Original Scientific Paper

Questionnaire development for the management of mental disorders in general practice

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ABSTRACT

Background

With the trend towards increased numbers of mentally ill patients being treated by general practitioners, it is understandable that concern exists about general practitioner confidence and skill levels in recognising and treating mental disorders in their patient population. The aim of this paper was to report the development of a questionnaire about general practitioners' attitudes, reported confidence and behaviour pertaining to the management of mental disorders in general practice.

Methods

A literature review, focus group meetings, and semi-structured interviews with GPs were conducted to identify issues of importance to GPs and possible questionnaire items. Preliminary work involved the development of two versions of the questionnaire; modification and removal of items to eliminate ambiguity and reduce non-response took place. The final version of the questionnaire was used in three small pilot studies with samples of convenience.

Results

A 46 item questionnaire was developed. Levels of internal reliability ranged from reasonable to good, Cronbach's alpha correlation coefficient exceeding 0.70 for all scales. Content validity was ensured by the process of questionnaire development.

Conclusion

An internally consistent measure of general practitioners' reported attitudes, reported confidence and behaviour has been developed. Further work is needed to assess its test-retest reliability, generalisability and to understand fully the uses and limitations of the questionnaire.

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Introduction

In an effort to control the costs of mental health care, many medical care systems have emphasised the management of psychiatric illness by general practitioners (GPs) and curtailed specialty mental health referrals. While this trend mandates that GPs have expertise in the diagnoses and treatment of psychiatric disorders, evidence indicates that not only are psychiatric disorders under recognised in primary care settings, but also that treatment is often inadequate and accompanied by less than optimal outcomes.[1,2,3,4,5,6] However, studies in both New Zealand and Australia challenge the view that lack of recognition and treatment is primarily the fault of the GP, instead they have reported a range of patient, doctor and service factors contributing to the ongoing problems of under recognition and under treatment of mental disorders in primary care.[7,8,9,10] Nevertheless, the reality is most people with psychiatric disorders present in primary care, although many are not diagnosed or treated.

Given the high rates of psychiatric illness in the primary care setting,[6,11,12,13,14,15] low rates of recognition and sub optimal treatment[1,16, 2,3,4,5,7,8,9,10] along with their relationship to disability, it is important that training about common mental disorders and their management is emphasised both within medical schools and in vocational training schemes for GPs, as most disorders will continue to be managed entirely within general practice.

There are numerous factors that contribute to the lack of recognition and appropriate diagnosis of psychiatric disorders by GPs. GPs will vary in competencies, skill, communication skill, knowledge base, time and attitudes about their patients, and about symptoms.[17,18] There are also differences in the type of patients who present to a GP. This is important

because research suggests that patients with major depressive disorders in general practice have different aetiology, pathophysiology and natural history than those of psychiatric inpatients or outpatients.[19,20] Often, depressed general practice patients present with somatic symptoms, which include gastrointestinal, skeletal muscle, and cardiovascular complaints, as opposed to describing non-somatic criteria for depression. In addition, patient factors such as poor insight into emotional illness,[21] poor adherence to treatment recommendations and stigma associated with having a mental illness[21,22] contribute to GPs' difficulties in recognising, identifying and treating mental disorders in their patients.

Systemic barriers can also prevent GPs from providing optimal care for their patients with mental disorders such as insufficient time to manage patients with mental disorders, limited referral resources and inadequate remuneration for extended consultations.[23,24]

The reasons are therefore complex and efforts to enhance recognition and management must involve a systematic approach. This might potentially include education of GPs. In order to provide good general practice training in the mental health area, greater understanding is required about how GPs really see themselves, their clinics, their patients, and diagnostic treatment of mentally ill patients.

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We believe strategies for increasing the frequency and accuracy with which GPs diagnose psychiatric illness are best designed within an educational framework specifically tailored to GP needs. Such a framework should include elements of knowledge relevant to managing mental disorders in general practice, interviewing skills and clinical decision-making processes.

