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District nursing staff and depression: A psychometric evaluation of Depression Attitude Questionnaire findings

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ABSTRACT

Background

Mental health problems such as depression are common in primary care settings and patients with chronic medical problems are at an increased risk. This co-morbidity suggests that district nursing services are particularly likely to encounter psychological problems in their patients. Mental health problems are poorly recognised and inadequately treated in primary care. In part this may be due to stigmatising views of mental illness, which negatively influence help-seeking and user experiences. Likewise providers' attitudes are likely to play a significant part in the management of such problems.

Objectives

The aims of this study were extend knowledge of district nursing staff attitudes to depression and explore the psychometric properties of a depression attitude measure used with this staff group.

Design and settings

The Depression Attitude Questionnaire (DAQ) was used within a postal questionnaire survey of district nursing services in three areas, Jersey (Channel Islands), Lewisham, and Hertfordshire.

Participants

All staff (community nurses, district nurses and home care staff) were contacted; 217 (66%) staff responded to the survey, and 189 (57%) completed the DAQ.

Results

Three factors were derived from the DAQ accounting for 47% of the variance. The factor solution appeared stable and provided meaningful dimensions, however the internal consistency of the measure and of its derived subscales was low (Cronbach's α between 0.59 and 0.64). The factors were labelled pessimism about depression and its treatment, tendency to defer to specialists, and professional ease in working with depressed patients. Staff responses revealed generally optimistic views concerning depression treatment, strongly rejecting deterministic attitudes to this condition.

Conclusions

The DAQ has been widely employed to measure and compare attitudes of staff from various disciplines and specialisms. The current evaluation has provided a more detailed examination of its psychometric properties than previously available, but low internal consistency levels indicate further examination of this area is warranted.

Keywords Attitudes; Mental illness; Education and practice development; District nursing; UK

What is already known about the topic?

- Unhelpful attitudes to mental problems are widespread.
- Attitudes are an important determinant of carer behaviour and client outcome.
- The DAQ has been previously employed to examine attitudes of medical and nursing staff.

What this paper adds

- Comparison of the attitudes of district nursing staff with those of other staff reveals a shared rejection of negative assumptions.
- Factor analysis of DAQ results has yielded a meaningful model, which appears robust and is supported by the findings of other studies.

1. INTRODUCTION

Depression and anxiety are common in primary care settings and likely to coexist with conditions for which general medical and nursing care is delivered. These disorders impact significantly on other aspects of health and health care utilisation (Katon et al, 2003) and are a leading cause of disability.

There has been growing recognition of primary care as the key domain for the management of common mental disorders—the vast majority of which are treated exclusively in this setting, with only around 10% of cases referred to specialist secondary services (Goldberg and Huxley, 1992). This has been accompanied by an increasing appreciation of the strengths of a primary care approach to these problems, based on sector characteristics of continuity, integration, and experience managing complex combinations of problems (Lester et al, 2004).

A consistent theme in studies of mental disorder in primary care has been their under-recognition and inadequate treatment (Tiemens et al, 1999). This is a complex area involving a variety of interlinked factors—notably attitudes and attributes of the professional and of the patient, as well as aspects of the consultation and the setting (Maginn et al, 2004; Boardman, 1987).

Stigma and discrimination are particularly evident in relation to mental disorders, with surveys indicating these negative opinions to be widespread and commonly held, exerting negative influences on help-seeking and contributing to sufferers' isolation and distress (Crisp et al, 2000). Studies conducted in several countries have identified embarrassment to consult for depression and the perception that it is a sign of weakness (Halter, 2004; Goldberg and Huxley, 1992; Paykel et al, 1998), together with negative views of treatments (Angermeyer and Matschinger, 1996). Negative public responses to depression include anger, fear and irritation and the desire for social distance from sufferers (Angermeyer and Matschinger, 2004; Link et al, 1999). It seems likely that this stigmatisation of mental illness is a major barrier to care and a key cause of poor recognition and treatment (Sirey et al, 2001).

The attitudes and beliefs of healthcare professionals to the mental health problems of their patients are of central importance, playing an implicit role in processes of communication, engagement, and treatment decisions. Patients base their evaluations of clinicians on the quality of the talking and listening within the clinical encounter, and they rate professionals' attitudes as very important to their care (Rogers et al, 2001). Understanding problems, supporting and encouraging, recognising depression, believing symptoms are real, and making the patient feel comfortable, are considered by patients to be most important provider characteristics (Cooper et al, 2000). Conversely, negative attitudes to psychological problems will add to patients' experience of stigma and discrimination (Hugo, 2001), with consequent adverse effects on outcomes (Link et al, 2001).

