

Factors that influence the detection of psychological problems in adolescents attending general practices

Rebecca Martinez, Shirley Reynolds and Amanda Howe

ABSTRACT

Background

Epidemiological studies indicate that the prevalence of psychological problems in patients attending primary care services may be as high as 25%.

Aim

To identify factors that influence the detection of psychological difficulties in adolescent patients receiving primary care in the UK.

Design of study

A prospective study of 13–16 year olds consecutively attending general practices.

Setting

General practices, Norfolk, UK.

Method

Information was obtained from adolescents and parents using the validated Strengths and Difficulties Questionnaire (SDQ) and from GPs using the consultation assessment form.

Results

Ninety-eight adolescents were recruited by 13 GPs in Norfolk (mean age = 14.4 years, SD = 1.08; 38 males, 60 females). The study identified psychological difficulties in almost one-third of adolescents (31/98, 31.6%). Three factors significant to the detection of psychological disorders in adolescents were identified: adolescents' perceptions of difficulties according to the self-report SDQ, the severity of their problems as indicated by the self-report SDQ, and whether psychological issues were discussed in the consultation. GPs did not always explore psychological problems with adolescents, even if GPs perceived these to be present. Nineteen of 31 adolescents with psychological difficulties were identified by GPs (sensitivity = 61.2%, specificity = 85.1%). A management plan or follow-up was made for only seven of 19 adolescents identified, suggesting that ongoing psychological difficulties in many patients are not being addressed.

Conclusions

GPs are in a good position to identify psychological issues in adolescents, but GPs and adolescents seem reluctant to explore these openly. Open discussion of psychological issues in GP consultations was found to be the most important factor in determining whether psychological difficulties in adolescents are detected by GPs.

Keywords

adolescent mental health; consultation; primary care; psychological; Strengths and Difficulties Questionnaire.

INTRODUCTION

Adolescence is a period of rapid biological, psychological, and social transitions. During this time, there can be high levels of emotional distress. A survey of 5–15 year olds in the general population revealed a 10% overall prevalence of mental disorder.¹ For children and adolescents who attend primary care services, the prevalence of mental health problems may be as high as 25%.²

The UK government's long-term healthcare objectives include the aim to reduce emotional and behavioural disorders in children.^{3–5} The main providers of health care for adolescents in the UK are GPs.⁶ Adolescents visit their GPs on average two to three times a year and 70% of all adolescents visit their GPs in any one year.⁷ A prospective study of 13–16 year olds attending general practices demonstrated that GPs' recognition of psychological disorder, according to diagnostic interview, had a sensitivity of 21% and a specificity of 91%. Therefore, psychological disorders in many adolescents were not detected, but few adolescents without disorders were incorrectly diagnosed.² Given that a substantial number of children and adolescents attend general practices every year, the consultation provides an opportunity for GPs to identify those with significant diagnoses.

R Martinez, MSc, DTM&H, PgDipCBT, MRCP, senior house officer, The Bethel Child and Family Centre, Mary Chapman House, Norwich. **S Reynolds**, PhD, professor of clinical psychology; **A Howe**, MA, MD, MEd, FRCGP, professor of primary care & MB/BS course director, School of Medicine, Health Policy and Practice, University of East Anglia, Norwich.

Address for correspondence

Rebecca Martinez, School of Medicine, Health Policy and Practice, University of East Anglia, Norwich NR4 7TJ.
E-mail: r.martinez@doctors.org.uk

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A number of factors have been described in the literature that can contribute to failure to detect psychological disorders in children and adolescents in the consultation, including somatisation of emotional distress and comorbidity with other non-psychiatric disorders.^{2,8} The experience, training, attitudes, and interview style of health professionals are key to the expression of psychological problems and the correct diagnosis of psychiatric disorders.⁹

Aim

The aim of this study was to investigate factors influencing the detection of psychological problems in adolescents visiting general practices, using GP recognition of disorders with a reliable and valid measure: the Strengths and Difficulties Questionnaire (SDQ). An adolescent and a parental version of the questionnaire were used.¹⁰

METHOD

Participants and setting

Data collection took place from March 2002 to January 2003. The recruitment of GPs was by letter to all GPs (a total of 253) listed in the former Norfolk Health Authority. Thirty-one GPs expressed an interest in the study and, after receiving more detailed information of the proposed research, 13 GPs agreed to take part. GPs were asked to recruit consecutive adolescents attending their surgeries for the study.

