception of two items, all items consisted of forced-choice responses. For example, the child needed to choose between: "I haven't been bullied at school this term", "only once or twice", "two or three times a month", "about once a week" or "several times a week." 18 of the questionnaire's items measured various forms of being bullied and bullying others (for example, physical, verbal, indirect and racial bullying). The remaining items focused on issues such as: who does the bullying (i.e. their gender, their year group in relation to the victim, and the number of bullies involved in the case of any one child) and children's attitudes to bullying.

The Revised Olweus Bully-victim Questionnaire has good reliability. In the present study, Cronbach's alpha for those items that related to being bullied was 0.86 ($n = 530$, $M = 14.70$, $SD = 6.08$) and, for those items that related to bullying others, it was 0.85 ($n = 534$, $M = 10.83$, $SD = 3.17$). In accordance with Olweus' scoring procedure (2000), items three and twenty-one on the questionnaire were used to classify children's bully-victim status. In brief, those children who reported that they were bullied at least two or three times a month (but did not bully others) were classified as "victims." Similarly, those children who reported that they bullied others at least two or three times a month (but were not bullied by others) were classified as "bullies."

Following the methodology of Kumpulainen *et al.* (1998), a new category called "bully-victims" was also created from these items: that is, those children who reported that they were both bullied and bullied others at least two or three times a month were classified as "bully-victims" (Kumpulainen *et al.*, 1998). Children who responded either "not at all" or "only once or twice" to items three and twenty-one were classified as "neutrals" (that is, not involved in bullying).

3.111. Missing Data on the Revised Olweus Bully-Victim Questionnaire (2000)

Four children (0.7%) did not respond to the items that classified them as neutrals, bullies or victims and were subsequently excluded from all parts of the study that depended on children's self-identification of their bully-victim status.

3.12. The Children's Depression Inventory (CDI: Kovacs, 1992)

The CDI contains 27 items, with a forced-choice response set of three options for each item (e.g. "I am tired once in a while", "I am tired many days", or "I am tired all the time"). In the present study, however, item 9 (which investigates a child's suicidal ideation) was omitted. This omission was guided by a concern that the emotional impact of this question on a child might not have been contained within the classroom setting, and is consistent with Kumpulainen and his colleagues' methodology (1998). In total, therefore, the CDI as used in the present study contained 26 items. When completing the questionnaire, children were asked to respond to each item in relation to how they had been feeling over the past two weeks.

Each item on the CDI is scored on a scale of 0 to 2, with higher scores indicating greater severity. A total score can be generated (ranging from 0 to 52 after the exclusion of item 9) by computing the sum of all items. In addition, the CDI consists of five factors (negative mood, interpersonal problems, ineffectiveness, anhedonia and negative self-esteem) and individual scores can be computed for each of these factors (a summary of items belonging to each factor can be found in Appendix 14).

Research has shown that the CDI has good internal reliability for both the total CDI score (Chronbach's Alpha = 0.86) and satisfactory reliability for the individual factor scores ranging from 0.59 to 0.68 (negative mood: Chronbach's Alpha = 0.62; interpersonal problems: Chronbach's Alpha = 0.59; ineffectiveness: Chronbach's Alpha = 0.63; anhedonia: Chronbach's Alpha = 0.66; negative self-Esteem: Chronbach's Alpha = 0.68) (Kovacs, 1992).

3.121. Missing data - CDI

A small number of children (n = 7) were excluded from those analyses that involved data from the CDI where children had failed to complete more than three items. Data were pro-rated for a further 23 children who had failed to respond to one or two items on the CDI.

As noted by Butler (2000b), the CDI manual does not recommend any criteria for pro-rating questionnaires when data is missing. It was decided therefore to follow Butler's (2000b, *unpublished*) method of pro-rating data on the CDI which is based on guidelines provided by The State-Trait Anxiety Inventory manual (STAI: Spielberger, 1983, cited by Butler, 2000b, *unpublished*). Before analysing CDI data, therefore, missing data were screened and excluded or pro-rated as follows:

1. Any participants who had failed to complete at least 90% of the CDI items (i.e. 23 items or more) were excluded from statistical analyses involving the CDI data.
2. In the cases of those participants who had failed to complete between one and three items the CDI, a mean score was generated of all their completed items and used to provide a pro-rated score for missing items.

3.2. Class teacher questionnaires

All teachers completed the following:

1. A teacher cover sheet that identified their own gender, school, class, ethnic background and number of years' experience in teaching. It also asked them about whether or not their school had a bullying policy, and whether or not they had attended any training events on bullying (see Appendix 15).
2. The Strengths and Difficulties Questionnaire (SDQ: Goodman, 1997) (see Appendix 16).

3.21. Strengths and Difficulties Questionnaire (SDQ: Goodman, 1997)

The SDQ is a brief behavioural screening questionnaire that assesses children's strengths and difficulties (Goodman, 1997). It is available in both self-report and informant-rated versions, but the former version is for children aged between 11 and 16 years only. Although both parents and teachers can complete the SDQ for children aged 4 to 16 years, only the teacher version was used here.

The SDQ consists of 25 items, each with three categories: "not true", "somewhat true" or "certainly true". Each of these items belongs to one of five separate scales: the prosocial scale (e.g. considerate of others); the hyperactivity scale (e.g. easily distracted); the emotional symptoms scale (e.g. nervous or clingy); the conduct problems scale (e.g. often has temper tantrums); and the peer problems scale (e.g. rather solitary) (see Appendix 17 for a summary of items within each scale). Each scale contains five items.

On the hyperactivity, emotional symptoms, conduct problems and peer problems scales, all those items whose content refers to a child's difficulty (e.g. "many worries, often seems worried") are scored as follows: "not true" is scored as 0, "somewhat true" is scored as 1, and "certainly true" is scored as 2. For all remaining items on these scales (i.e. those items that refer to a child's strength - e.g. "has at least one good friend"), the inverse scoring method is used: that is, "not true" is scored as 2, "somewhat true" is scored as 1, and "certainly true" is scored as 0. On these four "problem-related" scales, therefore, a higher score indicates greater severity of the problem.

The total score of the prosocial scale, by contrast, has the reverse meaning: that is, a higher prosocial score indicates a greater degree of prosocial strengths (as opposed to difficulties). The prosocial scale is therefore excluded from the generation of a child's "total deviance score" on the SDQ. A "total deviance score" can be obtained by summing all items except those that belong to the prosocial scale. This deviance score is used to define the child's "caseness" and norms exist to classify children into one of three categories (normal, borderline and abnormal) both for the total deviance score and for scores on all scale scores.

The SDQ has been found to have good concurrent validity with the Rutter scales (Goodman, 1997). It has also been found to have good predictive value when assessing whether or not a child has a certain type of psychiatric disorder (Goodman, Ford, Simmons, Gatward and Meltzer, 2000a). In brief, its predictive validity has been found to be most reliable when all possible informants are used (i.e. parents, teachers, and children if aged between 11 and 16 years). Where it is not possible to use two or more informants, however, it has been found that, in general, parents' and teachers' reports have approximately the same predictive value, with a small proviso that it depends on which disorder is being identified. Teachers' reports have been found to be slightly better predictors of conduct and hyperactivity disorders, whereas parents' reports have been found to be slightly better predictors of emotional disorders (Goodman *et al.*, 2000a).

3.211. Missing data - SDQ.

As on the CDI, no method has been recommended for pro-rating data on the SDQ. The method used in the present study was consistent with that used for pro-rating the CDI data. That is, a mean score of all completed items (in the case of the relevant participant) was computed, and this was used as a pro-rated score in place of the missing item. On the SDQ, it was only necessary to use this method in the case of one participant where just one item was missing.

3.3. Class teachers' identification of children's bullying-related behaviours

Teachers were not asked to complete items that identified children's involvement in bullying in addition to those items already on the SDQ. Although items on the SDQ that relate to bullying behaviours have not been standardized as bully-victim questions, two SDQ items were used to provide indications of children's involvement in bullying/ aggressive behaviours and being bullied according to teacher reports. These items were: "Often fights with other children or bullies them" and "Picked on or bullied by other children." Particular caution was used when considering the results of the first item as its content was mixed: the phrase "often fights with" may denote a child's involvement in aggressive behaviours that is separate to bullying (e.g. when two children are fighting of equal strength).

4. Statistical analyses

Analyses were conducted using SPSS version 10.0 (Statistical Package for Social Sciences). Normal probability plots, tests of homogeneity of variance, and skewness and kurtosis measures were used to determine whether or not assumptions of parametric tests had been met. Given that the majority of CDI and SDQ variables violated parametric assumptions, non-parametric tests were used in all analyses applied to these variables (see Appendix 18 for a fuller account).

Bully-victim status group comparisons were conducted using Kruskal Wallis analyses on all outcome measures that involved ordinal data. These comparisons included analyses of the CDI and SDQ total and factor scores. Where significant group differences were found, post hoc Mann Whitney U tests were applied. Because multiple comparisons carry the risk of committing a Type One error (i.e. rejecting the null hypothesis when it is true), this was corrected for using the Bonferroni *t* correction (Dunn, 1961).

Categorical variables were compared using chi-square tests and, if invalid, the Fisher's Exact test (denoted by FI) was used for comparisons that involved two by two analyses only. Given the small sample sizes of two of the groups (bully-victims: n = 10; bullies: n = 16), reported findings should be interpreted with caution.

RESULTS

In the first section below the incidence of children's involvement in bullying, the types of bully-victim behaviours reported, and the context in which they take place (e.g. where, how often and for how long) are all presented, together with the effects of gender, age and ethnicity. In the second section the relationships between children's CDI scores and their bully-victim status are described. In the third section the relationships between children's SDQ scores and their bully-victim status are presented. In the final two sections, the effects of gender and ethnicity on victims' scores are also reported.

1. Children's involvement in bullying

1.1. Child reports

534 children (99.3%) completed those items that classified their bully-victim status on the Revised Olweus Bully-Victim Questionnaire. Those children who were neither bullies nor victims are described hereafter as "neutrals." 96 (18.0 %) children nominated themselves as victims, 16 (3.0%) as bullies, and 10 (1.9%) as bully-victims. The remaining 412 (77.2%) were classified as neutrals.

1.11. The effect of gender

Table 2 summarizes the frequencies of male and female participants according to their bully-victim status.

Table 2. Frequencies of male and female participants according to their bully-victim status.

Bully-victim status	Male N (%)	Female N (%)	Total N (%)
Neutral	214 (51.9)	198 (48.1)	412 (100.0)
Victim	45 (46.9)	51 (53.1)	96 (100.0)
Bully	13 (81.3)	3 (18.7)	16 (100.0)
Bully-victim	7 (70.0)	3 (30.0)	10 (100.0)
Total	279	255	534

Note Four children were excluded from the analyses because they did not complete those items that classified their bully-victim status.

The differences between the four bully-victim status categories could not be investigated statistically because the expected count was less than 5 in more than 20% of cases, thus invalidating the use of a chi-square test (Diekhoff, 1992). Fisher's exact test was not a viable alternative as it is only valid for two by two comparisons. In order to test the hypothesis, therefore, that bullies were significantly more likely to be male than female, children were divided into two groups: those who nominated themselves as bullies and those who did not. Bully-victims were not included in the bully category as this would have confounded the results. As can be seen from Table 2, 81.3% of bullies were male in contrast to 18.7% of bullies who were female, a difference significant at the $p < 0.05$ level ($\chi^2 = 5.692$, df = 1, $p = 0.02$).[1]

1.12. The effect of age

Table 3 illustrates the frequencies of children's ages (as indicated by their year group). For reasons cited above, it was not possible to perform a chi-square test on these results, but it appears from an inspection of these data that there was little difference between years in the proportions of neutrals, victims, bullies and bully-victims.

Table 3. Frequencies of Year 5 and Year 6 children according to their bully-victim status.

Bully-victim status	Year 5 N (%)	Year 6 N (%)	Total
Neutral	215 (52.2)	197 (47.8)	412 (100.0)
Victim	44 (45.8)	52 (54.2)	96 (100.0)
Bully	9 (56.2)	7 (43.8)	16 (100.0)
Bully-victim	6 (60.0)	4 (40.0)	10 (100.0)
Total	274	260	534

1.13. The effect of ethnicity

The frequencies of Asian, Afro-Caribbean and white children and children whose ethnic origin was not otherwise specified can be found in Table 4.

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[1] All tests carried out were two-tailed unless otherwise stated.

Table 4. Frequencies of children's ethnic origin according to their bully-victim status.

	Afro-Caribbean N (%)	Asian N (%)	Other N (%)	White N (%)
Neutral	12 (66.7)	25 (89.3)	5 (62.5)	370 (77.1)
Victim	5 (27.7)	3 (10.7)	3 (37.5)	85 (17.7)
Bully	1 (5.6)	0 (0.0)	0 (0.0)	15 (3.1)
Bully-victim	0 (0.0)	0 (0.0)	0 (0.0)	10 (2.1)
Total	18 (100.0)	28 (100.0)	8 (100.0)	480 (100.0)

A *post hoc* decision was made to collapse these ethnic categories into "white" and "non white" and to exclude bullies and bully-victims to increase sample cell sizes for the purpose of statistical comparison (see Table 5). The difference between the frequencies of non-white and white children who classified themselves as victims was not significant ($\chi^2 = 0.133$, df = 1, p = 0.72).

Table 5. Frequencies of non-white and white children according to their victim status.

Bully status	White N (%)	Non white N (%)
Neutral	370 (81.3)	42 (79.2)
Victim	85 (18.7)	11 (20.8)
Total	455 (100.0)	53 (100.0)

However, 25 children (46.3%) of non-white ethnic origin reported that they were bullied with mean names or comments about their race or colour at least two or three times a month. Of these, only 11 children classified themselves as a victim. The proportion of non-white children who reported being bullied about their race or colour was significantly higher than the proportion of non-white children who classified themselves as a victim ($\chi^2 = 16.024$, df = 1, $p < 0.001$).