Studies that have examined staff attitudes have predominantly focussed upon medical students and doctors, revealing attitudes similar to those of the general population, in that schizophrenia and addiction attracted most negative views, although medical staff generally considered sufferers of mental illness less to blame for their problems and held notions of greater treatability (Kingdon et al, 2004).

General practitioner's (GP's) attitudes to depression have been a particular focus of research attention with findings suggesting relations between particular attitude factors and inclinations to note symptoms, willingness to actively engage in particular treatments, and the prescription of medications (Ross et al, 1999; Richards et al, 2004).

There have been fewer studies of the attitudes of non-medical staff. Jorm and colleagues (1999) examined attitudes of psychiatrists, GPs, clinical psychologists and members of the public, finding more pessimistic views of prognosis among health professionals than the general public. This finding was replicated in studies of mental health nurses' attitudes (Caldwell and Jorm, 2000; Hugo, 2001). This may be because much of health professionals' work is with patients at the more severe end of the spectrum, with staff views about outcome influenced by this contact with more chronic and recurrent conditions. Payne and colleagues (Payne et al, 2002) explored the attitudes of nurses working in a 24-hour nurse-led telephone advice service (NHS Direct) noting that these differed in several areas from those of GPs, with the latter more positive about both the ability of nursing staff to manage depression and the role of antidepressants in treatment. A further study of medical and

nursing staff's attitudes to depression in an older medical inpatients identified a reluctance to be involved in this area of care (Waller and Hillam, 2000).

The role of primary care staff in managing mental health problems is expanding (Department of Health, 1999; Department of Health, 2001). Mental health problems are likely to be especially prevalent among the patients of district nursing services, as the combination of older age and disabling physical conditions that characterise many of their patients are important determinants of depression and other common mental disorders. District nursing teams include district nurses, community staff nurses and home care assistants. Relatively little work has focussed on this professional group's views on depression and the potential impact of their attitudes on care.
The following report is part of a larger survey (Haddad et al, 2005) concerning district nursing teams' involvement with mental health work and associated training needs. The aims of this part of the study were:

(i) To examine attitudes of district nursing service staff to depression using a relevant measuring instrument, the Depression Attitude Questionnaire—DAQ (Botega et al, 1992);
(ii) To determine any pattern of underlying attitude factors for this staff group;
(iii) To explore the relationship between attitude factors and particular staff attributes.

2. METHOD
2.1. DESIGN
The study employed a cross-sectional survey design; a detailed description of methods is reported elsewhere (Haddad et al, 2005). In brief, all 331 staff of district nursing services from three geographically distinct settings - Lewisham (n=101), Hertfordshire (n=78), and Jersey (Channel Islands) (n=152) - were sent a questionnaire incorporating the DAQ. Reminder and repeat mailings to non-respondents were carried out after 3-weeks. Ethical approval was sought and obtained from the appropriate committees.

2.2. MEASURE
The DAQ was designed to examine GPs' attitudes to depressive illness (Botega et al, 1992), encompassing their conceptualisation of the disorder, experience of working with depressed patients, and views on different types of treatment. It is a self-report measure comprised of 20 items (*Table 1*) scored on a 100mm visual analogue scale between *'strongly disagree'* (0 mm) and *'strongly agree'* (100 mm), developed from a random sample of 72 UK GPs. Although originally developed for use with GPs and subsequently used in published studies of this staff group in UK countries, Australia, Denmark, the Russian Federation, Brazil and Zimbabwe, the DAQ has been usefully employed with NHS Direct nurses (Payne et al, 2002), practice nurses (Naji et al, 2004), in-patient staff (Waller and Hillam, 2000), and psychiatrists (Kerr et al, 1995). Internal reliability measures of all 20 DAQ items responses in the current survey revealed a Cronbach's α coefficient of 0.68 (95% confidence intervals (C.I.) 0.60–0.76); removal of the first item as indicated by the questionnaire authors and subsequent studies resulted in a more acceptable level of reliability of 0.70 (95% C.I. 0.63–0.77). Previous factor analyses of DAQ findings have provided 3-, 4- and 5-factor solutions. Only three prior studies report the variance (between 42% and 52%) accounted for by these models. No prior studies report measures of scale internal consistency.