The recruitment area for the study was Norfolk. This region has a population of 798 000 in 2001, of which approximately 40 000 fall in the age group of 13–16 year olds. Residents in this area are predominantly of white British background.

Recruitment

A member of practice staff trained for the project approached adolescents. They were approached in the waiting room prior to their appointment, following the consent procedure agreed and approved by the Norwich District Ethics Committee. Information was obtained from adolescents and parents before the consultation using the SDQ and from GPs following the consultation using the consultation assessment form (Figure 1).

A sample size of 300 participants was estimated to give an approximate power of 80% at a significance level of 0.05, and show an odds ratio of at least 2.5 in the main covariate (independent variable: detection of mental health problems in adolescents). The number of GPs required was established using a pragmatic approach, and was aimed at 20 GPs recruiting 15 adolescents each. Although this study did not examine the relative detection rates of individual GPs, the intention was to recruit from a variety of general practices.

How this fits in

Adolescent mental health problems in those attending primary care are common, and the detection of these problems is limited. This study found that open discussion of psychological issues in GPs consultations with adolescents is relatively uncommon, yet this is the most important factor influencing detection of psychological problems in adolescents. It appears that GPs and adolescents are reluctant to explore psychological issues in the consultation, even when they both suspect that these are important.

The recruitment of adolescents proved difficult for some GPs: only three GPs reached the target of recruiting 15 participants. Practice staff were asked to record the number of adolescents who did not give consent to take part in the study. Seven adolescents were excluded from the study: four were recorded as not consenting and three adolescents had incomplete data, leaving a sample group of 98 participants.

Measures

The SDQ is a well-validated measure of child and adolescent mental health which provides information about symptoms, parents' and children's levels of perception of difficulties and their impact on the child. The versions of the questionnaire that were used in this study for both the adolescents and the parents, were the extended versions, which include an impact supplement that involved asking the responder

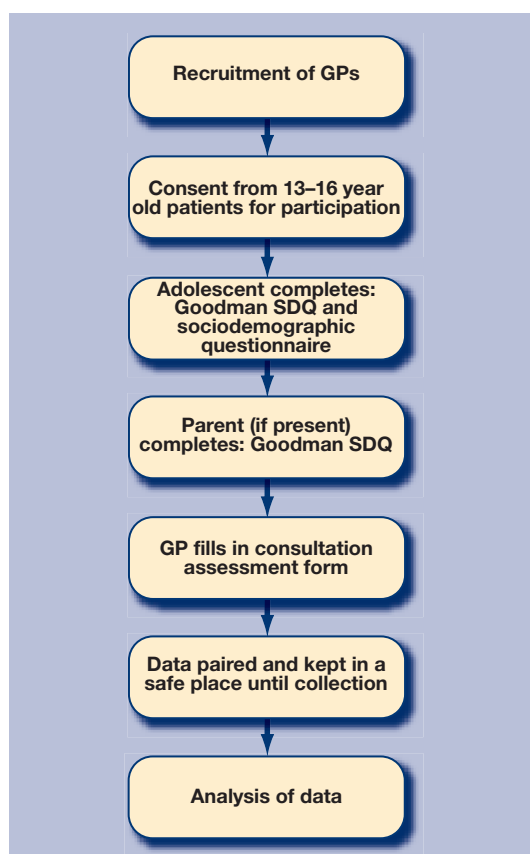


Figure 1. Data collection process.

Table 1. Summary of GP consultation assessment form.