The amount of available educational time in training programmes to prepare GPs for this task however is limited and competes with other areas of medicine for teaching time. Therefore, it is useful firstly to look at current practice, the systemic barriers GPs face, and GP attitudes towards managing mental disorders. Secondly, it is useful to specifically identify and prioritise the major areas of focus for mental health education of GPs. This paper reports the development of a questionnaire about general practitioners' attitudes, reported confidence and behaviour pertaining to the management of mental disorders in general practice.

Subjects and methods

Content of questionnaire

A literature review was carried out to identify important issues around the management of mental disorders in general practice. An initial review of other questionnaires looking at mental disorders in general practice[25,26,27] was undertaken along with informal communication with overseas experts in the area. (Hickie, personal communication, 1999; Davenport, personal communication, 2001; Gallo, personal communication, 2000, 2001, 2002 2003). A list of themes relevant to managing mental disorders in general practice was compiled and was further supplemented by formal discussions with fellow general practitioners, psychiatrists, and clinical psychologists.

Preliminary work led to the development of version 1 of the questionnaire (QV1) which was made up of themes and open-ended questions around general practitioners' confidence and skill, attitudes and continuing medical education factors pertaining to the management of mental disorders. Semi-structured interviews were conducted with five general practitioners to examine the relevance of the themes embedded within the QV1.

A convenience sampling was used to recruit GPs from one clinical practice in South Auckland. General practitioners were fully informed about the questionnaire and consent was given by phone. A written letter along with the QV1 was sent to each of the five GPs two weeks prior to the interview.

On the day of the interview the completed QV1 was collected and GPs were verbally re-administered the QV1 as a reliability check. GPs were also invited to comment on the QV1, the relevance of the questions, whether questions were confusing, ambiguous, irrelevant, meaningless or redundant. Interviews were taped and transcribed by the researcher. The semi-structured interview confirmed that the themes identified in the literature were correct.

The QV1 and GP feedback were presented at the Department of Psychiatry (Auckland University) scientific writing seminar, the audience primarily being GPs and psychiatrists. Feedback on the QV1 was also collected from this group of professionals.

Refinement of the questionnaire

The purpose of preliminary testing is to ensure that the right questions are being asked, that questions cover all important and relevant areas and that they are properly worded and organised so that it flows in a logical manner. Most importantly, however, was to ensure the QV1 was understandable and acceptable to GPs. From the themes and ideas collected from the transcripts of the semi-structured interviews, the QV1 was revised.

Revisions involved questions that required GPs to recall over a long

period for example; *'about how many times during the past year have you actively participated in continuing medical education specifically for the care of patients with depression?'* Questions such as this relied predominately on memory, hence GPs reported using 'guess work' to answer these types of questions. The revised version 2 questionnaire (QV2) included shorter time periods of recollection by GPs to avoid unreliable guess work.

A number of open-ended questions were refined to avoid a wide range of open-ended answers. Specific questions and categories were developed from GP responses collected from preliminary work and QV1.

A very important revision to the QV1 involved the widening of the questionnaires scope to include 'all psychiatric disorders'. The initial QV1 solely focused on depression, however, GPs involved in the development of the QV1 to this point all agreed that depression was just one of many mental disorders that GPs were faced with managing in their clinics and that the questionnaire should include all presenting mental disorders in general practice. Thus the revised QV2 included 'all psychiatric disorders' (schizophrenia, depression, anxiety, alcohol, drug, eating disorders, somatisation disorders, personality disorders, obsessive compulsive disorders, panic attack and bipolar disorder).

The QV2 was circulated to a panel of experts (GPs, psychiatrists, and clinical psychologists) within the academic departments of psychiatry, general practice and health psychology and to collaborators in Australia and the United Kingdom for comment. The QV2 was also redistributed to the original five GPs at South Auckland and distributed amongst a group of GPs attending seven consecutive continuing medical education courses on mental health issues in general practice (n=26). From this, further refinement took place.