1.2. Teacher reports

The frequencies of teachers' responses to the bully/ aggression and victim items on the SDQ are summarized in Table 6.

Table 6. Teachers' responses to bully/ aggression and victim questions on the SDQ.

	Not true N (%)	Somewhat true N (%)	Certainly true N (%)
Often picked on or bullied by other children	432 (80.3)	85 (15.8)	21 (3.9)
Often fights with or bullies other children	426 (79.2)	76 (14.1)	36 (6.7)

Despite the limitations of the bully-victim items on the SDQ (see methods section), bully-victim status groups were computed: that is, a child was identified as a bully, victim or bully-victim respectively if the teacher responded either "somewhat true" or "certainly true" (or both) to the appropriate items (see Table 6). According to teacher reports, 64 children (11.9%) were victims, 70 children (13.0%) were bullies, and 42 children (7.8%) were bully-victims.

1.21. Effect of gender

Table 7 illustrates the relationship between children's "bully-victim" status and gender according to teacher reports on the SDQ.

Table 7. Children's bully-victim status according to teacher reports on the SDQ.

Bully-Victim Status	**Male** **N (%)**	**Female** **N (%)**	**Overall** **N (%)**
Neutral	166 (58.9)	196 (76.6)	362 (67.3)
Victim	34 (12.1)	30 (11.7)	64 (11.9)
Bully	48 (17.0)	22 (8.6)	70 (13.0)
Bully-victim	34 (12.0)	8 (3.1)	42 (7.8)
Total	282 (100.0)	256 (100.0)	538 (100.)

Chi-square analysis revealed that children's bully-victim status group was influenced by gender ($\chi^2 = 27.296$, df = 3, $p < 0.001$). Post hoc chi-square analysis was limited to the difference between bullies and neutrals according to their gender. Boys were significantly more likely to be bullies than girls ($\chi^2 = 12.107$, df = 1, $p < 0.001$).

1.3. Comparison of child and teacher reports

Chi-square analysis revealed that children's self-reports yielded a significantly higher proportion of victims than did teacher reports ($\chi^2 = 17.223$, df = 1, $p < 0.001$), and that teacher reports yielded a significantly higher proportion of children involved in aggressive/ bullying behaviours than did child reports ($\chi^2 = 14.222$, df = 1, $p < 0.001$).

1.4. Types of bully-victim behaviours - child reports

Frequencies of bully-victim types of behaviours according to children's gender, and findings from chi-square analyses, are summarized in Table 8 overleaf.

The most common form of *being bullied* involved name-calling (24.3 %) for both boys and girls. Chi-square analysis revealed that significantly more girls than boys reported being left out of things by other children ($\chi^2 = 8.300$, df = 1, $p < 0.001$), but no further gender differences in the experience of being bullied were identified.

The most common form of *bullying others* also involved general name-calling (16.2%), followed by racial name-calling (2.1%). Significantly greater proportions of males than females reported that they participated in general name-calling ($\chi^2 = 7.675$, df = 1, $p = 0.01$), racial name-calling ($\chi^2 = 6.99$, df = 1, $p = 0.01$), and deliberately leaving other children out of things ($\chi^2 = 8.30$, df = 1, $p = 0.03$). No other significant gender differences were revealed.

Table 8. Types of bully-victim behaviours.

Item about being bullied (N = 534)	**Boys** **N (%)**	**Girls** **N (%)**	**Overall** **N (%)**	**Test result** **(df = 1)**
I was called mean names...	71 (25.4)	59 (23.1)	130 (24.3)	$\chi^2 = 0.358$ p = 0.55
Other children left me out of things on purpose...	30 (10.7)	50 (19.6)	80 (15.0)	$\chi^2 = 8.300$ p = 0.001 **
I was hit, kicked, pushed around or locked indoors.	45 (16.1)	29 (11.4)	74 (13.9)	$\chi^2 = 2.525$ p = 0.11
Other children told lies or nasty stories about me and tried to make others dislike me.	48 (17.1)	47 (18.4)	95 (17.8)	$\chi^2 = 0.152$ p = 0.70
I had money or other things taken away from me or damaged.	14 (5.0)	9 (3.5)	23 (4.3)	$\chi^2 = 0.716$ p = 0.40
I was threatened or forced to do things I didn't want to do.	24 (8.6)	15 (5.9)	39 (7.3)	$\chi^2 = 1.456$ p = 0.23
I was bullied with mean names or comments about my race or colour.	26 (9.3)	29 (11.4)	55 (10.3)	$\chi^2 = 0.630$ p = 0.43
I was bullied in another way.	29 (10.4)	28 (11.0)	57 (10.7)	$\chi^2 = 0.048$ p = 0.83
Item about bullying others (N = 534)				
I called another child mean names, made fun of or teased him or her in a hurtful way.	25 (8.9)	8 (3.1)	33 (6.2)	$\chi^2 = 7.675$ *p = 0.01***
I kept him or her out of things on purpose...	12 (4.3)	3 (1.2)	15 (2.8)	$\chi^2 = 4.705$ *p = 0.03**
I hit, kicked, pushed him or her around or locked him or her indoors.	10 (3.6)	3 (1.2)	13 (2.4)	$\chi^2 = 3.229$ *p = 0.07*
I told lies or nasty stories about him or her and tried to make others dislike him or her.	4 (1.4)	4 (1.6)	8 (1.5)	FI~ *p = 1.00*
I took money away from him or her or damaged other things ...	2 (0.7)	0 (0.0)	2 (0.4)	FI~ *p = 0.50*
I threatened or forced him or her to do things he or she didn't want to do.	3 (1.1)	0 (0.0)	3 (0.6)	FI~ *p = 0.25*
I bullied him or her with mean names or comments about his or her race or colour.	10 (3.6)	1 (0.4)	11 (2.1)	$\chi^2 = 6.699$ *p = 0.01***
I bullied him or her in another way.	7 (2.5)	1 (0.4)	8 (1.5)	FI ~ *p = 0.07*

Note: Figures relate to numbers and percentages of children who ticked "2 or 3 times a month or more" to these items. Overall percentages may be greater than 100 as children could mark more than one item.

* indicates significance at the 1% level; ** indicates significance at the 5% level.

1.5. Context of bully-victim behaviours

Table 9 illustrates that the greatest proportion of children (23.2%) reported that they were bullied by someone in their class and that they were bullied by either one boy (17.5%) or several boys (15.3%). Children most commonly reported being bullied by either one child (22.4%) or by a group of two to three children (21.1%). The greatest proportion of bullying took place in the playground (54.8%). 30.5% of children told their parent they were being bullied by contrast with 18.2% who told their class teacher.

Chi-square tests revealed several gender differences. Girls were found more likely than boys to be bullied by someone in their class ($\chi^2 = 20.724$, df = 1, $p < 0.001$), whereas boys were found more likely than girls to be bullied by someone in their year but from a different class ($\chi^2 = 16.533$, df = 1, $p = 0.001$). Girls were more likely than boys to be bullied either by one girl ($\chi^2 = 15.309$, df = 1, $p < 0.001$) or several girls ($\chi^2 = 17.291$, df = 1, $p = 0.001$) whereas boys were more likely to be bullied by several boys than were girls ($\chi^2 = 35.861$, df = 1, $p < 0.001$). A significantly greater proportion of girls (36.1%) than boys (25.4%) reported that their teacher "almost always" tried to stop bullying (($\chi^2 = 7.414$, df = 1, $p < 0.01$).

Table 9. Context of children's bully-victim behaviours.

Item	Boys N (%)	Girls N (%)	Overall N (%)	χ^2 / FI (df = 1)	p-value
I was bullied by someone... (N = 533)					
In my class	43 (15.3)	81 (31.9)	124 (23.2)	20.724	0.001*
In a different class/ same year	62 (22.1)	29 (11.4)	91 (17.0)	16.533	0.001*
In a higher year	15 (5.3)	9 (3.5)	24 (4.5)	1.545	0.214
In a lower year	6 (2.1)	3 (1.2)	9 (1.7)	FI~	0.501
In different classes	25 (8.9)	27 (10.6)	52 (9.7)	0.128	0.720
I was bullied by... (N = 534)					
Mainly one girl	12 (4.3)	39 (15.3)	51 (9.5)	15.309	0.001*
Several girls	1 (0.4)	20 (7.8)	21 (3.9)	17.291	0.001*
One boy	52 (18.5)	42 (16.5)	94 (17.5)	2.497	0.114
Several boys	63 (22.4)	19 (7.5)	82 (15.3)	35.861	0.001*
Both boys and girls	21 (7.5)	38 (14.9)	59 (11.0)	4.897	0.027
I was bullied by... (N = 533)					
Mainly one child	56 (20.0)	64 (25.1)	120 (22.4)	0.863	0.353
Group of 2-3 children	53 (18.9)	60 (23.5)	113 (21.1)	0.677	0.410
Group of 4-9 children	35 (12.5)	23 (9.0)	58 (10.8)	3.045	0.081
Group of more than 9 children	3 (1.1)	0 (0)	3 (0.6)	FI~	0.248
Several different children/ groups	10 (3.6)	10 (3.9)	20 (3.7)	0.000	1.000
Bullying has lasted... (N = 531)					
About two weeks	87 (31.3)	81 (31.8)	168 (31.5)	0.672	0.412
About one month	26 (9.4)	29 (11.4)	55 (10.3)	0.672	0.412
About six months	8 (2.9)	8 (3.1)	16 (3.0)	0.001	0.978
About one year	14 (5.0)	14 (5.5)	28 (5.3)	0.001	0.971
Several years	16 (5.8)	21 (8.2)	37 (6.9)	0.001	0.971
Bullying took place in the...(N = 533)					
Playground	144 (51.4)	149 (58.4)	293 (54.8)	0.104	0.747
Corridor	29 (10.4)	27 (10.6)	56 (10.5)	0.346	0.557
Class (with teacher there)	36 (12.9)	30 (11.8)	66 (12.3)	1.325	0.250
Class (with teacher not there)	31 (11.1)	40 (15.7)	71 (13.3)	0.745	0.388
Toilets	31 (11.1)	26 (10.2)	57 (10.7)	1.052	0.305
PE class/cloakroom	14 (5.0)	27 (10.6)	41 (7.7)	3.699	0.054
Dinner hall	22 (7.9)	45 (17.6)	67 (12.5)	7.928	0.005*
On way to and from school	21 (7.5)	19 (7.5)	40 (7.5)	0.336	0.562
School bus stop	3 (1.1)	4 (1.6)	7 (1.3)	0.082	0.775
Somewhere else in school	12 (4.3)	10 (3.9)	22 (4.1)	0.379	0.538
I told... (N = 532)					
My class teacher	48 (17.1)	49 (19.4)	97 (18.2)	0.479	0.489
Another grown-up at school	26 (9.3)	29 (11.5)	55 (10.3)	0.002	0.964
My parent or guardian	75 (26.7)	88 (34.8)	163 (30.5)	0.205	0.650
My brother or sister	23 (8.2)	30 (11.9)	53 (9.9)	0.372	0.542
My friend	67 (23.8)	100 (39.5)	167 (31.3)	8.152	0.004*
Somebody else	19 (6.8)	18 (7.1)	37 (6.9)	0.324	0.569
Teachers try to stop it... (N = 530)					
Almost never	43 (15.4)	27 (10.7)	70 (13.2)	2.447	0.118
Once in a while	61 (21.8)	33 (13.1)	94 (17.7)	6.779	0.009*
Sometimes	57 (20.4)	46 (18.3)	103 (19.4)	0.349	0.555
Often	48 (17.1)	54 (21.4)	102 (19.2)	1.629	0.202
Almost always	71 (25.4)	91 (36.1)	162 (30.5)	7.414	0.006*
My teacher has talked to me (N = 536)					
Once	62 (22.1)	30 (11.8)	92 (17.2)	3.013	0.083
Several times	14 (5.0)	8 (3.1)	22 (4.1)	0.053	0.818

Note. %s in all but penultimate item do not equal 100 because children who marked "I have not been bullied at school this term" are not reported. Where overall %s > 100, more than 1 item was marked.
* indicates significance at the 1% level.

2. Relationships between children's CDI scores and their bully-victim status groups

Children's median scores on the CDI total and all the CDI factors according to their bully-victim status are summarized in Table 10 overleaf. Bully-victims obtained the highest median CDI total score (23.00), followed by victims (15.00) and then bullies (9.50). Neutrals obtained the lowest median CDI total score (6.00)[2]. This pattern of scores was repeated on all other CDI factors (i.e. negative mood, ineffectiveness, anhedonia and negative self-esteem factors) with the exception of the interpersonal problems in which bullies obtained a higher median total score than did victims.

The relationships between children's CDI scores and their bully-victim status were examined using Kruskal-Wallis analyses which revealed that the differences between the groups for the CDI total score and all factors were significant at the level of $p<0.001$. Post hoc Mann-Whitney U tests were conducted to determine the nature of these significant effects. The results of both sets of these analyses are summarized in Table 10 overleaf. A more detailed breakdown of significant and non-significant post hoc findings can be found in Appendix 19.

As can be seen from Table 10, victims and bully-victims scored significantly higher than neutrals on the CDI total score and all the CDI factors. In addition, bullies scored significantly higher than victims and neutrals on the interpersonal problems factor. No further significant differences between groups were identified.

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[2] Medians are reported because the means, when examined, appeared to be affected by extreme scores.

Table 10. Kruskal-Wallis and post hoc Mann Whitney *U* tests - CDI scores and children's bully-victim status.