2.3. STATISTICAL ANALYSIS
Data were analysed using SPSS™ (Version 12). Mean scores and 95% C.I. were calculated for demographic data and DAQ items. Principal components analysis (PCA) using scree plots and varimax rotation was employed to determine attitude factors from DAQ responses. Multiple regression was used to explore relationships between staff characteristics and attitude variables. Additionally (and as in prior work) DAQ items were divided into categories—disagree (0–33 mm), neutral (34–67 mm), agree (68–100 mm)—for ease of presenting summary findings (Oladinni, 2002; Ross et al, 1999; Thornett et al, 2001).

3. RESULTS
3.1. SURVEY RESPONSE AND DEMOGRAPHICS
The overall response rate was 66% ($^{217}/_{331}$). This varied between the surveyed areas, but differences between sites were not statistically significant. Nearly half (106) of the respondents were based in Jersey, and least from Hertfordshire (48).

Most respondents were female (98%) and white (88%); other ethnic groups were solely from the Lewisham area, where 40% ($^{25}/_{62}$) of respondents were black or of other non-White ethnic groups. Sixty eight per cent of respondents were district nurses or community staff nurses, the rest being home care workers (non-registered staff). The mean age of respondents was 44.7 years (range 24–64 years; SD=9.3), and registered nursing staff were slightly younger (mean=42.8, SD=8.6) than home care workers (mean=48.5 years, SD=9.4), this difference being statistically significant ($P<0.001$).

Table 1: Responses to DAQ: numbers (percentage) of district nursing team staff expressing agreement with individual statements

Statement	Agree	Neutral	Disagree
1. During the last five years, I have seen an increase in the number of patients presenting with depressive symptoms	77 (43)	79 (44)	22 (12)
2. The majority of depression seen in general practice originates from patients' recent misfortunes	62 (33)	80 (43)	42 (23)
3. Most depressive disorders seen in general practice improve without medication	24 (13)	89 (49)	68 (38)
4. An underlying biochemical abnormality is at the basis of severe cases of depression	59 (33)	94 (53)	24 (14)
5. It is difficult to differentiate whether patients are presenting with unhappiness or a clinical depressive disorder that needs treatment	42 (41)	69 (38)	38 (21)
6. It is possible to distinguish two main groups of depression: one psychological in origin and the other caused by biochemical mechanisms	48 (28)	97 (56)	28 (16)
7. Becoming depressed is a way that people with poor stamina deal with difficulties	26 (14)	37 (20)	121 (66)
8. Depressed patients are more likely to have experienced deprivation in early life than other people	33 (18)	55 (30)	96 (52)
9. I feel comfortable in dealing with depressed patients' needs	58 (31)	54 (29)	73 (40)
10. Depression reflects a characteristic response in patients, which is not amenable to change	26 (15)	61 (35)	87 (50)
11. Becoming depressed is a natural part of being old	9 (5)	9 (5)	167 (90)
12. The district (community) nurse could be a useful person to support depressed patients	111 (60)	45 (24)	29 (16)
13. Working with depressed patients is heavy going	118 (64)	21 (39)	27 (15)
14. There is little to be offered to those depressed patients who do not respond to what GPs do	37 (20)	43 (23)	106 (57)
15. It is rewarding to spend time looking after depressed patients	69 (38)	82 (45)	32 (17)
16. Psychotherapy tends to be unsuccessful with depressed patients	19 (12)	73 (44)	73 (44)
17. If depressed patients need antidepressants, they are better off with a psychiatrist than with a general practitioner	77 (42)	61 (33)	46 (25)
18. Antidepressants usually produce a satisfactory result in the treatment of depressed patients in general practice	52 (29)	93 (52)	35 (19)
19. Psychotherapy for depressed patients should be left to a specialist	121 (67)	44 (24)	15 (8)
20. If psychotherapy were freely available, this would be more beneficial than antidepressants, for most depressed patients	94 (53)	68 (38)	15 (9)

Visual analogue scale 0–100 mm, divided for summary presentation: disagree (0–33 mm), neutral (34–67 mm), agree (68–100 mm). Row totals range between 165 and 187 due to missing or invalid responses to DAQ items.

3.2. PCA
Staff responses to individual DAQ items are summarised in *Table 1*. Twenty-eight respondents either did not complete any DAQ items or produced invalid responses, and for 47 additional staff one or more of the 20 items was missing or invalidly completed. The missing response data were handled by pair-wise deletion. The DAQ responses as readings in mm were subjected to exploratory factor analysis. Initial examination of the shared variance between (19 items) DAQ responses revealed a Kaiser–Meyer–Olkin (KMO) measure of sampling adequacy of 0.60 and significant Bartlett's Test of Sphericity ($P<0.001$), demonstrating adequacy of the sample to provide stable factor solutions. The number of respondents (n=189) meets the standard requirement of 5 to 10 subjects for each item.