Due to the widening of the scope from depression to 'all psychiatric disorders', a number of new questions were inserted regarding confidence in identifying and recognising 'psychiatric disorders' in their patient population. A wider range of pharmaceutical treatments were included, such as antipsychotics and mood stabilisers. A number of questions were reworded to correct ambiguity from recommendations from preliminary work. Additional sections were added looking at GP techniques on keeping up to-date with the medical literature, number of visitations by drug company representatives and comparisons made on the amount of continuing medical education (CME) between common physical disorders such as hypertension, diabetes, asthma and psychiatric disorders. Different types of CME strategies were investigated along with different types of dissemination processes. Questions regarding 'shared care' between primary and secondary services were inserted. The layout of the questionnaire was revisited and practice-site questions were put at the end of the questionnaire, with only important and relevant demographic questions placed at the beginning. Thus version 3 of the questionnaire emerged and was subsequently renamed as the *'Attitudes, Reported Confidence and Behaviour Questionnaire'* (ARCBQ).

Research suggests that patients with major depressive disorders in general practice have different aetiology, pathophysiology and natural history than those of psychiatric inpatients or outpatients

ARCBQ

The ARCBQ consisted of demographic data (i.e. age, gender) along with questions on medical training and specific training in mental health, practice site characteristics and specific questions about consultation involving patients with mental disorders.

Two items with Likert-type response involved questions around confidence in identifying, recognising and making assessments of mental disorders. Scoring ranged from 'not confident' through 'slightly confident' and 'somewhat confident' to 'very confident'. These questions originated from the GP self report questionnaire on knowledge, behaviour and attitudes on depression recognition and management[27] but was expanded upon to include 'psychiatric disorders' and not just depression. Three items looked at GP confidence in prescribing different types of medication for mental disorders with the same response range as above. Drug categories were taken from the GP self report questionnaire[27] and modified to be acceptable to New Zealand GPs.

Four items involved questions about perceived skill in providing different services to patients with mental disorders (i.e. counselling and education, making a diagnosis, prescribing medication, and making a referral). Similarly items were of a Likert-type response, with scores ranging from 'not skilled' through 'lightly skilled' and 'somewhat skilled' to 'very skilled.' These questions were taken from the GP self report questionnaire.[27]

Seven items explored factors that GPs felt limited their ability to recognise or provide optimal treatment for patients with mental disorders (e.g. limited visiting time, medical problems more pressing). Scoring ranged from 'does not limit', through 'limits somewhat', to 'limits a great deal.' The initial open-ended questions originated from a survey of 768 physicians of Maryland Academy of Family Physicians in Baltimore,[26] subsequent development of these categories were later derived from GP focus groups and semi-structured interviews.

Two questions explored the amount of time GPs spent consulting

with a specialist (i.e. psychiatrist) and keeping up-to-date with the literature for mental disorders in comparison to three common physical problems often presenting in general practice (diabetes, hypertension, arthritis). These questions developed from themes extracted during the preliminary phase of questionnaire development.

Four questions explored current practice in keeping up-to-date with the literature, and continuing medical education preference. GPs were asked to choose as many categories that applied. Categories were derived from feedback from focus groups, semi-structured interviews during the questionnaire development phase.

The final version of the ARCBQ contained 46 questions.

Evaluation of questionnaire

The investigators undertook three further pilots (2001–2003), all of which used convenience samples. Twenty-two GPs involved in a share-care programme were invited to complete the ARCBQ. A further eight GPs attending a continuing medical education course were asked to completed the ARCBQ, and finally 13 GPs already involved in another study with researchers were invited to complete the ARCBQ. A total of 43 GPs completed the ARCBQ. All GPs worked full-time and 39 of the 43 were members of an IPA.* The average age of GPs was 45 years (ranging from 34 through to 73), 25 were male and 18 female.

To assess the internal reliability of the questionnaire, whether items in each subscale seem to be measuring the same dimension, reliability was assessed using Cronbach's alpha.[28] This method of estimating reliability offers an alternative to test-retest methods which can be impractical when assessing views about specific issues, and it is frequently employed in questionnaire development. Cronbach's alpha is a summary correlation between all items in a scale and the scale total, the higher the coefficient, the greater the reliability of the instrument; .70 is generally the minimum considered acceptable.[29]

The coefficient of variation was determined for each item to indicate the degree of response variability. All convenience samples results from the three pilots were pooled as one sample for a reliability check, given the small numbers in each group.