CDI score or factor	Neutrals (n = 410)		Victims (n = 96)		Bullies (n = 16)		Bully-Victims (n = 10)		χ^2
	Median	Inter-quartile range	Median	Inter-quartile range	Median	Inter-quartile range	Median	Inter-quartile range	
CDI total	6.00	2.01 -11.00	15.00^a	10.00 -19.00	9.50	6.25 - 22.50	23.00^a	11.50 - 32.00	89.378**
Negative mood	1.00	1.00 -2.00	4.00^a	2.00 -6.00	2.00	2.00 - 5.50	5.50^a	1.75 - 7.25	73.313**
Interpersonal problems	0.00	0.00 - 1.00	0.50^a	0.00 - 1.27	2.00^{ab}	1.00 - 5.00	4.00^a	0.00 - 4.50	36.814**
Ineffectiveness	1.00	0.00- 2.00	2.00^a	1.00 - 4.00	1.00	0.00 - 3.00	4.50^a	1.00 - 5.25	35.822**
Anhedonia	2.00	1.00 -4.00	5.00^a	3.00 -8.00	4.00	1.25 - 6.00	7.00^{ac}	4.50 - 8.50	71.419**
Negative self-esteem	1.00	1.00 -2.00	2.00^a	1.00 - 4.00	1.00	0.25 - 3.00	3.50^a	2.00 - 7.00	47.523**

Note 1. n refers to the number of children who completed each part of the CDI. 7 children were excluded from the CDI total as they had omitted three items or more.
Note 2. Neutrals: n is less by one for interpersonal problems and negative self-esteem; and N is less by two for CDI total score and negative mood.
Note 3. Bully-victims: n is less by one for negative mood, ineffectiveness and negative self-esteem.

** Statistical difference between the groups (neutrals, victims, bullies and bully-victims) on the Kruskal-Wallis test at $p < 0.01$
a Significantly greater than neutrals on post hoc Mann-Whitney *U* test at $p < 0.009$ (i.e. after Bonferroni's correction).
b Significantly greater than victims on post hoc Mann-Whitney *U* test at $p < 0.009$ (i.e. after Bonferroni's correction).
c Significantly greater than bullies on post hoc Mann-Whitney *U* test at $p < 0.0009$ (i.e. after Bonferroni's correction).

2.1. Clinical implications of children's scores on the CDI according to their bully-victim status.

The clinical implications of children's scores on the CDI were also examined. It has been suggested that the most appropriate cut-point on the CDI for use in general screening is a total score of 19 (Kovacs, 1992). Although one item in the present study was excluded from the CDI, the same cut-point was used to minimize the possibility of false positives (Kovacs, 1992). The frequencies of children who scored above and below the cut-point for clinical depression are summarized in Table 11.

Table 11. Frequencies of children who scored above the clinical cut-point on the CDI according to their bully-victim status.

Above/below cut-point	Neutral N(%)	Victim N (%)	Bully N (%)	Bully-victim N (%)	Total N (%)
Above cut-point for depression (CDI total score > 19)	34 (8.3)	24 (25.0)	4 (25.0)	6 (66.7)	68 (12.9)
Below cut-point for depression (CDI total score < or = 19)	374 (91.7)	72 (75.0)	12 (75.0)	3 (33.3)	461 (87.1)
Total	408 (100)	96 (100)	16 (100)	9 (100)	529 (100)

The findings indicated that bully-victims (66.7%) were those most likely to score above the clinical cut-point for depression, while neutrals (8.3%) were least likely to do so. Equal proportions (25%) of bullies and victims were above this cut-point.

Unfortunately, the differences between all four groups could not be investigated statistically using Pearson chi-square because the expected count was less than 5 in more than 20% of cases (Diekhoff, 1992). For the purposes of statistical comparison, therefore, bully-victims were excluded from this analysis. The analysis revealed a significant difference in the frequency of children who scored above the CDI cut-point according to their bully-victim status ($\chi^2 = 23.245$, df = 2, $p < 0.001$).

Two post hoc chi-square tests were carried out to compare the number of neutrals, victims and bullies scoring above the CDI cut-point.[3] It was found that a significantly greater proportion of children in the "victim only" group compared with "neutral" children scored above the cut-point ($\chi^2 = 21.198$, df = 1, $p < 0.001$). However, the difference between the "bully only" group and neutral children failed to reach significance (FI~, $p = 0.05$).

2.11. *The role of gender and ethnicity*

It was not possible to investigate the role of gender and ethnicity in all bully-victim status groups because of the small number of bullies and bully-victims. Statistical analyses were therefore limited to victims' scores only. Chi-square analysis of victims' scores that fell above or below the CDI cut-point revealed that there was no significant difference between males and females ($\chi^2 = 1.129$, df = 1, $p = 0.288$) or between white and non-white children (FI~, $p = 0.753$). Frequencies of victims according to their gender and ethnic grouping can be found in Tables 12 and 13.

Table 12. Frequencies of victims' scores that fell above and below the CDI cut-point according to gender.

Above/below cut-point	**Male**	**Female**
Below CDI cut-point	36 (80.0)	36 (70.6)
Above CDI cut-point	9 (20.0)	15 (29.4)
Total	408 (100.0)	72 (100.0)

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[3] In order for a result to reach significance after using Bonferroni's correction for multiple comparisons, the level of significance needed to be equal to or less than 0.025.

Table 13. Frequencies of victims' scores that fell above and below the CDI cut-point according to their ethnicity.

Above/ below cut-point	White	Non-white
Below CDI cut-point	59 (73.8)	13 (81.3)
Above CDI cut-point	21 (26.2)	3 (18.2)
Total	80 (100.0)	16 (100.0)

3. Relationships between children's scores on the SDQ (as rated by teachers) and their bully-victim status groups.

Children's median scores on the SDQ measure of total deviance (abbreviated as "SDQ total") and all the SDQ scales according to their bully-victim status summarized in Table 14 overleaf. Bully-victims obtained the highest median total deviance score (14.50) according to teacher ratings on the SDQ, indicating that they were rated as having the greatest number of difficulties. Bullies obtained the next highest median total deviance score (12.00), followed by victims (7.00). Neutrals obtained the lowest median total score (4.00). Teachers were blind to children's classification of their bully-victim status.

This pattern of scores was replicated on the hyperactivity and conduct problems scales. On the emotional symptoms and peer problems scales, bully-victims again obtained the highest median scores, and neutrals obtained the lowest median score. However, victims obtained a higher median score than bullies on the emotional symptoms scale, and the same median score (1.00) on the peer problems scale. On the prosocial scale, bully-victims obtained the lowest median score (indicating they had the most problems in this area), followed by victims, bullies, and finally neutrals. It should be noted that a higher score on the prosocial scale indicates a child's greater number of prosocial strengths according to teachers reports.

Kruskal-Wallis analyses were carried out to investigate the statistical relationships between bully-victim status groups and the SDQ scores. There were significant effects for children's SDQ total scores as well as for all the SDQ scales (see Table 14). Post hoc Mann-Whitney U tests were conducted to determine the nature of these significant effects. These findings are again summarized in Table 14. A more detailed breakdown of significant and non-significant findings revealed by post hoc Mann Whitney *U* tests can be found in Appendix 20.

In summary, victims scored significantly higher than neutrals on the SDQ total and all the SDQ scales except the conduct problems scale (i.e. prosocial, hyperactivity, emotional symptoms and peer problems scales). Both bullies and bully-victims scored significantly higher than neutrals on the SDQ total, the prosocial, hyperactivity and conduct problems. No further significant differences between groups were found. Results should be interpreted with caution because of the small group sizes, in particular in respect of the bully only group (n = 16) and the bully-victim group (n = 10).

Table 14. Kruskal-Wallis and post hoc Mann Whitney *U* tests - SDQ scores.

	Bully-victim status								
	Neutrals (n = 412)		**Victims (n = 96)**		**Bullies (n = 16)**		**Bully-victims (n = 10)**		χ^2
SDQ score/scale	**Median**	**Inter-quartile range**	**Median**	**Inter-quartile range**	**Median**	**Inter-quartile range**	**Median**	**Inter-quartile range**	
SDQ total deviance score	4.00	1.00 - 8.00	7.00^{a}	3.00 - 13.00	12.00^{a}	7.00 - 14.00	14.50^{a}	3.75 - 23.00	38.852**
Prosocial scale	9.00	6.00 - 10.00	6.00^{a}	5.00 - 9.00	5.00^{a}	4.25 - 6.75	5.50^{a}	3.00 - 8.00	29.581**
Hyperactivity scale	2.00	0.00 - 4.00	3.00^{a}	1.00 - 5.00	5.50^{a}	3.25 - 8.00	8.50^{a}	2.00 - 10.00	30.555**
Emotional symptoms scale	0.00	0.00 - 2.00	1.00^{a}	0.00 - 4.00	0.50	0.00 - 2.00	1.00	0.00 - 2.500	16.121**
Conduct problems scale	0.00	0.00 - 1.00	0.00	0.00 - 2.00	2.00^{ab}	1.00 - 5.50	3.00^{ab}	0.75 - 5.00	31.290**
Peer problems scale	0.00	0.00 - 2.00	1.00^{a}	0.00 - 4.00	1.00	0.00 - 3.00	1.50	0.00 - 4.25	19.230**

** Statistical difference between the groups (neutrals, victims, bullies and bully-victims) on the Kruskal-Wallis test at $p < 0.01$

a Significantly greater than neutrals on post hoc Mann-Whitney *U* test at $p < 0.009$ (i.e. after Bonferroni's correction).

b Significantly greater than victims on post hoc Mann-Whitney *U* test at $p < 0.009$ (i.e. after Bonferroni's correction).

3.1. Clinical implications of children's SDQ scores according to their bully-victim status.

The clinical implications of children's emotional, behavioural and social difficulties according to teachers' reports on the SDQ were also examined. Goodman (1997) has generated provisional bandings that define a child's clinical "caseness" on the SDQ as follows: normal, borderline or abnormal. He recommends that, in a study where the sample is low risk (as in the present study), probable clinical "cases" can be identified by those children who fall within the abnormal range on the SDQ total and all the SDQ scales.

All children involved in bullying scored more frequently in the clinical range (i.e. above the relevant clinical cut-point - see Table 15 overleaf) on the SDQ total and across all the SDQ scales, particularly bully-victims. Table 15 shows the frequencies of children's scores on the SDQ scales that fell within the clinical range according to their bully-victim status. Findings from statistical analyses are also presented in this table.

The relationships between children's bully-victim status and the frequency of SDQ scale scores that fell within the clinical range were examined using chi-square analyses. As on the CDI clinical data, bully-victims were excluded from statistical analyses because of the small group size. Chi-square tests revealed a significant difference in the frequency of children who scored above the SDQ cut-points for clinical "caseness" according to their bully-victim status on the SDQ total and all the SDQ scales.

Three post hoc chi-square tests were conducted to examine the nature of these effects. Fisher's exact test was used where appropriate (i.e. where more than 20% of cells had an expected count of less than 5). After using Bonferroni's correction for multiple comparisons, a significantly greater proportion of victims' scores than neutrals' scores were found to fall above the clinical cut-point on the SDQ total ($\chi^2 = 6.284$, df = 1, $p < 0.017$), prosocial ($\chi^2 = 9.801$, df = 1, $p < 0.017$), emotional symptoms ($\chi^2 = 13.300$, df = 1, $p < 0.017$) and peer problems scales ($\chi^2 = 11.729$, df = 1, $p < 0.017$). On the conduct problems scale, bullies were found significantly more likely to fall above the clinical cut-point than neutrals (FI~, $p < 0.017$) and than victims (FI~, $p < 0.017$). No further significant differences were identified.

Table 15. Chi-square tests - children's SDQ scores that fell above and below the clinical cut-points according to their bully-victim status.

	Bully-victim status				
Scale/ Range	**Neutral N (%)**	**Victim N (%)**	**Bully N (%)**	**Bully-victim N (%)**	**Test result**
SDQ total					
Clinical (i.e score > 15)	25 (6.1)	13 (13.5)[a]	2 (12.5)	3 (30.0)	$\chi^2 = 6.722$ df = 2 p = 0.04*
Normal/borderline	387 (93.9)	83 (86.5)	14 (87.5)	7 (70.0)	
Prosocial					
Clinical (i.e. score > 5)	39 (9.5)	20 (20.8)[a]	4 (25.0)	3 (30.0)	$\chi^2 =$ 12.139 df = 2 p = 0.01**
Normal/borderline	373 (91.5)	76 (79.2)	12 (75.0)	7 (70.0)	
Hyperactivity					
Clinical (i.e. score > 6)	39 (9.5)	17 (7.7)	5 (31.3)	6 (60.0)	$\chi^2 =$ 11.312 df = 2 p = 0.00**
Normal/borderline	373 (90.5)	79 (82.3)	11(68.7)	4 (40.0)	
Emotional symptoms					
Clinical (i.e. score > 5)	8 (1.9)	9 (9.4)[a]	2 (12.5)	2 (20.0)	$\chi^2 =$ 16.030 df = 2 p = 0.00**
Normal/borderline	404 (98.1)	87 (90.6)	14 (87.5)	8 (80.0)	
Conduct problems					
Clinical (i.e. score > 3)	33 (8.0)	9 (9.4)[a]	6 (37.5)	4 (40.0)	$\chi^2 =$ 16.104 df = 2 p = 0.00**
Normal/borderline	379 (92.0)	87 (90.6)	10 (62.5)[ab]	6 (60.0)	
Peer problems					
Clinical (i.e. score > 4)	25 (6.1)	16 (16.7)[a]	2 (12.5)	2 (20.0)	$\chi^2 =$ 11.953 df = 2 p = 0.00**
Normal/borderline	386 (93.9)	80 (83.3)	14 (87.5)	8 (80.0)	

Note. Bully-victims were not included in statistical analyses. A detailed breakdown of post hoc findings can be found in Appendix 21.

* Statistical difference between the groups (i.e. neutrals, victims and bullies) on chi-square at a 5 % level.