Firstly, any item exhibiting individual measure of sampling adequacy of less than 0.5 was excluded: this applied to item 3. PCA was used to examine the correlation patterns within responses: seven components were found to have eigenvalues greater than unity, the highest values being 2.92, 1.95 and 1.59, with the remainder less than 1.30.

The scree plot (*Figure 1*) was examined and indicated a levelling at the fourth component point, so a three-factor solution was employed, and orthogonal (varimax) rotation was applied to the extracted factors. Item loadings were mostly strong and unambiguous. Exclusion of items with weak (<0.35) (Nunnally and Bernstein 1994) or complex loadings (to ensure that items exclusively contributed to

particular dimensions), together with consideration of the relevance of item statements to emergent factors, indicated the retention of 12 items for optimal solution.

Fig. 1: Scree plot for DAQ items (1 and 3 excluded).
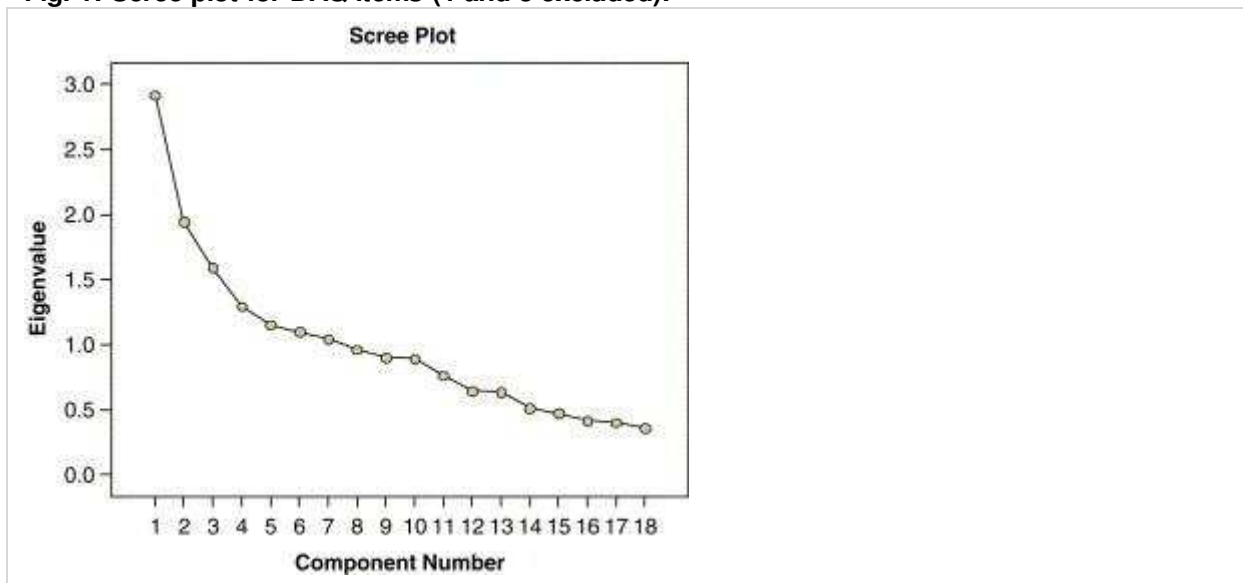
The three-factor model explained 47.2% of the variance. Factor 1 accounted for 17.9% of the variance and was comprised of 6 of the 12 items (7, 8, 10, 11, 14, & 16), with loadings ranging from 0.38 to 0.71. Factor 2 (items 9, 12, & 15) and Factor 3 (items 17, 19, & 20) respectively explained 14.9% and 14.4% of the variance. Typically (Kline, 1994) item loadings for these factors were higher than for the first factor, ranging between 0.68 and 0.78. The magnitudes of the eigenvalues, proportions of variance, and factor loadings are reported in *Table 2*.