Table 1. Perceived confidence scale

Confidence items	Item-total correl N=43
Confidence in identifying and recognising psychiatric disorders in my patient population	0.42
Confidence in making assessments and appropriate categorisation of psychiatric disorder	0.46
Confidence in prescribing psychotropic drugs	0.49
Confidence in prescribing antidepressant drugs	0.57
Confidence in prescribing antipsychotic drugs	0.55
Coefficient alpha	0.73

Response options:
Not Confident=1, Slightly confident=2, Somewhat confident= 3, Very confident=4

Table 2. Perceived confidence and skill scale

Confidence items	Item-total correl N=43
Confidence in identifying and recognising psychiatric disorders in my patient population	0.55
Confidence in making assessments and appropriate categorisation of psychiatric disorder	0.68
Skilled in providing counselling and education	0.43
Skilled in providing a diagnosis	0.78
Skilled in providing referrals	0.53
Skilled in providing medication	0.57
Coefficient alpha	0.81

Response options:
Not confident/Not skilled=1, Slightly confident/lightly confident=2, Somewhat confident/somewhat skilled=3, Very confident/very skilled=4

Content validity

Content validity was checked by ensuring that the items which made up the ARCBQ were initially established by content experts, that is, general practitioners themselves. The ARCBQ, throughout its preliminary development, underwent ongoing scrutiny and revision from a large panel of specialists in the area – GPs, psychiatrists, and clinical psychologists.

Results

Reported confidence and prescribing

Analysis of questions about reported confidence in relation to prescribing showed five items formed a single coefficient alpha=0.73, demon-

* Independent Practitioner Association (IPA): This is a voluntary ad hoc collection of GPs who come together to provide share management of resources and contracting with funding organisations.

strating reasonable internal consistency (Table 1).[28]

Reported confidence and skill

Analysis of questions about reported confidence and skill in relation to assessment and treatment showed six items formed a single factor (coefficient alpha=0.81) demonstrating good internal consistency (Table 2).[28]

Reported confidence in prescribing and skill level

Analysis of questions about reported confidence and skill in relation to assessment and treatment showed seven items formed a single factor (coefficient alpha=0.78) demonstrating good internal consistency (Table 3).[28]

Table 3. Prescribing and skill scale

Confidence items	Item–total correl N=43
Confidence in prescribing psychotropics drugs	0.51
Confidence in prescribing antidepressant drugs	0.64
Confidence in prescribing antipsychotic drugs	0.45
Skilled in providing counselling and education	0.31
Skilled in providing a diagnosis	0.60
Skilled in providing referrals	0.49
Skilled in providing medication	0.67
Coefficient alpha	0.78

Response options: Not confident/Not skilled=1, Slightly confident/lightly confident=2, Somewhat confident/somewhat skilled=3, Very confident/very skilled=4

Discussion

The questionnaire was designed to assess GP attitudes and reported confidence in the management of patients with mental disorders. The themes identified in the literature included GPs' perceived confidence in identifying, recognising, assessing and treating these conditions and GP attitudes and behaviour towards continuing medical education and keeping up-to-date with the literature.

In order to assess the content validity of the scale, a number of procedures were followed. The final ARCBQ covered all themes identified by the literature review, GPs' interviews, expert focus groups and questionnaires at the start of the study. Therefore the ARCBQ has good content validity with questions developed from a review of the literature, interview fieldwork, existing instruments, expert focus groups and GP comments.

Internal reliability of the ARCBQ ranged from reasonable to good internal reliability when assessed on its individual subscales. A Cronbach's alpha of 0.81 for reported confidence and skill in relation to assessment and treatment suggests that those GPs that were confident in identifying or making assessments of mental disorders also felt skilled in providing a diagnosis, and subsequently felt skilled in providing medication. A Cronbach's alpha of 0.78 for confidence in prescribing and skill level indicated not surprisingly that GPs that reported confidence in prescribing antipsychotics were also confident in prescribing psychotropics and subsequently felt skilled in providing medication. These results were anticipated, GPs' reported confidence in one area can predict confidence in another, and can be taken to indicate that the dimensions are internally consistent and also confirmatory of predictions.