Please indicate the degree of psychological disturbance in your patient today by circling an appropriate option:

Normal/stable person with or without physical illness	1
Person with sub-clinical emotional or behavioural disturbance	2
Person with mild psychological disturbance	3
Person with moderate psychological disturbance	4
Person with severe psychological disturbance requiring referral	5

Do you regard this person as having:

Chronic psychological problems?	Yes	No
Significant mental health problems within the last year?	Yes	No

Diagnosis for today's consultation: _____

Did you:

Issue a script? (If so, indicate prescription: _____)	Yes	No
Make a follow-up appointment?		
Refer this patient to a specialist service? (If so, which _____)	Yes	No
Did you discuss any psychological issue in today's consultation?	Yes	No

According to the normative data of the parental SDQ, a score of >14 in an adolescent, is classified as having 'low needs', 14–16 as 'some needs', and ≥17 as 'high needs'. In the self-report SDQ, a score between 0 and 15 is classified as having 'low needs', 16–19 as 'some needs' and ≥20 as 'high needs'. Although high scores on rating scales are not the same as diagnostic criteria for a disorder, a high score indicates a high risk of developing further problems, suggesting that the identification of these children for future assessment is of relevance.¹⁴

After each visit, GPs were required to complete a consultation assessment form, based on a model used in previous studies¹⁶ which included a 5-point scale assessing the GPs' perceptions of degree of distress in the patient, as well as further information on other aspects of the consultation (Table 1).

whether they thought that the adolescent had a problem and enquires about the overall distress, social impairment, burden and chronicity of the problem.¹⁰ Parental and self-report versions of the SDQ were given to participants and their parents. The definition of difficulties associated with significant clinical risk is based on a total symptom score of at least 14 for the parental SDQ score, and 16 for the self-report.^{10–13}

Analysis

Data were analysed using SPSS version 10.0 and STATA (for logistic regressions). It was hypothesised that:

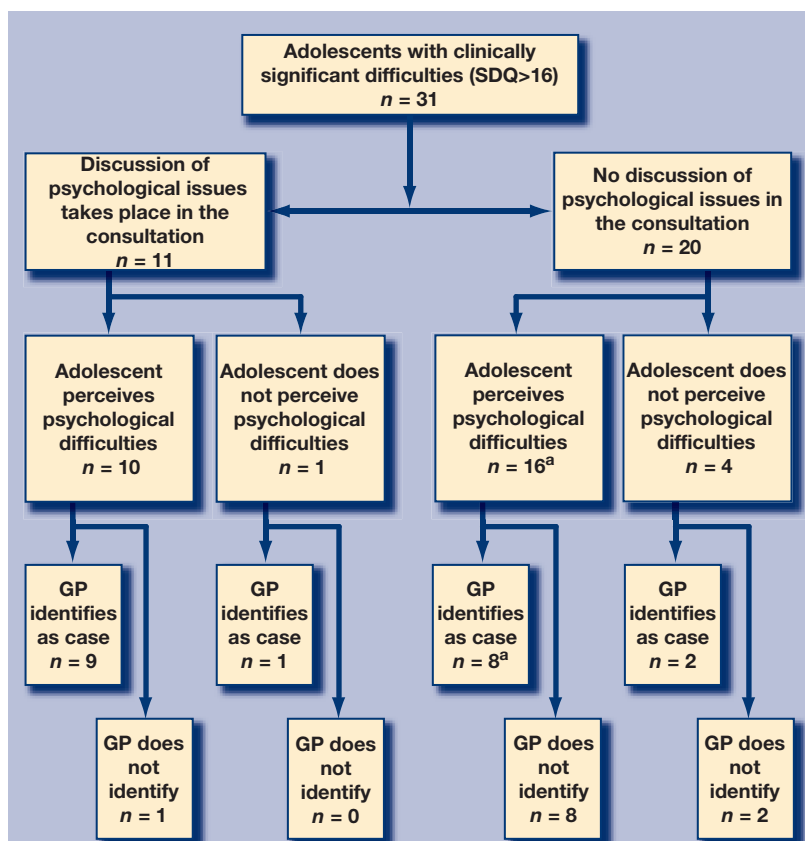
- GPs are able to detect more severely disturbed adolescents;
- psychological problems would be discussed when the GP thinks that these are present; and
- psychological problems are more likely to be discussed when both parents and adolescents perceive a problem.