Table 2: Rotated Component Matrix for the DAQ (12 items)[a]

Item no.	Item statement	Component		
		1	2	3
7	Becoming depressed is a way that people with poor stamina deal with difficulties	**.707**	−.039	.040
8	Depressed patients are more likely to have experienced deprivation in early life than other people	**.681**	.087	−.011
10	Depression reflects a characteristic response in patients, which is not amenable to change	**.740**	.012	−.133
11	Becoming depressed is a natural part of being old	**.470**	.098	.022
14	There is little to be offered to those depressed patients who do not respond to what GPs do	**.447**	.091	.132
16	Psychotherapy tends to be unsuccessful with depressed patients	**.380**	−.029	.289
9	I feel comfortable in dealing with depressed patients' needs	.132	**.726**	−.112
12	The district (community) nurse could be a useful person to support depressed patients	−.084	**.749**	.156
15	It is rewarding to spend time looking after depressed patients	.186	**.776**	−.079
17	If depressed patients need antidepressants, they are better off with a psychiatrist than with a general practitioner	.134	−.237	**.722**
19	Psychotherapy for depressed patients should be left to a specialist	.003	.028	**.759**
20	If psychotherapy were freely available, this would be more beneficial than antidepressants, for most depressed patients	−.009	.111	**.681**
% Variance		17.9	14.9	14.4
Eigenvalue		2.2	1.8	1.7

Extraction method: principal component analysis. Rotation method: Varimax with Kaiser normalization.
Rotation converged in 4 iterations

Comparison was made between different methods of rotation of the factor solution, using an oblique rotation (Direct Oblimin) as well as the orthogonal method. This revealed an identical pattern of underlying factors with very similar eigenvalues and item loadings.

The replicability of the factor structure was examined by repeating the PCA procedure in random split halves of the study sample. The structure appeared stable with similar three factor solutions evident in both groups of subjects.
Coefficients of reliability were calculated for the subscales derived from factor analysis. The levels of internal consistency or correlations between individual DAQ items were moderate to low for all three of the attitude components, with Cronbach's α values of 0.64 for the first and second factors, and 0.59 for the third. The value for the 12-item scale as a whole was 0.62. A Cronbach's α reliability statistic of 0.65 or 0.70 is generally considered as the minimum acceptable criterion of instrument internal reliability (Bland and Altman, 1997).

Repetition of the PCA procedure with analysis restricted to registered nursing staff resulted in a similar three-factor structure, which explained 48% of the shared variance. Factor 1 was comprised of items 7, 8, 10, 11, 14, accounting for 18.8% of the variance; Factor 3 involved items 13,17, 19, 20 (16.5% variance); and Factor 2 was made up the same statements as in the total subject analysis (12.6% variance).

3.3. ATTITUDE COMPONENTS
The three attitude components produced by varimax rotation are shown in *Figure 2*, with the extent of agreement with the combined item statements shown (the summated mean is divided by the number of items to enable comparability), 0mm representing complete disagreement with the constituent statements and 100 mm full agreement.

Figure 2: Mean scores with 95% confidence intervals for the 3 Attitude Components (combined statement scores), scores are derived from a 100 mm visual analogue scale ranging from 0 mm (strongly disagree) to 100 mm (strongly agree).
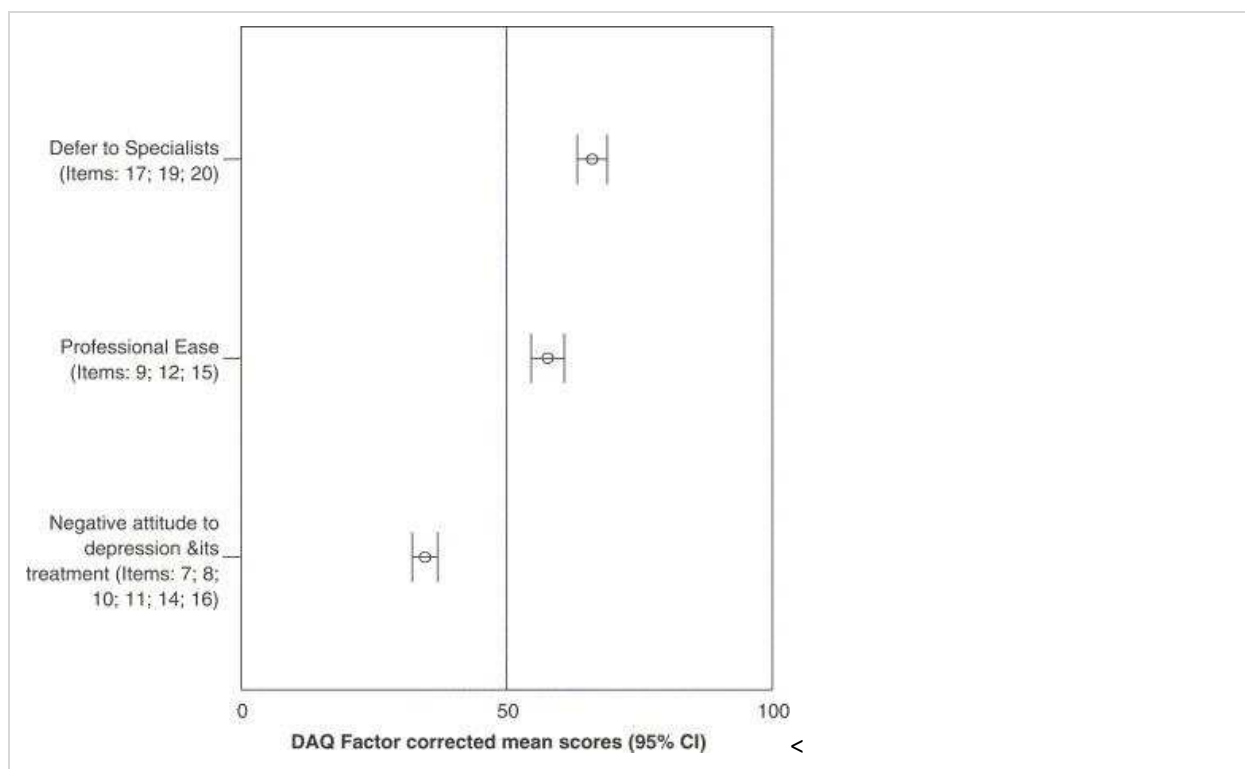
3.4. Attitudes to depression indicated by DAQ items and components