** Statistical difference between the groups (i.e. neutrals, victims and bullies) on chi-square at a 1% level.

a. Significantly greater than neutrals after Bonferroni's correction (i.e. $p < 0.017$).

b. Significantly greater than victims after Bonferroni's correction (i.e. $p < 0.017$).

3.11. The role of gender and ethnicity

It was not possible to investigate the role of gender and ethnicity in children's scores that fell above and below the SDQ clinical cut-points in all bully-victim status groups because of the small number of bullies and bully-victims. Chi-square analysis, however, of victims' scores that fell above or below the clinical cut-point for the SDQ total and the SDQ scales was carried out between males and females and white and non-white children. The results of these analyses are reported in Tables 16 and 17.

Table 16. Victims' SDQ scores that fell above and below the clinical cut-points according to victims' gender.

Scale/ score		**Male** N (%)	**Female** N (%)
SDQ total	Below clinical cut-point	35 (77.8)	48 (94.1)
	Above clinical cut-point	10 (22.2)	3 (5.9)
	Total	45 (100.0)	51 (100.0)
Prosocial	Below clinical cut-point	30 (66.7)	46 (90.2)
	Above clinical cut-point	15 (33.3)	5 (9.8)
	Total	45 (100.0)	51 (100.0)
Hyperactivity	Below clinical cut-point	30 (66.7)	49 (96.1)
	Above clinical cut-point	15 (33.3)	2 (3.9)
	Total	45 (100.0)	51 (100.0)
Emotional symptoms	Below clinical cut-point	38 (84.4)	49 (96.1)
	Above clinical cut-point	7 (15.6)	2 (3.9)
	Total	45 (100.0)	51 (100.0)
Conduct problems	Below clinical cut-point	39 (86.7)	48 (94.1)
	Above clinical cut-point	6 (13.3)	3 (5.9)
	Total	45 (100.0)	51 (100.0)
Peer problems	Below clinical cut-point	36 (37.5)	44 (42.5)
	Above clinical cut-point	9 (7.5)	7 (8.5)
	Total	45 (100.0)	51 (100.0)

Male victims scored significantly more frequently above the clinical cut-point than female victims on the SDQ total ($\chi^2 = 5.452$, df = 1, p = 0.02), the prosocial scale ($\chi^2 = 8.025$, df = 1, p = 0.005) and the hyperactivity scale ($\chi^2 = 14.191$, df = 1, p = 0.000). No significant differences were found, however, between male and female victims on the emotional symptoms scale (FI~, p = 0.078), the conduct problems scale (FI~, p =

0.297) or the peer problems scale ($\chi^2 = 0.678$, df = 1, p =0.41). These findings should be interpreted with caution where cell sizes are small.

Table 17. Frequencies of victims' scores that fell above and below the clinical cut-points on the SDQ and SDQ scales according to victims' ethnicity.

		White **N (%)**	**Non-white** **N (%)**
SDQ total	Below clinical cut-point	72 (84.7)	11 (100.0)
	Above clinical cut-point	13 (15.3)	0 (0.0)
	Total	85 (100.0)	11 (100.0)
Prosocial scale	Below clinical cut-point	69 (81.2)	7 (63.6)
	Above clinical cut-point	16 (18.8)	4 (36.4)
	Total	85 (100.0)	11 (100.0)
Hyperactivity scale	Below clinical cut-point	69 (81.2)	10 (90.9)
	Above clinical cut-point	16 (18.8)	1 (5.9)
	Total	85 (100.0)	11 (100.0)
Emotional symptoms scale	Below clinical cut-point	76 (89.4)	11 (100.0)
	Above clinical cut-point	9 (10.6)	0 (0.0)
	Total	85 (100.0)	11 (100.0)
Conduct problems scale	Below clinical cut-point	77 (90.6)	10 (90.9)
	Above clinical cut-point	8 (9.4)	1 (9.1)
	Total	85 (100.0)	11 (100.0)
Peer problems scale	Below clinical cut-point	70 (82.4)	10 (90.9)
	Above clinical cut-point	15 (17.6)	1 (9.1)
	Total	85 (100.0)	11 (100.0)

No significant differences were found between white and non-white victims' scores that fell above or below the cut-point on either the SDQ total (FI~, p = 0.351) or any of the SDQ scales (prosocial scale: FI~, p = 0.233; hyperactivity scale: FI~, p = 0.683: emotional symptoms scale: FI~, p = 0.592; conduct problems scale: FI~, p = 1.000; peer problems scale: FI~, p = 0.684). These results should be interpreted with extreme caution given very small or empty cell sizes in some cases.

DISCUSSION

The present study was the first British study on bullying to investigate primary school children's emotional, behavioural and social problems as rated by their teachers in addition to children's self-reports of their emotional difficulties. It was therefore successful in its overall objective to in part replicate, and in part extend the current body of research on the relationship between primary school children's psychosocial adjustment problems and their involvement in bullying. Key findings, their implications for clinical practice, school-based interventions and future research are considered below.

1. Children's involvement in bullying

1.1. Victims of bullying

96 children (18 %) identified themselves as victims of bullying, a figure compatible with rates reported by several studies which employed similar methodologies to the present study (e.g. Austin and Joseph, 1996; Forero *et al.,* 1999; Kumpulainen *et al.,* 1998). That is, these previous studies also investigated all three groups of children involved in bullying (namely, bullies, victims and bully-victims) and used self-report measures to identify children's bully-victim status.

The incidence of victims in the present study was, however, lower than that identified by other studies (e.g. Whitney and Smith, 1993; Wolke *et al.,* 2000). As these studies varied in their methodologies by comparison with the present study - for example, Whitney and Smith (1993) did not identify bully-victims as a separate group and Wolke and his colleagues (2000) used an interview approach - these methodological differences may account for the difference in rates of victimization. Other factors such as family background, school differences and child characteristics may also contribute to this difference (see Dowdney, 1993, for a review).

1.11. The role of gender and age

Similar proportions of male and female victims (boys = 46.9 %, girls = 53.1%) were found, a finding consistent with those of other studies (e.g. Boulton and Smith, 1994; Kumpulainen *et al.,* 2001; Whitney and Smith, 1993; Wolke *et al.,* 2000). However, some studies report that boys are bullied more frequently than girls (e.g. Boulton and

Underwood, 1992; Kumpulainen *et al.,* 1998; Wolke and Stanford, 1999). The present finding may be explained in the light of empirical evidence that gender differences are less pronounced when an inclusive definition of bullying - that is, one that incorporates both direct and indirect forms of bullying - is employed (Crick and Grotpeter, 1995). The present study similarly employed this type of definition.

Supporting this explanation, gender differences were identified when bully-victim items were analyzed individually. In brief, a significantly greater proportion of girls (19.6%) reported being left out by others than boys (10.7%). Although the Revised Olweus Bully-victim Questionnaire (2000) does not formally distinguish between direct and relational bullying in children's bully-victim classifications, the concept of "being left out" relates to social exclusion, and is a key factor in relational or indirect bullying. This finding was therefore in keeping with evidence that more girls are involved in indirect bullying (Crick, Casas and Hyon-Chin, 1999; Crick and Grotpeter, 1995). It suggests that gender differences may arise when children's involvement in direct and indirect bullying behaviours are distinguished from one another.

The effect of age on children's bully-victim status was not analyzed statistically, but an inspection of the data suggested that age (as indicated by children's year group) did not influence children's involvement in bullying. Although research suggests that the rate of bullying decreases with age (e.g. Olweus, 1987; Rigby and Slee, 1991), the present finding was to be expected given the close proximity in children's ages.

1.12. The role of ethnicity

No significant relationship was found between children's self-nominated victim status and their ethnicity, a finding consistent with previous research (Boulton, 1995; Economic and Social Research Council, 1999, *unpublished*; Moran *et al.,* 1993). However, it should be borne in mind that several researchers have suggested that their failure to identify a relationship between children's ethnic background and their involvement in bullying has been a consequence of their methodology (Economic and Social Research Council, 1999, *unpublished*; Moran *et al.,* 1993). That is, in these studies, all participants have been interviewed by white researchers, which may have encouraged children from ethnic minorities to conceal their involvement in bullying. This may have been a factor in the present study.

However, while ethnic background was not found to be a significant influence upon rates of bullying, a significant number of children from an ethnic minority background, who reported being bullied with mean names or comments about their race or colour, did not classify themselves as victims of bullying. This finding replicated that of other researchers (Boulton, 1995; MacDonald *et al.*, 1989; Moran *et al.*, 1993), and supports the argument that a victim of racial name-calling does not necessarily perceive him or herself as a "victim" of bullying (Siann *et al.*, 1994).

A distinction needs to be made between bullying and racism. Eslea and Mukhtar (2000) have pointed out that, while it is generally agreed that bullying is an action that is carried out repeatedly over time (cf. Olweus, 1997), racism can take the form of isolated events. Eslea and Mukhtar (2000) also point out that bullying and racism differ in another respect. That is, while bullying tends to focus on a particular characteristic of the victim, racism involves an attack at all levels of the victim, ranging from their physical self to their social world and culture (Mooney, Creeser and Blatchford, 1991, cited by Eslea and Mukhtar, 2000). As a result, the authors suggest that, although racism "may be far more hurtful than bullying...[it] does not involve the same individual isolation and so may be less distressing" (Eslea and Mukhtar, 2000).

The statement seems almost to contradict itself. Yet it has face validity in the light of findings from the present study, which have highlighted apparent inconsistencies in ethnic minority children's perceptions of being bullied. In brief, results from the present study would seem to indicate the limitations of assessing racial bullying using measures that do not pay specific attention to racial bullying behaviours (Eslea and Mukhtar, 2000). Future research needs to explore racial bullying behaviours that include, for example, racially motivated physical attacks (Eslea and Mukhtar, 2000) or racially motivated social exclusion - aspects of racial bullying that to date have been ignored.

1.13. The role of teachers

The rate of self-reported victimization (18 %) in the present study is substantial and offers cause for continuing concern that bullying remains a significant problem in primary schools. The finding that all schools had a bullying policy in place appeared to reinforce the difficulty of limiting bullying in the school context. In addition to this, over half the teachers reported that they used forums such as assemblies and "circle time" to discuss the issue of bullying at school, though only four out of twenty teachers said they had attended training days specific to bullying. This latter finding seemed consistent with research that indicates the need for teachers to receive intensive training in order to tackle bullying effectively (NSPCC, 2001).

As expected, the frequency of children who were bullied as identified by their class teachers was considerably lower than that identified by children's self-reports. According to their reports on the SDQ, teachers only identified 64 children (11.9 %) as victims, which is almost one-third less than that reported by the children. This significant discrepancy between children's and teachers' reported rates of victimization is consistent with the small number of studies in this area to date (e.g. Mellor, 1990; Pakaslahti and Keltikangas-Jarvinen, 2000), though it should be noted that the discrepancy in the present study was not so great as has been found elsewhere (e.g. Kumpulainen *et al.,* 1998).

This discrepancy lends itself to different interpretations. Firstly, it is possible that children tend to over-report their victim status (Perry, Kusel and Perry, 1988). It would seem more likely, however, that, despite teachers' efforts to identify bullying, children are not willing to confide in their teachers. As a result, teachers remain unaware of the extent of bullying in their schools (KIDSCAPE, 1999, *unpublished*). In the present study, less than one fifth of the children (18.2%) reported that they had told their class teacher about being bullied. It would seem, therefore, that improvement in communication between children and teachers is paramount if bullying policies are to be successfully implemented at school (NSPCC, 2001).

1.2. Bullies and bully-victims

A strength of the present study was its identification of a group of children involved in bullying only recently identified by the literature: namely, bully-victims. The degree of this success was limited, however, by the low number of children who reported bullying others - considerably lower than reported elsewhere (e.g. Forero *et al.,* 1999; Haynie *et al.,* 2001; Kumpulainen *et al.,* 1998; Wolke *et al.,* 2000). Only 16 children (3.0 %) identified themselves as bullies, and only 10 children (1.9 %) identified themselves as bully-victims. There may be several reasons for this finding.

Firstly, it is possible that the prominence of bullying as a key issue in the present study may have biased children towards giving defensive responses (Austin and Joseph, 1996). The methodology may therefore have been improved had the subject of bullying been less explicit. Secondly, the necessary attribution of an identification number to every child's questionnaire may have rendered children wary of their assured confidentiality. Furthermore, children's answers may have been confounded by a social desirability bias (Crowne and Marlowe, 1964), particularly given that the study was administered in the classroom setting. The inclusion of a measure of social desirability in one or more of the children's questionnaires would have improved the study's design.

It is also possible that children involved in bullying others were more likely not to participate in the present study, either because they or their parents did not give their consent, or because of their absence on the day of the study (Byrne, 1994). Related to this, there may have been a self-selection bias in terms of the schools that quickly agreed to participate in the study. Similarly, the missing children's data may not have been randomly distributed. If so, the method of excluding and pro-rating data in the present study may have subjected the data to other sources of bias (see Tabachnick and Fiddell, 1996, cited by Butler, 2000b, *unpublished*).

Finally, the present study was conducted in close succession of the murder of Damilola Taylor. Several children from a variety of classes raised the issue of Damilola's murder in the question time period at the end of the session. A *post hoc* hypothesis was generated by the researcher that children's awareness of the potentially tragic consequences of bullying had been heightened by this event, and so encouraged them to underreport their own involvement in bullying others.

1.21. The effect of gender and age

The effect of ethnicity on children's bully and bully-victim status was not assessed because of small group sizes. Inspection of the data (as opposed to statistical analysis) suggested that age had not influenced children's tendency to bully others, probably because of the small differences in ages as indicated by children's year groups (one year only).