To establish factors that are important in determining the detection of psychological problems by GPs, a multiple regression model with appropriate confidence intervals (CIs) was applied. Backward elimination was conducted using odds ratios (ORs) to test each model.

RESULTS

Data were collected from 98 adolescents attending routine appointments with their GPs. Mean age of the sample was 14.4 years (standard deviation [SD] = 1.08). The sample included 38 males (38.8%) and 60 females (61.2%). All participants were of white British origin. Seventy-six (77.5%) adolescents who attended the consultation were accompanied by a parent. All of the 13 year olds (27/27) attended with a parent, 91.3% (21/23) of the 14 year olds were accompanied by an adult, as were 73.3% (22/30) of the 15 year olds; however, only 33.3% (6/18) of the 16 year olds attended with an adult. The percentage of adolescents over 15 years of age attending their GP alone has been previously reported at 50%.¹⁶ Thirteen GPs (seven males and six females) participated in the study with a mean age of 44.7 (SD = 9.22), and a mean of 12.5 years' (SD = 9.77) experience in general practice.

Figure 2. Flowchart of discussion and identification of psychological issues in those with a clinically significant SDQ score.



^aIn these participants there may be a concealment of issues by the adolescents, as the GP correctly identifies the adolescent as experiencing psychological difficulties, but these are not discussed in the consultation.

Four GPs had MRCGP accreditation: one had a diploma in child health and three belonged to training practices. None of the 31 GPs who expressed an initial interest in the study had any specific training or experience in adolescent mental health, and only one GP reported having had specific training in adolescent health.

GPs' recognition of disorder

GPs were asked to record the reason for attendance and their perception of the adolescents' presentation regarding their mental health on the consultation assessment form (Table 1). GPs assessed 69 (70.4%) participants as 'normal/stable' adolescents. Although GPs regarded 29 (29.6%) adolescents as having some degree of psychological difficulties, psychological issues were only elicited and discussed in 18 (18.3%) of the consultations (Table 2).

Clinically significant SDQ scores and GP responses

Thirty-one adolescents (25 females and six males) reported difficulties of clinical significance. When specifically asked if they perceived any difficulties in conduct, behaviour, peer relationships, and emotions (impact section of the SDQ), only four of 31 adolescents stated that they were not aware of having difficulties in these areas. Alternately, 84% adolescents (26 of 31) were aware of experiencing difficulties in one of these areas. Explorations of psychological issues only took place in 11 of these participants (Figure 2).

Discussion of psychological issues

The discussion of psychological issues during GP attendance took place in 18 of 98 (18.3%) consultations (Table 2). Of these, 14 consultations were with females and four were with males. Fifteen adolescents were accompanied by a parent and the rest attended alone. The pathway of discussion and identification of psychological difficulties in adolescents who scored in the clinically significant range of the SDQ is shown in Figure 2.

Instances where both the GP and the adolescent felt that there were psychological difficulties but did not discuss these in the consultation, may indicate that GPs are reluctant to initiate discussion of psychological issues. In all of these cases, the presenting complaint was physical. There might have been an reluctance to redirect the discussion towards psychological issues, or GPs might be responding to subtle clues from adolescents about their willingness to being questioned.

Role of parents

Of the 98 participants, parental SDQ questionnaires

Table 2. Exploration of psychological issues in the consultation.