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The instrument still has some weaknesses. Work is needed to assess its test-retest reliability and its generalisability; the GPs were convenience samples, some had a specific interest in mental health, and the sample size was small.

Once these concerns are dealt with, the questionnaire will have a variety of uses. As a research tool it could help estimate the number of patients presenting to their GP with mental disorders, the GP's perceived skill level in the management of mental disorders and could provide one means of studying ways to increase the knowledge and skill of GPs to be sufficiently prepared to manage the growing demand for mental health care in their practices. This topic has been intensively discussed in recent years looking at continuing medical education (CME),[30,31,32,33,34] information sources[35] and problem solving treatment in general practice.[36,37,38]

Future research with the ARCBQ on a large random sample of GPs would help shed light on issues regarding appropriate and desirable strategies for GP CME, GP concerns about referring and diagnosing, and ways in which GPs can treat and manage mental health problems within the general practice setting, with the long-term aim of providing needed appropriate training. Clearly there is work that could be done to understand fully the uses and limitations of the questionnaire, but we are confident that it will be useful to practitioners in its present form.

Appendix 1 DRAFT FOR DISCUSSION PURPOSES ONLY

General practitioner attitudes, reported confidence and behaviour questionnaire (ARCBQ)

UNIQUE IDENTIFIER ☐☐☐☐☐☐

1. What year did you complete your medical school training? — WRITE IN YEARS 1 9 ☐☐

2. How many years have you been in your current practice? — WRITE IN YEARS ☐☐

3. Is this your only practice site?
   - Yes 1
   - No 2

   If **No**, how many practice sites do you have?
   - Two 3
   - Three 4
   - Greater than three 5

4. What is your practice type?
   - Solo 1
   - Partnership 2
   - Group 3
   - Medical centre 4

5. Are you a member of an IPA?
   - Yes 1
   - No 2

   If **Yes**, which IPA?

   _____

   _____

   _____

6. How many patients comprise your practice? ☐☐☐☐

7. How many patients do you see on average in one week? ☐☐☐☐

8. What percentage of your patients have community services cards? _____ %

9. Are you in full-time or part-time practice?
   - Full-time 1 *(5-tenths or more in regular general practice)*
   - Part-time 2 *(less than 5-tenths in regular general practice)*

10. What are your major areas of interest? (e.g. paediatrics, gynaecology, sports medicine)
    - i.
    - ii.
    - iii

11.	Do you have a specific interest in mental health/counselling?	Yes	1
		No	5
12.	Have you had any previous mental health training?	Yes	1
		No	5

If **Yes**, please specify

13.	For new visits, how long on average (minutes) does a patient visit with you?	WRITE IN MINUTES	☐☐
14.	For follow-up visits, how long on average (minutes) does a patient visit with you?	WRITE IN MINUTES	☐☐
15.	How many of your consultations (per week) involve patients with a psychiatric disorder?	WRITE IN MINUTES	☐☐

(Circle one number on each line)

16.	How confident are you with identifying and recognising psychiatric disorders in your patient population?	Not Confident	Slightly Confident	Somewhat Confident	Very Confident
		1	2	3	4
17.	How confident are you with making assessments and appropriate categorisation of psychiatric disorders?	Not Confident	Slightly Confident	Somewhat Confident	Very Confident
		1	2	3	4

18. What diagnostic criterion do you use to make a diagnosis of a psychiatric disorder?

☐ DSM IV ☐ ICD-10 ☐ Other

If **Other**, Please specify

19.	How confident are you at prescribing psychotropic drugs?	Not Confident	Slightly Confident	Somewhat Confident	Very Confident
		1	2	3	4
20.	How confident are you at prescribing antidepressant drugs?	Not Confident	Slightly Confident	Somewhat Confident	Very Confident
		1	2	3	4
21.	How confident are you at prescribing antipsychotics?	Not Confident	Slightly Confident	Somewhat Confident	Very Confident
		1	2	3	4
22.	How skilled do you think you are in providing the following services for psychiatric patients?	Not Skilled	Slightly Skilled	Somewhat Skilled	Very Skilled
	Counselling and education	1	2	3	4
	Diagnosis	1	2	3	4
	Medication	1	2	3	4
	Referral	1	2	3	4

23. How many times during the past year did you talk to a specialist (face to face or by telephone) about the treatment of patients with the following conditions?