The study's hypothesis that a significantly greater proportion of bullies would be boys was supported. This finding was consistent with findings from existing studies that have focused on direct bullying behaviours, and concluded that boys are more likely to engage in overtly aggressive behaviours (e.g. Olweus, 1993; Wolke and Stanford, 1999). The present study, however, employed a more inclusive definition of bullying that incorporated indirect as well as direct bullying (see victims section). There may have been a higher proportion of male bullies than females because, as evidence suggests, boys are more likely to answer truthfully than girls on self-report questionnaires (Roland, 1989; Ziegler and Pepler, 1993, cited by Atlas and Pepler, 1998).

1.22. The role of class teachers

In contrast to victimization, class teachers reported higher rates of bullying and aggression than did the children themselves. 70 children (13.0 %) were reported to "often fight with or bully others", and 42 children (7.8%) were reported to be bullied themselves as well as to "often fight with or bully" other children. One reason for this finding may be that the SDQ item on bullying and aggression is biased towards an overtly aggressive behaviour, whereas the Olweus "bully" classification item is not. Alternatively, children's perception of their involvement in bullying others may differ to that reported by their teachers because they better understand the motivation underlying their behaviour (Funder and Colvin, 1997; Paulhus, 1989).

2. Relationship between children's emotional, behavioural and social problems and their bully-victim status

All children involved in bullying scored significantly higher on the SDQ measure of total deviance (hereafter abbreviated as "the SDQ total") than did children not involved in bullying. This suggested that victims, bullies and bully-victims all experience increased levels of combined emotional, behavioural and social difficulties as reported by class teachers. Although differences between the three groups were not significant on the SDQ total, children's ratings on the SDQ scales and CDI/ CDI factors revealed interesting differences between all three groups.

To recap: children's emotional problems were rated by themselves on the CDI and by teachers on the SDQ emotional symptoms scale. Children's behavioural difficulties were rated by teachers only on the SDQ conduct problems and hyperactivity scales. Consideration of children's social difficulties was based on children's self-reports on the CDI interpersonal problems factor and teacher reports on the SDQ prosocial and peer problems scales. It should be noted that bully-victims were excluded from all analyses that related to children's scores that fell above and below the clinical cut-points on the SDQ and CDI totals, and all related scales or factors.

2.1. Emotional difficulties

2.11. Victims

Consistent with previous research (e.g. Austin and Joseph, 1996; Kumpulainen *et al.*, 1998; Neary and Joseph, 1995), victims of bullying reported significantly higher levels of depression than children not involved in bullying according to their self-reports on the CDI and all the CDI factors. Similarly, victims scored significantly more highly than neutrals on the SDQ emotional symptoms scale, indicating increased levels of emotional difficulties as rated by their teachers. Victims were also more likely to score above the clinical cut-points on the CDI total and SDQ emotional symptoms scale (25% and 9.4%, respectively) than were neutrals. This replicated findings from a small number of studies to date that suggest that victims' levels of internalizing difficulties have clinical as well as statistical significance (e.g. Austin and Joseph, 1996; Slee, 1995).

Because the present study was cross-sectional in design, it was not possible to determine the direction of the relationship between victimization and children's emotional problems, but several hypotheses from the literature are available. One possibility is that children's peer experiences act as a social database by which they evaluate themselves and others (Crick and Dodge, 1994). Crick and Bigbee (1998), for example, have suggested that those victimized children who attribute their own negative experiences to their own low self-worth may develop internalizing difficulties.

The hypothesis has much in common with attribution theory, which similarly proposes that the relationship between victimization and psychosocial maladjustment is in part informed by an internal locus of control: that is, the tendency to attribute blame to oneself about external events (Graham and Juvonen, 1998). Other researchers, however, have conversely suggested that children who appear anxious are more likely to invite being victimized (Troy and Stroufe, 1987, cited by Crick and Grotpeter, 1996).

It is possible of course that both hypotheses are valid in that the relationship between children's experience of being victimized and their emotional problems may well be bi-directional. If so, victims of bullying are trapped in a vicious cycle (Crick and Grotpeter, 1996). Future research needs to evaluate those variables (such as attribution style) that mediate the relationship between children's experience of being bullied and associated emotional difficulties. Findings would have theoretical implications which in turn would inform interventions at a clinical and school-based level.

2.111. The role of teacher reports

The finding that victims' increased level of difficulty on the SDQ emotional symptoms scale had statistical and clinical significance by comparison with neutrals contradicts a finding from a recent British study (Wolke *et al.*, 2000). Wolke and his colleagues (2000) found no significant difference between self-nominated victims and neutrals on the SDQ emotional symptoms scale as rated by their parents. These authors suggested that their failure to identify children's emotional problems may be consistent with the literature that highlights adults' tendency to underreport children's emotional symptoms (e.g. Schwartz *et al.*, 1998).

Results from the present study would seem, however, to counter this suggestion, and rather support findings that indicate adults' ability to identify children's emotional problems (e.g. Goodman *et al.*, 2000b; Kumpulainen *et al.*, 1998). It may be that Wolke and his colleagues' results (2000) were confounded by those parents who failed to complete the SDQ questionnaire. The present study was not susceptible to this type of methodological weakness as teachers completed the SDQ for all participating children.

The consistency in the present study between child and teacher reports of victims' emotional difficulties is encouraging. Because the SDQ emotional symptoms scale and the CDI are not comparable measures, it is not possible to draw a conclusion about the relative usefulness of child and teacher reports of children's emotional difficulties. However, given that the empirical association between bullying and psychosocial adjustment difficulties has been well-established (see Hawker and Boulton, 2000a, for a review), teachers' ability to recognize children's emotional problems may have implications for bullying policies and interventions in the school context. Supporting this, the identification of vulnerable children by teachers has been highlighted by the NSPCC "Full Stop" campaign as a primary factor in "keeping children safe at school" (NSPCC, 2001).

2.112. The role of gender and ethnicity on victims' CDI total and SDQ emotional symptoms scale scores that fell above the clinical cut-points.

Given the small number of bullies and bully-victims, these analyses were undertaken only in relation to victims of bullying. No differences were found between male and female victims' scores that fell above the clinical cut-points on the CDI total or the SDQ emotional symptoms scale, respectively. This endorsed findings from several studies (e.g. Haynie *et al.*, 2001; Kaltiala-Heino *et al.*, 2000), but contradicted findings from several adolescent studies which report a bias in females towards internalizing symptoms (see Angold and Rutter, 1992, cited by Butler, 2000b, *unpublished*). This apparent contradiction may be accounted for by the finding that sex differences tend to be revealed as children mature, particularly those that relate to children's emotional world (e.g. Offer, Ostrov and Howard, 1981; Raviv *et al.*, 1990; both cited by Ronen, 1998).

The finding that ethnic background was not associated with victims' level of difficulty on the CDI total or on the SDQ emotional symptoms scale was consistent with findings from one study which investigated primary school children (Butler, 2000a, *unpublished*). A relationship has been found, however, between ethnicity and depressive symptoms in adolescence in so far as adolescents from an ethnic minority background are less likely to report depressive symptoms than white children (Butler, 2000b, *unpublished*). The author concluded that the relationship between ethnicity, victimization and depression may be more important in adolescence than middle childhood, whilst acknowledging that further research was necessary to report this finding.

2.12. Bullies

Bullies' CDI total and SDQ emotional symptoms scale scores were not significantly higher than neutrals' scores, either statistically or clinically. This suggested that bullies did not experience increased levels of depression or emotional difficulties according to their own or teacher reports by comparison with children not involved in bullying. Similarly, no significant differences were found between bullies' and neutrals' CDI factor scores, with the exception of the interpersonal problems factor, which will be discussed in the social difficulties section below.

The small number of bullies (n = 16) means that these findings should be interpreted with caution. The consistency, however, between the present study's findings and those of previous research (e.g. Kaltialo-Heino *et al.*, 2000; Kumpulainen *et al.*, 1998) appears to strengthen the conclusion that bullies are less prone to internalizing difficulties than are victims. Research is needed that investigates those variables that mediate this relationship between bullying and psychosocial maladjustment if the difference in bullies and victims' difficulties is to be clarified.

2.13. Bully-victims

Again consistent with previous research (e.g. Kaltialo-Heino, Rimpela, Marttunen, Rimpela and Rantanen, 1999; Kaltialo-Heino *et al.*, 2000; Kumpulainen *et al.*, 1998; Wolke *et al.*, 2000), bully-victims scored significantly higher than neutrals on the CDI total, indicating increased levels of emotional difficulties according to their own reports. This suggested that bully-victims, according to their own reports, differ from bullies in that they, like victims, are prone to internalizing difficultes (Kaltialo-Heino *et al.*, 1999). No significant difference was, however, found between bully-victims and neutrals on the SDQ emotional symptoms scale, suggesting that bully-victims' emotional problems may go unnoticed by teachers. This finding is new to the research, and may be because the SDQ emotional symptoms scale only measures external symptoms of children's emotional difficulties (e.g. cries, complains of headaches). If so, it appears to highlight a particular vulnerability of bully-victims in that their emotional difficulties, by contrast with victims', seem not to be recognized by their teachers

2.2. Behavioural difficulties

2.21. Bullies, victims and bully-victims - hyperactivity

There was mixed evidence for the hypothesis that bullies and bully-victims would obtain higher scores than victims on the hyperactivity scale as rated by their teachers, indicating an increased level of difficulty in this area. Although, as anticipated, bully-victims did indeed obtain the highest median score on the hyperactivity scale, followed by bullies and then victims, it should be noted that the differences between these groups were not significant. Furthermore, all groups of children involved in bullying (i.e. victims, bullies and bully-victims) scored significantly higher than neutrals on the SDQ hyperactivity scale.

While this finding was to some extent consistent with research evidence that suggests that children involved in bullying have particular problems with concentration and hyperactivity (e.g. Boulton and Smith, 1994; Kumpulainen *et al.*, 1998; Stephenson and Smith, 1989), it failed to differentiate between the difficulties of victims, bullies and bully-victims in this area. One explanation for this finding may lie in the suggestion that bully-victims are comparable with a sub-group of victims who have irritative qualities such as inattention and restlessness which provoke other children (hence known as "provocative victims") (Olweus, 1993). It is possible that those victims in the present study who obtained higher scores on the hyperactivity scale may also fall into the "provocative victim" category. Indeed, there may be an overlap between those children who classified themselves as victims in the present study and those children who classified themselves as bully-victims. That is, a certain proportion of victims may not have admitted to bullying others (and so avoided the classification of bully-victim) because of a concern about anonymity (as discussed above).

Crick and Bigbee's social information processing model (1998) offers one attempt at providing a theoretical account for this overlap between bully and victim status in respect of children's hyperactivity problems. These authors propose that some victims of bullying may negatively evaluate their peers (as opposed to themselves) as a result of their peer experiences. They further suggest that these evaluations may lead to difficulties of self-control such as aggression or impulsivity, which may then serve victims' efforts to "get even" with their victimizers (Crick and Bigbee, 1998). In other words, victims' provocative behaviours are triggered by the experience of being bullied, and may lead to their bullying others.

Research on children with attention deficit hyperactivity disorder (ADHD) would seem, however, to indicate a contrary hypothesis. The cognitive-behavioural literature points out that children with ADHD have poor information-processing skills. That is, as these children tend not to take time in attending to and processing social cues and information, they are more likely to perceive a situation as hostile, and so act aggressively (Kendall, Panichelli-Mindel and Gerow, 1995). Consequently, children's impulsive or restless traits may lead to their involvement in bullying others and not vice-versa. Of course, these theories may not be mutually exclusive, and the relationship between children's involvement in bullying and hyperactivity may be bi-directional. Future research needs to clarify not only the direction of this relationship, but also whether this direction varies for victims, bullies and bully-victims.

2.22. Bullies and bully-victims - conduct problems

Both bullies and bully-victims scored significantly higher than neutrals and victims on the SDQ conduct problems scale. In the case of bullies, this difference was significant at a clinical as well as a statistical level. That is, bullies scored significantly more above the clinical cut-point for conduct problems on the SDQ than did victims or neutrals. This finding supported empirical evidence which suggests that bullies are more prone to externalizing problems than are victims (e.g. Salmon *et al.*, 2000).

The finding that those children who bullied others were more likely to experience conduct problems that fell within the clinical range is a cause of concern. Although the SDQ is only a screening measure, it has been found to have good predictive value for children's clinical problems and appropriateness for psychiatric referral (Goodman *et al.*, 2000b). It should be noted, however, that, perhaps surprisingly, bullies scores on the hyperactivity scale (by contrast with that of neutrals) did not reach significance. It is not clear why this was so, but it may be that conduct problems are identified more consistently by teachers than hyperactivity problems, as a child suffering from poor concentration may not necessarily exhibit behavioural problems in the classroom, and his or her problems may therefore be less noticeable.

2.23. Victims - conduct problems

There was no significant difference between victims and neutrals according to teacher reports of their conduct problems on the SDQ. This was consistent with findings that suggest that victims are less prone to externalizing difficulties than are bullies and bully-victims (e.g. Kaltiala-Heino *et al.*, 2000).

2.24. The role of ethnicity and gender on victims' SDQ hyperactivity and conduct problems scale scores that fell above and below the clinical cut-points.

As stated previously, these analyses were undertaken only in relation to victims of bullying. In brief, ethnicity was not found to influence the proportion of victims' scores that fell above the clinical cut-points for conduct and hyperactivity problems. The lack of research in this area limited the possibility of comparing this finding with those of other studies, but it is consistent with the finding reported by the one study known to the author that examined the role of ethnicity in victims' emotional and behavioural problems (Economic and Social Research Council, 1999, *unpublished*). As already discussed in the emotional difficulties section above, more sophisticated research is needed in this area before conclusions can be made about the role of ethnicity in children's behavioural problems in the context of their involvement in bullying.