	Yes	No	Total
GP recognition of psychological difficulty			
Yes	14	15	29
No	4	65	69
Total	18	80	98
Clinically significant SDQ score (SDQ>14)			
Yes	11	20	31
No	7	60	67
Total	18	80	98
Adolescents' perception of own difficulties (self-report SDQ)			
No difficulties	4	47	51
Yes, minor difficulties	7	26	33
Yes, more serious difficulties	7	7	14
Total	18	80	98

SDQ = Strengths and Difficulties Questionnaire.

were obtained for 76 (77.5%) adolescents. Twenty-one parents (27.6%) reported significant overall difficulties in their children. Inter-rater agreement between parents and adolescents on the SDQ was calculated using Spearman's coefficient. The correlation coefficient for total difficulties was $r = 0.48$ ($P < 0.001$), conduct problems $r = 0.23$ ($P < 0.021$), hyperactivity difficulties $r = 0.48$ ($P < 0.001$), peer problems $r = 0.49$ ($P < 0.001$), social behaviour difficulties $r = 0.39$ ($P < 0.001$), and emotional problems $r = 0.48$ ($P < 0.001$).

A management plan or follow-up was arranged for seven adolescents, six of whom were female and accompanied by a parent.

Factors associated with recognition of disorder

To establish factors that determine the detection of psychological problems by GPs, a multivariate logistic regression model was applied including the following factors: sex of the adolescent, age of the adolescent, history of mental health problems in the family, whether accompanied or not, social problems in the family, mental health problems in the family, the score of the self-report SDQ, the score of the parental SDQ, whether psychological issues were explored in the consultation, perceived difficulties by the parent, and perceived difficulties by the adolescent.

Table 3. Multivariate analysis model.

Factor	OR	95% CI	P-value
Exploration of psychological issues (Yes versus No)	11.13	2.78 to 44.53	0.001
Adolescent self-report SDQ score (Some need versus low need)	4.37	1.02 to 18.74	0.047
Adolescent self-report SDQ score (High need versus low need)	11.22	2.92 to 43.12	<0.001

OR = odds ratio. SDQ = Strengths and Difficulties Questionnaire.

Table 4. GPs' recognition of psychological difficulties.

	Self-report SDQ score		
	Clinically significant (>16)	Not clinically significant	Total
	Yes	No	
GP recognition of psychological difficulty			
Yes	19	10	29
No	12	57	69
Total	31	67	98

SDQ = Strengths and Difficulties Questionnaire. Sensitivity = 61.2% (19/31). Specificity = 85.1% (57/67).

The final regression model retained the following factors which were significant: active exploration of psychological issues during the consultation; adolescents' self-definition as having significant difficulties as indicated by the self-report SDQ; and the relative severity of the difficulties (Table 3).

DISCUSSION

Summary of main findings

Thirty-one of 98 adolescents reported difficulties of clinical significance, according to self-report SDQ scores. GP recognition of mental health difficulties in adolescents had a sensitivity of 61.2% (19/31) and a specificity of 85.1% (57/67) (Table 4). Despite recognition of problems, psychological issues were only discussed in 18 of the consultations, and a management plan or follow-up was only established for seven of these adolescents. Psychological difficulties were less likely to be presented, discussed, or detected in consultations with males.

As hypothesised, GPs were able to identify correctly adolescents with more severe difficulties; however, a discussion of psychological issues did not always take place, even when GPs felt that these were present. Similarly, up to 50.0% (7/14) of adolescents who perceived themselves as having more serious difficulties did not raise these issues in the consultation. There appears to be mutual reluctance to acknowledge psychological difficulties by GPs and adolescents.

Strengths and limitations of the study

This study used data collection from consultations between GPs and adolescents; the study design is similar to previous studies examining this issue.² GPs who participated were a self-selected cohort, which may have introduced bias to the sample by attracting those who are more predisposed to psychological issues. Although GPs were blind to SDQ scores, participation might have influenced responsiveness; however, this is unlikely, as the discussion rate of psychological issues was low. This could suggest that unselected GPs may have even lower sensitivity and specificity for correctly detecting psychological problems and their discussion in the consultation.

Perceived difficulties according to adolescents and parents were determined using the impact score of the SDQ, rather than information presented in the consultation. Determining whether the discussion of a psychological issue took place in the consultation was based on GPs' views, as recorded in the consultation assessment form. In cases where GPs stated that psychological issues were not discussed, it is possible that GPs consider psychological issues even if they do not overtly explore these. Videoing of consultations was considered for the study, but was discarded after piloting indicated that there would be low levels of recruitment.