Diabetes	☐☐	
Hypertension	☐☐	
Arthritis	☐☐	
Psychiatric disorder	☐☐	
Please specify →	Depression	☐
	Anxiety	☐
	Schizophrenia	☐
	Bipolar	☐
	Drug/alcohol problems	☐
	other	☐

24. Do you feel that you need to change or improve the way you evaluate and manage patients with psychiatric disorders?

(Circle one)

Definitely

Probably

Maybe

No

25. The following items are factors that clinicians report **limit** their ability to recognise or provide optimal treatment for psychiatric disorders. How much does each factor limit your ability to provide 'optimal' psychiatric treatment for your patients?

	Does Not Limit	Limits Somewhat	Limits Moderately	Limits a Great deal
a. Patient or family reluctance to accept diagnosis or treatment	1	2	3	4
b. Medical problems were more pressing	1	2	3	4
c. Preferred medication difficult to obtain	1	2	3	4
d. Mental health professionals not available	1	2	3	4
e. Limited visit time for counselling/education	1	2	3	4
f. Inadequate time for me to provide follow-up	1	2	3	4
g. Poor reimbursement or patient insurance limitations	1	2	3	4

26. When you encounter a mental health problem that you cannot answer, what sources of information do your rely on or frequently use? **Please circle all those that apply**.

A Discussions with general practitioner colleagues

B Review articles in journals

C Medical text books

D Pocket notes

E CME courses

F Computer aided literature searches

G Clinical practice guidelines

H Other _____

27. About how much time during the **past six months** have you actively participated in continuing medical education (CME) specifically for the care of **patients with psychiatric disorders**?

TOTAL NUMBER OF HOURS _____

28. How many articles about each of the following topics have you read in the past six months?

Diabetes		☐☐
Hypertension		☐☐
Arthritis		☐☐
Psychiatric disorder		☐☐
Please specify →	Depression	☐
	Anxiety	☐
	Schizophrenia	☐
	Bipolar	☐
	Drug/alcohol problems	☐
	other	☐

29. How many times during the past six months have you been visited by a pharmaceutical company representative about medications for each of the following?

Diabetes		☐☐
Hypertension		☐☐
Arthritis		☐☐
Psychiatric disorder		☐☐
Please specify →	Depression	☐
	Anxiety	☐
	Schizophrenia	☐
	Bipolar	☐
	Drug/alcohol problems	☐
	other	☐

30. What type of strategies do you find most effective to keep up-to-date with the management of patients with mental health problems? Please circle appropriate letters.

- A Educational materials (articles in journals, printed educational material, drug bulletins, educational brochures)
- B Formal CME programmes (conferences, seminars, workshops)
- C Audit and feedback (review of the performance of a health care provider and the provision of this information to the provider)
- D Reminders (brief notes embedded in computer information systems or prompt cards to remind clinicians of information and/or desired actions)
- E Academic detailing (one on one visit by a professional educator to provide information to practitioners)
- F Guidelines
- G Other

31. If you had the choice of how CME materials were to be delivered on mental health, what would you find most effective? Please circle appropriate letters.

A	Via post
B	One on one visits by an academic detailer
C	CME Internet website where information could be downloaded when required
D	Reminders (brief notes embedded in computer information systems or prompt cards to remind clinicians of information and/or desired actions)
E	Formal CME programmes
F	Other

Finally, we need a few facts from you.

32. What is your date of birth? ☐☐ Month ☐☐ Day ☐☐ Year

33. What is your gender? Male Female

34. Does your clinic have access to computers during the consultation? Yes No

35. Do you use specialised computer software? Yes No
(such as; Medtech, GP Dat, Health tech, Houston etc.)

If **Yes**, please specify the type of software

_____

36. Does your clinic have access to email? Yes No

37. Does your clinic have access to the Internet? Yes No

38. Not counting interruptions how many minutes has it taken you to complete this questionnaire? ☐☐

THANK YOU FOR YOUR PARTICIPATION

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