Male victims were more likely to fall above the clinical cut-point on both the SDQ conduct problems and hyperactivity scales. Because of the limitation of non-parametric analyses, it was not possible to assess the influence of gender on the relationship between victimization, depression and externalizing difficulties in the present study. Victims, however, were more likely to experience internalizing difficulties than neutrals in the present study. One reason, therefore, for this gender difference in victims' scores on the SDQ conduct problems and hyperactivity scales may be that depressed boys have less effective communication strategies to express their negative feelings than do girls (Austin and Joseph, 1996). As a result, they may "act out" their negative feelings, for example, through challenging behaviours (Stroufe and Rutter, 1984, cited by Austin and Joseph, 1996). This hypothesis is, however, yet to be tested.

2.3. Social difficulties

2.31. Victims, bullies and bully-victims

The profile of victims', bullies' and bully-victims' social difficulties was mixed. On the one hand, all children involved in bullying (i.e. victims, bullies and bully-victims) were more likely to experience increased levels of social difficulties as indicated by their low scores on the SDQ prosocial scale and by their high scores on the CDI interpersonal problems factor. On the other hand, no significant differences were found between bullies and neutrals or between bully-victims and neutrals on the SDQ peer problems scale.

Furthermore, on the SDQ prosocial scale and peer problems scales, only victims' scores fell significantly more frequently above the scales' clinical cut-points than did neutrals'. This latter finding highlighted the importance of distinguishing between the statistical and clinical significance of children's difficulties, and suggests that victims (at least according to teacher reports) are more vulnerable to experiencing peer-related/ social difficulties than bullies are. It also supports the small body of research that argues that bullies are more socially skilled than are victims (e.g. Sutton *et al.*, 1999b). Given that children's prosocial skills have been found to be positively correlated with children's theory of mind abilities (Crick and Dodge, 1999), bullies' superior ratings on the prosocial scale may be theoretically accounted for by the argument that bullies possess a superior theory of mind by contrast with victims (Sutton *et al.*, 1999a).

This account should not, however, be overstated. Firstly, based on findings in the present study, it would seem that bullies do experience problems in terms of their prosocial skills but that, by contrast with victims of bullying, these problems do not fall above a clinical cut-point. Secondly, although bullies were rated by teachers as experiencing less problems than victims on the prosocial and peer problems scales, a different picture emerged when bullies' interpersonal problems were based on self-reports, as rated on the CDI. On the CDI interpersonal problems factor, bullies scored significantly more highly than victims, suggesting that bullies do not perceive themselves as experiencing positive interpersonal relationships. Indeed, this finding would seem to support the argument that, even if bullies do experience superior social cognitions, this will do little to predict their positive prosocial skills and peer relations (Crick and Dodge, 1999).

Although the CDI interpersonal problems factor and the SDQ prosocial and peer problems scales are not directly comparable, the difference in findings between child and teacher reports of children's social skills according to these scales have implications for future research. It suggests that researchers need to explore differences in adult and child perceptions of children's social skills before drawing conclusions about bullies' social cognitions and skills. A more rigorous investigation of this could be undertaken if a population of children aged eleven years or above was sampled: children of this age group would be able to complete the self-report version of the SDQ, thus enabling a direct comparison between child and teacher data. Any differences identified may have significant implications for interventions that relate to bullies' and victims' social skills and peer relations in either the clinical or school context.

2.311. *The role of ethnicity and gender on victims' SDQ prosocial and peer problems scale scores that fell above and below the clinical cut-points.*

As stated previously, these analyses were undertaken only in relation to victims of bullying. No significant differences were found between the proportion of male and female victims that fell above the clinical cut-point on the SDQ peer problems scale. On the prosocial scale, however, male victims were more likely than female victims to score above the clinical cut-point. This finding was consistent with the research which suggests that boys' social skills develop later than girls' (e.g. Ronen, 1998). If this finding is replicated by future research, it may have important practical implications. For example, interventions designed to improve victims' prosocial strengths may be particularly appropriate for boys.

3. Limitations

A major limitation of the present study was that only a very small proportion of children reported that they bullied others, which may limit the generalisability of the study's findings. On the basis of previous research, larger proportions of bullies and bully-victims were anticipated (e.g. Haynie *et al.*, 2001; Kaltiala-Heino *et al.*, 2000; Kumpulainen *et al.*, 1998). Several methodological limitations that may account for this finding have already been considered (see section 1.2 above), and will not be repeated here.

One of these methodological limitations - namely, the possibility that children did not accurately report their involvement in bullying others - may have been overcome had teachers been required to complete items that identified the children's bully-victim status using items whose content was consistent with Olweus' (2000) classification items. Unfortunately, a multi-informant identification of children's bully-victim status was not employed by the present study, but an analysis of teachers' reports of children's involvement in bullying and aggressive behaviours suggested that the use of teacher data may have increased the bully and bully-victim group sizes.

The author was aware of the limitations of using non-parametric analyses in the present study. Firstly, the use of parametric analyses may have increased the power of the analyses undertaken (Greene and d'Oliveira, 1998). It should be noted, though, that the increased power of parametric statistical tests has been disputed (Bradley, 1968, cited by Howell, 1992). Secondly, the use of parametric analyses would have enabled a greater range of statistical comparisons: in particular, the analysis of the role of gender and ethnicity across all groups of children involved in bullying. The skewed distributions of children's CDI and SDQ scores meant that key parametric assumptions would not have been met, and may therefore have invalidated any conclusions drawn on the basis of parametric analyses.

A further limitation of the present study was that the use of the Revised Olweus Bully-Victim Questionnaire (2000) meant that it was not possible to differentiate between children's bully-victim status according to their involvement in direct and indirect bullying except at an item level. Although Olweus' Bully-Victim Questionnaire (2000) incorporates both types of bullying behaviours, scoring of the questionnaire does not distinguish two types of bullying for classification purposes. The questionnaire's design did not therefore facilitate an analysis of the differential influence of direct and indirect bullying on children's emotional and behavioural difficulties. Furthermore, because the present study was cross-sectional in design, it was not possible to determine the direction of the relationship between children's emotional and behavioural difficulties and their involvement in bullying.

Finally, the relatively small proportion of children from an ethnic minority background (approximately 10 %) meant that ethnic groups needed to be collapsed into white and non-white groups of children for the purpose of statistical comparison. Such a comparison was therefore only a very crude measure of ethnic differences. It has also been found that the experiences of Asian children who are bullied in a school where they are the minority differ to those in a school where they are a majority (Craig, 1999, *unpublished*, cited by Eslea and Mukhtar, 2000). Findings from the present study may not therefore generalize to a setting where children from ethnic minority backgrounds belong to the majority group.

4. Conclusions

The present study has made important contributions to the current literature on bullying and children's emotional and behavioural problems. It confirmed the finding that the rate of bullying in schools continues to be high in primary schools, and is therefore a major source of concern. Furthermore, it identified that children involved in bullying are more liable to experience emotional and behavioural problems: and that, in general, bullies are most likely to experience problems of an externalizing nature, and victims are most likely to experience problems of an internalizing nature. Future research is needed to examine the causal direction of, and factors that mediate this relationship, the findings of which would have implications for interventions at a school-based and clinical level.

Bully-victims were identified as a particularly vulnerable group of children who are liable to manifest emotional, behavioural and social difficulties. This supported findings from the small body of research in this area to date (Haynie *et al.*, 2001; Kaltiala-Heino *et al.*, 2000; Wolke *et al.*, 2000). Another finding of particular concern was that children's problems often reached a level of clinical significance. Future research that investigates the clinical relevance of children's scores would benefit from using standardized diagnostic interview schedules either instead of or in addition to screening measures.

The present study has highlighted the valuable role of class teachers in identifying children's emotional, behavioural and social problems. Given children's reluctance often to inform an adult when they are being bullied (KIDSCAPE, 1999, *unpublished*), the finding that teachers' reports of psychosocial adjustment difficulties is associated with their bully-victim status would seem to have implications for future intervention practice. That is, prevention and intervention of bullying behaviours may benefit from teachers acting on their own perceptions of children's problems and, in the context of a "no-blame" and "listening" culture (NSPCC, 2001), to discuss these with the children concerned. Referral to clinical psychology or psychiatric services may also be appropriate in some cases (Kumpulainen *et al.*, 1998, 2001). As has been highlighted, it is important that teachers are trained to be aware of these issues before children's difficulties reach crisis point (NSPCC, 2001).

The present study also made an important contribution to the limited number of empirical studies that have been carried out to date on the social skills of children involved in bullying. Findings from the present study threw some light on the current debate in this area that has offered at times conflicting opinions (Crick and Dodge, 1999; Haynie *et al.,* 2001; Sutton *et al.,* 1999a, 1999b, 2001). On the one hand, findings suggested that, consistent with one theoretical assumption (Sutton *et al.,* 1999a), bullies are more socially skilled than victims, though only according to teachers' reports. On the other hand, the present study also found bullies to experience a great number of problems with their peer relationships according to their own reports.

This finding indicated the need for school-based interventions that involve peer relations. Research, however, in this area, is still at an early stage. Further research is needed that will examine the difference in the social skills of bullies and victims according to both their own and external reports, so that false assumptions about the social skills of bullies are not made.

Finally, the present study represented an early attempt to measure the role of ethnicity in bullying. The finding that children who are bullied with mean names or comments did not necessarily identify themselves as victims of bullying highlighted the limitations of investigating children's experience of being bullied using measures such as the Revised Olweus Bully-Victim Questionnaire (2000). While no differences were found, therefore, in victims' emotional and behavioural problems according to their ethnicity, further research is needed that uses more sophisticated measures which specifically tap different variants of racial bullying.

In summary, the present study demonstrated that the research on children's emotional and behavioural problems in the context of their involvement in bullying has not yet been exhausted. While certain findings have been well-established, in particular, the psychosocial adjustment difficulties of victims according to their own reports, significant areas of research remain unaddressed: in particular, a comparison of child and teacher ratings of children's emotional and behavioural problems according to their bully-victim status using comparable measures. Future research needs to incorporate the role of ethnicity into these investigations, not to mention the use of longitudinal designs that will help determine the causality of children's problems.

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APPENDIX 1

Description of sampling procedure

Background

There are 53 primary schools (non-independent) in the sampled LEA. Each school is located in one of 17 wards in the authority.

Sampling procedure

Step 1.

Information was obtained from section 5 of the "Statistical Profile for Education in Schools" regarding the socio-economic and ethnic demographics of all 17 wards (see Table 18 overleaf for a summary).

Step 2.

Given that there were 17 wards in the sampled LEA, the present author decided to approach 17 schools in total, one school from every ward.

Step 3.

Schools expressed an interest in the research more readily than anticipated. For this reason, it was no longer appropriate to approach 17 schools, as originally anticipated. In total, seven schools were approached from a cross-section of these wards.

Step 4.

The final sample of schools belonged to wards 1, 6, 9 and 15, and were therefore representative of a cross-section of the socio-economic and ethnic demographics of the sampled population.

APPENDIX 1 (continued)

Table 18. Socio-economic and ethnic demographics.

	Social Class	Over-crowding	Unemployment	Qualification	Ethnicity
Ward id.					
1	7.30	18.86	35.80	2.29	5.97
2	7.77	16.99	37.05	2.23	7.15
3	8.46	17.02	36.07	1.76	6.84
4	10.12	14.81	35.95	3.26	5.39
5	32.16	6.77	9.26	3.26	5.34
6	34.29	7.74	6.75	9.63	5.59
7	36.08	5.70	10.80	9.37	3.53
8	42.13	4.82	7.27	8.74	6.85
9	46.63	5.08	6.24	12.78	5.57
10	47.96	6.97	11.16	13.19	4.18
11	53.27	6.09	5.93	14.34	6.41
12	58.97	3.80	4.44	19.90	4.28
13	62.60	1.40	3.11	24.04	1.66
14	65.24	6.56	5.50	23.46	1.33
15	67.26	4.94	4.51	22.93	6.79
16	77.27	0.39	2.51	31.73	4.64
17	78.54	0.82	2.19	29.20	1.23

<u>Note.</u> Numbers have been used to represent each ward in order to preserve schools' confidentiality.

Key: Social Class = %age of children in high social class households in ward
Overcrowding = %age of children in overcrowded households in ward
Unemployment = %age of unemployment in ward
Qualification = %age of adults with higher education in ward
Ethnicity = %age of children of ethnic minority in ward

Appendix 2

Frequencies of participants and non-participants

Table 19. Frequencies of participants and non-participants.

	School A N (%)	School B N (%)	School C N (%)	School D N (%)	Total N (%)
Year 5					
Parent dissent	1 (1.2)	2 (2.4)	0 (0.0)	0 (0.0)	3 (1.0)
Child Dissent	5 (6.0)	0 (0.0)	4 (6.0)	0 (0.0)	9 (3.0)
Absent	4 (4.8)	4 (4.7)	9 (13.4)	5 (7.6)	22 (7.3)
Final sample	*73 (88.0)*	*79 (92.9)*	*54 (80.6)*	*61 (92.4)*	*267 (88.7)*
Potential sample	83 (100.0)	85 (100.0)	67 (100.0)	66 (100.0)	301 (100.0)
Year 6					
Parent Dissent	0 (0.0)	2 (2.4)	0 (0.0)	1 (1.5)	3 (1.0)
Child Dissent	0 (0.0)	4 (4.9)	0 (0.0)	1 (1.5)	5 (1.7)
Absent	4 (4.9)	5 (6.1)	4 (5.9)	7 (10.4)	20 (6.7)
Final sample	*78 (95.1)*	*71 (86.6)*	*64 (94.1)*	*58 (86.6)*	*271 (90.6)*
Potential sample	82 (100.0)	82	68 (100.0)	67 (100.0)	299 (100.0)
Years 5&6 total					
Parent Dissent	1 (0.6)	4 (2.4)	0 (0.0)	1 (0.8)	6 (1.0)
Child Dissent	5 (3.0)	4 (2.4)	4 (3.0)	1 (0.8)	14 (2.3)
Absentee	8 (4.8)	9 (5.4)	13 (9.6)	12 (9.0)	42 (7.0)
Final sample	*151 (91.5)*	*150 (89.8)*	*118 (87.4)*	*119 (89.4)*	*538 (89.7)*
Potential sample	165(100.0)	167(100.0)	135 (100.0)	133(100.0)	600 (100.0)

Note 1: No difference was found between schools for participation (Chi square = 3.00, df = 3, p = 0.392). Unfortunately, it was not possible to analyze the difference between genders for participation because information about non-participating children's gender was not collected by the researcher.