Although the SDQ has been validated and has a profile of sensitivity 61.3% and specificity of 94.0%, it is a screening instrument rather than a diagnostic tool.¹³ Neither the GP consultation assessment form nor the SDQ prove that the adolescents had a clinical diagnosis requiring treatment.

The recruitment target for this study was not met. This limited the possibility of examining the influence of other factors, such as parental factors (socioeconomic), or GP factors (training, level of experience, sex, or the influence of being a low or a high recruiting GP in the study). The small sample size may have resulted in underestimation of the effect of other factors considered in the analysis. Also, there was limited possibility of following up patients and the outcomes of detection, the benefits of which have been questioned in other studies.¹⁷

The strengths of this study lie in that the data collection takes place in naturally occurring consultations between GPs and adolescents adding ecological validity to the study. The SDQ, which has been used in this study, is a well validated tool in large community samples in the UK. This study builds on previous knowledge regarding the detection of psychological distress, and adds a view on the reported discussion of psychological issues between adolescents and GPs.

Comparison with existing literature

Recognition of psychological difficulties by GPs, when contrasted with a clinically significant SDQ score, was relatively higher than previous studies have suggested.² This may have been triggered by the use of a broad concept of difficulties, including 'mild psychological difficulties' and 'sub-clinical psychological difficulties'. However, the specificity was in keeping with previous research.² Thus it may be appropriate to use this broader concept, as it can improve the detection of psychological disorders.

Adolescents and GPs may not address psychological issues if GPs are reluctant to assign a psychiatric diagnosis, or if they hope that psychological difficulties are a transient phase in the

adolescent. Avoiding diagnoses or fear of stigmatisation may be present in the doctors, parents, and in the adolescents themselves.¹⁶ Other authors have suggested that health professionals and patients may hesitate about addressing issues where they lack confidence in their own skills and the treatments available.⁹

Male adolescents in the current study were less likely to have psychological issues discussed or detected during GP consultations. A previous study of adult populations found a similar trend in detection of psychological problems according to sex. Although the objective measures of difficulties among males and females were similar, GPs classified female patients as affected more than males.¹⁸

Parental presence during the consultation seems to act as a modifier in the outcome of the consultation in terms of securing a management plan or follow up. In this age group, the parent still plays an important role in health and help-seeking behaviours. 'Parental burden', in terms of the degree to which the adolescent's presentation disrupts family life, has been identified as a factor associated with service use for psychological ill health in adolescents, which may explain the over representation of externalising disorders seen in Child and Adolescent Mental Health Services.¹⁹

Implications for future research and clinical practice

The first step in the process of deciding to seek help for mental health problems is recognition of psychological difficulties by the adolescent or parent.²⁰ Psychological difficulties among adolescents who visit GPs are common; however psychological issues were discussed in only a small proportion of the consultations in this study. A number of adolescents in the current sample perceived themselves as having psychological difficulties, but they did not discuss them in the consultation. There is a need to understand better the reasons why some adolescents or their parents are not seeking help for these issues.

Although difficulty perceived by parents was not a statistically significant factor in the detection of psychological difficulties, it was important in determining whether management and follow-up plans were established. Parents may be the initiators of contacts, or they may be approached by the adolescents initially for assistance. Previous research of 5–11 year olds indicates that parents can provide clues that may help to detect possible child disorders.¹⁴

One of the key findings in the current study is that an exploration of psychological issues does not always take place in GP consultations, even when the doctor feels that these are present and the adolescent is similarly aware. It is important to consider that even

when psychological issues are discussed, and problems identified, a management or follow-up plan is only arranged for a small proportion of these patients. Adolescents may not identify their GPs as an obvious source of help for psychological issues. Approaches to adolescent mental health should aim to increase awareness and training of GPs so that the needs of these patients can be met.

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Ethics committee

Norwich District Ethics Committee (LREC 2001/132)

Competing interests

The authors have stated that there are none

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