Note 2: The high percentage of absenteeism in School D, Year 6, was due to the choir's absence from this year on the day of the study. It had been arranged that the choir would return to school in time for the study but transport delays had prevented this.

APPENDIX 3

Letter to head teachers

[University of Surrey headed note paper]

[head teacher's address]

[date]

Dear [head teacher's name],

Re: Research on bullying and emotional and behavioural problems in primary school children.

Thank you for expressing an interest in your school's participation in the above research, which I am carrying out with the support of Solihull Educational Psychology Department.

Further to our telephone conversation last week, I am enclosing copies of the questionnaires to be used in the study, together with an information sheet about what the research involves.

If you have any queries, please do not hesitate to contact either myself or Dr Linda Dowdney at the University of Surrey (tel: 01483 259 441) or Dr Paul Timmins at the Solihull Educational Psychology Department (tel: 0121 770 6030).

Thank you again for taking the time to consider your school's participation in this study.

Yours sincerely,

Joanna Chapman
Trainee Clinical Psychologist, University of Surrey

Enc. summary of research procedure

APPENDIX 4

Information sheet for head teachers

Summary of Research Procedure

What the research will involve...

The research will be looking at a range of verbal and physical bullying behaviours in primary school children between the ages of 9 and 11 years. It will also contribute to the knowledge of the extent to which children involved in bullying may have emotional and behavioural difficulties.

The study is interested in teachers' as well as children's perspectives. For this reason, I shall be asking:

- ➢ that all participating children complete two questionnaires: one will categorize which children are involved in bullying, and the other will assess the child's mood in the last two weeks;
- ➢ that class teachers fill in a questionnaire containing 25 brief items about every pupil in his or her class. Completion of each questionnaire takes approximately one minute.

All the information provided by children and their teachers will remain anonymous and will be strictly confidential.

How might my school benefit from participating in the study?

I would hope that participation in this study would be of benefit to your school in a variety of ways. For example, through:

- ➢ discussion or written feedback of each school's profile of results with staff responsible for school behaviour policy. This profile would include information about: how often bullying is taking place; the number of children involved in bullying; where bullying is taking place and what kind of bullying is taking place.
- ➢ providing your school with an information pack about possible strategies for dealing with bullying.

Joanna Chapman
Trainee Clinical Psychologist, University of Surrey

APPENDIX 5

Class teachers' information sheet/ consent form regarding their participation in study

My name is Joanna Chapman, I am a Trainee Clinical Psychologist at the University of Surrey and I am carrying out some research in the LEA of Solihull with the support of Solihull Educational Psychology Service. This research will be investigating the extent to which children who are bullied or who bully others (or both) may also have problems of an emotional or behavioural nature.

I am interested in looking at class teachers' as well as children's perspectives. For this reason, I will be asking:

- that teachers fill in a questionnaire containing 25 brief items about *every* pupil in his or her class (approximately 1 min to complete each questionnaire). The questionnaire is called the "Strengths and Difficulties Questionnaire" and is attached overleaf.
- that all participating pupils complete two questionnaires: one will categorize which children are involved in bullying; and the other will assess the child's mood in the past two weeks.

In order to preserve the confidentiality of every child, I will also be asking class teachers to: (i) assign a code to each questionnaire and (ii) distribute the questionnaire to the particular child to which the code has been assigned.

I anticipate that class teachers will be able to complete their questionnaires at the same time as the children. Please would you indicate on the consent form below whether or not you are willing to take part in this study.

Thank you for taking the time to consider this proposal.

……

Consent form for class teachers

Please tick the appropriate box.

I have read the information sheet outlining class teachers' involvement on the study on bullying in primary schools to be carried out by Joanna Chapman, and:

☐ I am willing to take part in the study.

☐ I am not willing to take part in the study.

Signed:.................... Name in block capitals..........................

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APPENDIX 7

Letter to parents

[University of Surrey headed note paper]

For the attention of parents of children from years 5 and 6:
[name and address of relevant school]

Dear Parent/ Guardian

I am a Trainee Clinical Psychologist at the University of Surrey. I am writing to you because, with the support of the Solihull Educational Psychology Service, I am carrying out some research on the effects of bullying on 9 to 11 year olds. This area of research is very topical and I believe that the results of my study will provide an important contribution to our understanding of how bullying affects children.

Mr[s] [Head teacher] has kindly agreed to allow me to ask the children in years 5 and 6 to complete some questionnaires for this research. I am planning to visit the school on [dates of study]. The questionnaires should take approximately 45 minutes to complete. The children's class teachers will also be filling out questionnaires about the children. All the information provided by the children and teachers will remain anonymous and be strictly confidential. Class teachers will <u>not</u> have access to the questionnaires filled in by the children.

If you are happy for your child to participate in this study there is no need to respond to this letter. However, if you do not wish your child to take part for any reason, please could you complete and return the slip below to your child's class teacher <u>before [relevant date]</u>, otherwise we will assume that you have no objections. If you decide that you do not wish your child to participate in the study, you may be reassured that this decision will be fully respected and that your child will not be disadvantaged in any way as a result of this decision.

If you have any queries regarding this study which you would like to discuss, please do not hesitate to contact me at the University of Surrey on 01483 259 441.

Yours sincerely,

Joanna Chapman
Trainee Clinical Psychologist
Supervised by Dr Linda Dowdney, Clinical Psychologist

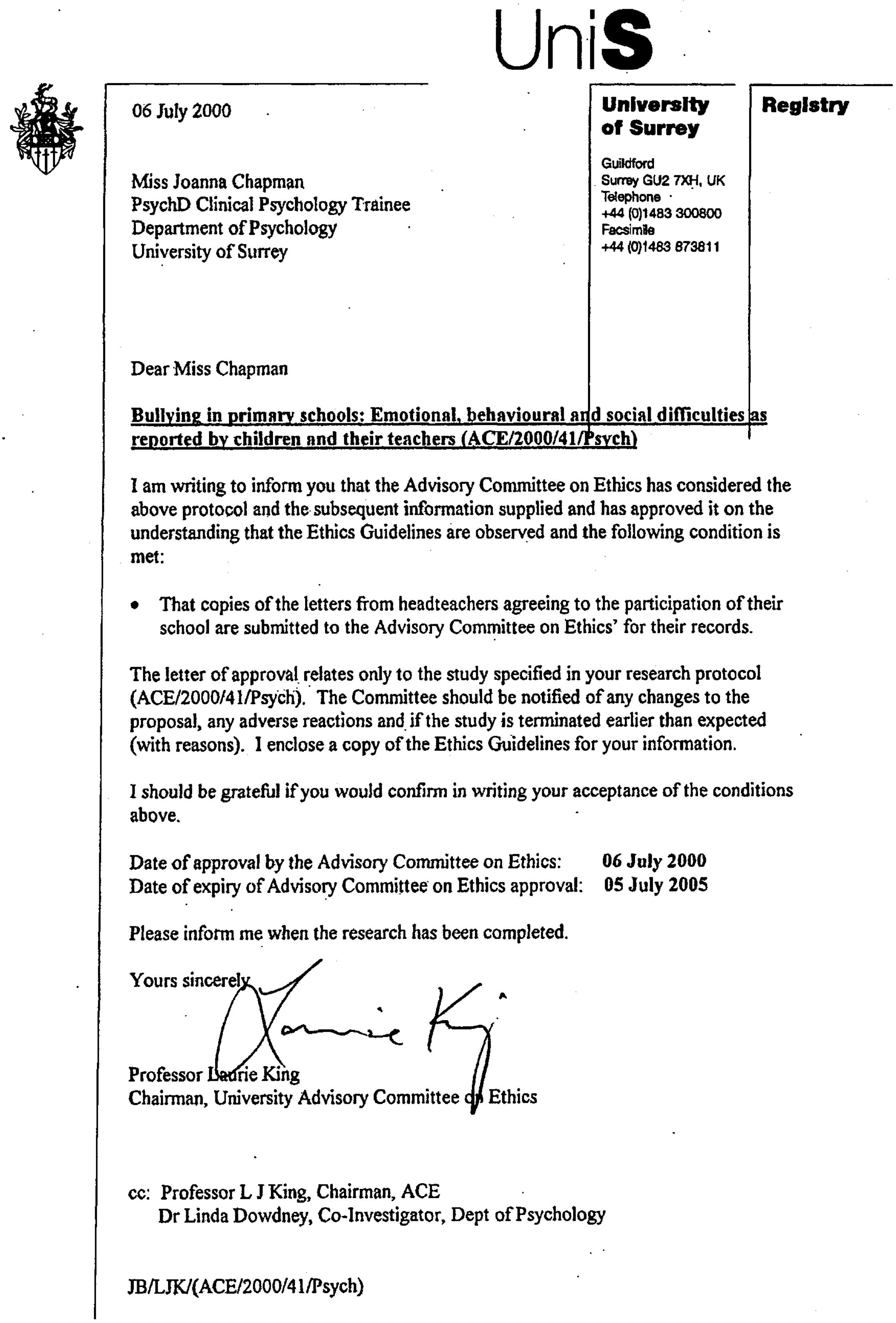
....

Having read the letter sent to met by Joanna Chapman (Trainee Clinical Psychologist), I have decided that I do not wish my child *(name)* .... to take part in the study that she will be conducting.

Signed..
Name...

Appendix 8

Letter of approval from University of Surrey ethics committee



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06 July 2000

Miss Joanna Chapman
PsychD Clinical Psychology Trainee
Department of Psychology
University of Surrey

Dear Miss Chapman

Bullying in primary schools: Emotional, behavioural and social difficulties as reported by children and their teachers (ACE/2000/41/Psych)

I am writing to inform you that the Advisory Committee on Ethics has considered the above protocol and the subsequent information supplied and has approved it on the understanding that the Ethics Guidelines are observed and the following condition is met:

- That copies of the letters from headteachers agreeing to the participation of their school are submitted to the Advisory Committee on Ethics' for their records.

The letter of approval relates only to the study specified in your research protocol (ACE/2000/41/Psych). The Committee should be notified of any changes to the proposal, any adverse reactions and if the study is terminated earlier than expected (with reasons). I enclose a copy of the Ethics Guidelines for your information.

I should be grateful if you would confirm in writing your acceptance of the conditions above.

Date of approval by the Advisory Committee on Ethics:	**06 July 2000**
Date of expiry of Advisory Committee on Ethics approval:	**05 July 2005**

Please inform me when the research has been completed.

Yours sincerely

Professor Laurie King
Chairman, University Advisory Committee on Ethics

cc: Professor L J King, Chairman, ACE
Dr Linda Dowdney, Co-Investigator, Dept of Psychology

JB/LJK/(ACE/2000/41/Psych)

APPENDIX 9

Obtaining consent from and instructing/ debriefing children

Obtaining consent

Hello, my name is Joanna Chapman. I have come to your school today because ……………………… has given me permission to come and ask whether you would like to fill out some questionnaires.

I am doing a project about bullying and am interested in finding out how bullying effects children your age. These questionnaires that I have will help me find out about this.

If you decide to join in, I will not be asking for your name so I won't know who wrote what, and anything that you say will be kept confidential [check that everyone knows what confidential means]. Your teacher [give name] will also be filling in a different questionnaire about you but she won't write your names on the questionnaires either, and she will never see the questionnaires that you fill in.

All those who want to join in, please come with me; and anybody who doesn't want to join in, please let me or your teacher know and you can stay with Mr[s] [teacher's name].

Distribution of child questionnaires

You will see on the booklet I have given you that a number is written at the top of the front page. Remember, I cannot know which questionnaire belongs to who because I do not know which number belongs to who. Also remember that neither your teacher nor any well else at school or home will ever know what you have written because they are not allowed to see the questionnaires. I am asking over 500 children to fill in these questionnaires for me because I am interested to know what lots of children think about these things, but I do not want to know what any one person in particular thinks about it.

Is that clear?? Does anybody have any questions?

Instructions: Cover sheet

Please start by filling in the front page of the booklet. You can use a pen or pencil to fill them out. Please do not write your name anywhere on the questionnaires. I will read out loud each question to you. Let me know if I am going too quickly. Let's begin…

[read out loud questions from cover sheet and wait until every one has finished]

Has every one finished?

APPENDIX 9 (continued)

Instructions: Definition of Bullying

Now I am going to explain to you what we mean by "bullying."

[Read Olweus' definition]:

We say a child is being bullied when another child, or several other children:

- *say mean and hurtful things or make fun of him or her or call him or her mean and hurtful names*
- *completely ignore or shut him or her out from their group of friends or leave him or her out of things on purpose*
- *tell lies or nasty stories about him or her or send mean notes and try to make other children dislike him or her*
- *and other hurtful things like that.*

When we talk about bullying, these things happen lots of times, and it is difficult for the child being bullied to stick up for him or herself. We also call it bullying when a child is teased lots of times in a mean or hurtful way. But we don't call it bullying when the teasing is done in a friendly and playful way. Also, it is not bullying when two children fight who are about as strong as each other.

[end of definition].

You can now turn over.

[Children turn over to front page of Olweus].

Most of the questions are about your life in school this term, in other words, since you came back from the Summer holidays until now. So when you answer, you should think of how things have been since the Summer at school and not only just now. Before we start, does everybody know how long a month is?...

Now I am going to read the questions aloud to you. Let's do a practice question first..

Instructions: Practice Olweus question
Look at question 1. How do you like school? Answer the question by marking a cross X in the box next to the answer that best describes how you feel about school. If you really dislike school, mark an X in the box next to "I dislike school very much." If you really like school, put an X in the box next to "I like school very much", and so on. [Draw box on black board, put a cross in it to demonstrate].

Only mark ONE of the boxes. Try to keep the mark inside the box. Now put an X next to the answer that best describes how you feel about school.

APPENDIX 9 (continued)

If you mark the wrong box, you can change your answer like this: make the wrong box completely black [demonstrate on blackboard]. Then put an X in the box where you want your answer to be.

Don't forget - don't write your name anywhere on this booklet. No one will know how you have answered these questions. This is NOT a test, and there aren't any right or wrong answers. But it is important that you answer carefully and how you really feel. Sometimes it is hard to decide what to answer. Then just answer how you think it is. If you have any questions, please put up your hand.

Now I'll read out loud the rest of the questions to you.

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Appendix 11

Child information sheet

ARE YOU WORRIED AND WANTING TO SPEAK TO SOMEONE??

If you do not want to talk to someone at home or at school, there are also people you can ring and talk to in private.

Here are some numbers you might want to ring (the top two numbers are free):

CHILDLINE: Call free on: 0800 1111

NSPCC: Call free on: 0808 800 5000

Or, if you are being bullied or bullying someone else, and want to talk to someone, you could ring:

KIDSCAPE: tel: 0207 730 3300

Appendix 12

Child cover sheet

1

Inside this booklet are two questionnaires for you to fill out. Before you open the booklet, please fill out the boxes below:

QUESTION	ANSWER
Are you a boy or a girl?	I am a ....
How old are you?	.... years
What date is your birthday?	....
What class are you in now?	Class ....
What class were you in when you started this school?	Class ....

If you need any help now or at any time while you are filling out the booklet, please just put up your hand.

Do not turn over until I ask you.

THANK YOU

Appendix 13

Modifications to the Revised Olweus Bully-Victim Questionnaire (2000)

The following questions were cut from Olweus' original questionnaire:

- Are you a boy or a girl?
- I was bullied with mean names, comments or gestures with a sexual meaning
- Has any adult at home contacted the school to try to stop your being bullied at school in the past couple of months?
- I bullied him with mean names, comments, or gestures with a sexual meaning
- Has any adult at home talked with you about your bullying other students at school in the past couple of months?
- Overall, how much do you think you class (home room) teacher has done to counteract bullying in the past couple of months?
- How often are you afraid of being bullied by other students in your school?

The following questions were modified in the following way for ease of understanding in the UK at a primary school level:

- the word "student" was replaced by "children."
- the phrase "past couple of months" was replaced by "this term."
- the phrase "it hasn't happened to me" was replaced with "this hasn't happened."
- the phrase "excluded" was replaced with "shut me out."

APPENDIX 14

Children's Depression Inventory (CDI: Kovacs, 1992) - Items within factors

Negative Mood items:
I am sad once in a while etc.
I think about bad things happening to me once in a while etc.
Bad things are not usually my fault etc.
I feel like crying every day etc.
Things bother me all the time etc.
I cannot make up my mind about things etc.

Interpersonal Problems items:
I am sad once in a while etc.
I usually do what I am told etc.
I get along with people etc.
I like being with people etc.

Ineffectiveness items:
I do most things okay etc.
My schoolwork is alright etc.
I am just as good as other kids etc.
Doing schoolwork is not a big problem etc.

Anhedonia items:
I have fun in many things etc.
I have fun at school many times etc.
I have plenty of friends etc.
I sleep pretty well etc.
I am tired once in a while etc.
I eat pretty well etc.
I don not worry about aches and pains etc.
I do not feel alone etc.

Negative Self Esteem items:
Things will work out for met O.K. etc.
I like myself etc.
I am sure that somebody loves me etc.
I look O.K. etc.

Appendix 15

Class teacher cover sheet

Class Teacher Cover Sheet

Gender (please circle) Male/ Female

School ....

Class ....

Ethnic Background (please tick) ☐ Afro-Caribbean ☐ Asian
☐ White ☐ Other ....

Number of years' teaching experience ....

Does your school have a policy on bullying? YES/ NO

If yes, please say a little bit about how the children are taught about this policy?

....
....
....

Have you attended any training courses on bullying? YES/ NO

If yes, please say a little bit about this training.

....
....

Thank you for taking the time to complete this form.

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APPENDIX 17

Strengths and Difficulties Questionnaire (Goodman, 1997) - Items within scales

Prosocial scale items:
Considerate of other people's feelings
Shares readily with other children (treats, toys, pencils etc.)
Helpful if someone is hurt, upset or feeling ill
Kind to younger children
Often volunteers to help others (parents, teachers, other children)

Hyperactivity scale items:
Restless, overactive, cannot stay still for long
Constantly fidgeting or squirming
Easily distracted, concentration wanders
Thinks things out before acting
Sees tasks through to the end, good attention span

Emotional symptoms scale items:
Often complains of headaches, stomach-aches or sickness
Many worries, often seems worried
Often unhappy, down-hearted or tearful
Nervous or clingy in new situations, easily loses confidence
Many fears, easily scared

Conduct problems scale items:
Often has temper tantrums or hot tempers
Generally obedient, usually does what adults request
Often fights with other children or bullies them
Often lies or cheats
Steals from home, school or elsewhere

Peer problems scale items:
Rather solitary, tends to play alone
Has at least one good friend
Generally liked by other children
Picked on or bullied by other children
Gets on better with adults than other children

APPENDIX 18

Violation of parametric assumptions.

As can be seen in Table 20, both the total CDI depression scores and CDI factor scores were positively skewed. In addition, the distribution of scores on the interpersonal problems scale was leptokurtic (interpersonal problems kurtosis = 5.958, s.e. kurtosis = 0.211).

Table 20. Skewness of CDI total score and individual factor distributions.

	Skewness statistic	Standard error of skewness
CDI total score	1.104	0.106
Negative mood factor	1.145	0.106
Interpersonal problems factor factor	2.227	0.106
Ineffectiveness factor	1.234	0.106
Anhedonia factor	1.055	0.106
Negative self-esteem factor	1.280	0.106

Note Where a skewness statistic is greater than plus or minus one or two, this indicates that the skewness of the distribution is problematic.

Further, as demonstrated in Table 21, Levene's test of homogeneity of variances demonstrated that the variances on all CDI variables were significantly unequal.

Table 21. Test of homogeneity of variance for CDI variables.

	Levene statistic (based on mean)	Df 1, Df 2	Level of Significance
CDI total score	5.649	3, 525	.001
Negative mood factor	7.004	3, 525	.000
Interpersonal problems factor factor	27.943	3, 525	.000
Ineffectiveness factor	6.237	3, 525	.000
Anhedonia factor	4.700	3, 525	.003
Negative self-esteem factor	12.768	3, 525	.000

APPENDIX 18 (continued)

Similarly, the SDQ total score and individual scales showed skewed distributions, and the majority of scores had statistically unequal variances (see Tables 22 and 23). In addition, the distributions of scores on the emotional symptoms scale and conduct problems scale were leptokurtic (emotional symptoms kurtosis = 3.624, s.e. kurtosis = 0.210, conduct problems kurtosis = 4.938, s.e. kurtosis = 0.21).

Table 22. Skewness of SDQ total score and individual scale distributions.

	Skewness statistic	Standard error of skewness
SDQ total score	1.414	0.105
Prosocial scale	-0.747	0.105
Hyperactivity scale	0.836	0.105
Emotional symptoms scale	1.893	0.105
Conduct problems scale	2.236	0.105
Peer problems scale	1.754	0.105

Table 23. Test of homogeneity of variance for SDQ variables

	Levene statistic (based on mean)	Df 1, Df 2	Level of Significance
SDQ total score	5.441	3, 529	0.001 *
Prosocial scale	.935	3, 529	0.423
Hyperactivity scale	2.452	3, 529	0.063
Emotional symptoms scale	14.537	3, 529	0.000 *
Conduct problems scale	7.252	3, 529	0.000 *
Peer problems scale	9.346	3, 529	0.001 *

Note. * indicates that p-values are significant at the 1% level.

In brief, the majority of the distributions of the CDI and SDQ variables violated two key parametric assumptions: namely, that data are drawn from a normally distributed sample and have equal variances. For this reason, non-parametric statistical analyses were employed in all analyses employing the CDI and SDQ measures.

Appendix 19

Post hoc Mann-Whitney *U* analyses - Children's CDI scores according to their bully-victim status

(See Table 24 overleaf).

Table 24. Post hoc Mann Whitney U analyses - Children's CDI scores according to their bully-victim status

		Bully-victim status groups					
CDI score/scale	Test statistic	Neutrals and victims (N = 508)	Neutrals and bullies (N = 428)	Neutrals and bully-victims (N = 422)	Victims and bullies (N = 112)	Bullies and bully-victims (N = 36)	Victims and bully-victims (N = 106)
CDI total score	Mann-Whitney *U*	8665.00	2037.00	348.50	595.500	32.50	258.000
	p	*0.001**	*0.011*	*0.001**	*0.151*	*0.025*	*0.046*
Negative mood	Mann-Whitney *U*	9452.00	2533.00	809.00	580.00	48.00	372.500
	p	*0.001**	*0.117*	*0.001**	*0.115*	*0.08*	*0.242*
Interpersonal problems	Mann-Whitney *U*	*16264.50*	*1308.50*	885.50	403.00	*71.00*	238.000
	p	*0.002**	*0.001**	*0.002**	*0.001**	*0.094*	*0.017*
Ineffectiveness	Mann-Whitney *U*	13386.00	2832.00	821.00	640.00	45.50	313.000
	p	*0.001**	*0.323*	*0.001**	*0.279*	*0.064*	*0.067*
Anhedonia	Mann-Whitney *U*	9700.00	2407.50	611.50	533.500	30.00	337.500
	p	*0.001**	*0.068*	*0.001**	*0.050*	*0.016*	*0.227*
Negative self-esteem	Mann-Whitney *U*	*12231.00*	*2737.00*	*609.50*	632.500	39.00	293.000
	p	*0.000**	*0.251*	*0.000**	*0.254*	*0.029*	*0.041*

Note. P-values marked with a * are equal to or less than 0.008, and indicate therefore results that were significant after using the Bonferroni correction for multiple comparisons.

N refers to combined sample size of the two bully-victim status groups involved in comparison.
N is less by one for CDI total score, interpersonal problems and anhedonia factors for victims/ bully-victims and bullies/bully-victims comparisons.

Appendix 20

Post hoc Mann Whitney *U* analyses - Children's SDQ scores according to their bully-victim status

(See Table 25 overleaf).

Table 25. Post hoc Mann-Whitney *U* analyses - Children's SDQ scores according to their bully-victim status.

		Bully-victim status comparison groups					
Score/scale	Test statistic	Neutrals and victims (N = 508)	Neutrals and bullies (N = 428)	Neutrals and bully-victims (N = 422)	Victims and bullies (N = 112)	Victims and bully-victims (N = 106)	Bullies and bully-victims (N = 26)
SDQ total	Mann-Whitney *U*	13978.0	1389.50	1012.00	553.000	327.500	66.500
	p	*0.001**	*0.001**	*0.001**	*0.073*	*0.099*	*0.476*
Prosocial	Mann-Whitney *U*	15730.50	1456.50	1018.00	502.500	329.500	75.000
	p	*0.001**	*0.001**	*0.001**	*0.026*	*0.100*	*0.789*
Hyperactivity	Mann-Whitney *U*	15988.00	1501.00	859.00	481.000	243.500	57.500
	p	*0.003**	*0.001**	*0.001**	*0.016*	*0.010*	*0.231*
Emotional symptoms	Mann-Whitney *U*	15329.00	2855.50	1562.00	694.000	468.500	73.500
	p	*0.001**	*0.308*	*0.143*	*0.519*	*0.897*	*0.719*
Conduct problems	Mann-Whitney *U*	17950.50	1545.00	870.00	422.000	234.500	71.500
	p	*0.095*	*0.001**	*0.001**	*0.002**	*0.004**	*0.651*
Peer problems	Mann-Whitney *U*	14938.00	2567.00	1452.00	731.500	453.500	72.000
	p	*0.001**	*0.105*	*0.085*	*0.756*	*0.769*	*0.666*

Note. P-values marked with a * are equal to or less than 0.016, and indicate therefore results that were significant after using the Bonferroni correction for multiple comparisons.

Appendix 21

Post hoc chi-square tests - SDQ clinical cut-points

Table 26. Post hoc chi-square tests - SDQ clinical cut-points.

		Bully-victim status comparison groups		
Score/scale	**Test result**	**Neutrals and victims (N = 508)**	**Neutrals and bullies (N = 428)**	**Victims and bullies (N = 112)**
SDQ total	χ^2	6.284	FI~	FI~
	df	1	-	-
	p	0.012 *	0.267	1.000
Prosocial	χ^2	9.801	FI~	FI~
	df	1	-	-
	p	0.002 *	0.066	0.745
Hyperactivity	χ^2	5.393	FI~	FI~
	df	1	-	-
	p	0.020	0.017	0.304
Emotional symptoms	χ^2	13.300	FI~	FI~
	df	1	-	-
	p	0.001*	0.050	0.656
Conduct problems	χ^2	0.191	FI~	FI~
	df	1	-	-
	p	0.662	0.002*	0.008*
Peer problems	χ^2	11.729	FI~	FI~
	df	1	-	-
	p	0.001 *	0.268	1.000

Note. P-values marked with a * are equal to or less than 0.016, and indicate therefore results that were significant after using the Bonferroni correction for multiple comparisons.

N is the combined total of the two groups in each comparison.