Staff responses to individual DAQ items are shown in summary form in *Table 1*. Most disagreement was associated with statements encapsulating negative stereotypical views of depression and a pessimistic outlook on treatment and illness course. These items (7; 8; 10; 11; 14; 16) are grouped as *Component 1 - Negative attitude to depression and its treatment*, with staff responses determining a mean value of 34.6 mm (95% C.I. 32.2–36.9 mm). Of the individual items, disagreement was most pronounced for the statements interpreting depression as a natural consequence of ageing (item 11)—rejected by 90% of respondents (item mean=18.1mm, 95% C.I. 15.2–20.9 mm), as indicative of a lack of stamina on the sufferer's part (item 7, mean=31.9 mm, 95% C.I. 27.9–35.9 mm), and that little can be offered in addition to GP care (item 14, mean=37.4 mm, 95% C.I. 33.2–41.7 mm). None of the measured variables appeared significantly associated with this attitude component.

Component 2: Professional ease (*items:* 9; 12; 15): Agreement (higher scores) with the selected items indicated that staff felt their work with depressed patients to be appropriate and rewarding. Most substantial agreement was with the statement that community nurses may provide useful support (item 12, mean=67.2 mm, 95% C.I. 63.2–71.3 mm). The overall component mean was 57.7 mm (95% C.I. 54.6–60.8 mm). Stepwise multiple regression—with missing data managed by pair-wise deletion—indicated that after controlling for other variables (age, site, ethnicity, time in practice), professional ease was more apparent among care assistants than registered nursing staff (β=0.43; P<0.001) and among staff who had attended any course relating to mental health during the previous 5 years (β=0.16, P=0.04) These two predictor variables explained 17% of the variance in this attitude component ($F_{2, 139}$=15.21, P<0.001).

Component 3: Tendency to defer to specialists was comprised of items: 17, 19 and 20. Responses showed agreement with this group of statements that specialist management and psychotherapy are appropriate for the management of depression, with psychological therapy very clearly regarded as an area best confined to specialist practitioners (item 19, mean=73.6 mm, 95% C.I. 70.2–77.1 mm). The overall component mean was 66.1 mm (95% C.I. 63.3–68.9 mm). Stepwise multiple regression revealed a small but significant association between this attitude and both increased time spent in practice (β=0.21, P=0.01) and non-White ethnicity (β=0.18, P=0.03). Only 8.3% variance was explained by this model ($F_{2, 133}$=6.05, P=0.003).

4. DISCUSSION
4.1. STUDY LIMITATIONS

There are a number of limitations that need to be taken into consideration when interpreting the results of this study. The concept of 'attitude' is inherently complex, being comprised of cognitive and emotional elements, as well as behavioural components. Given that attitudes involve knowledge, belief, affective response, and prior experience, and that they provide such varied functions as value expression, maintenance of esteem and group membership, the appropriateness of their measurement using a brief self-report instrument might be questioned. However, this approach is the most pragmatic available, making feasible the systematic measurement of an important aspect of human activity. The application of appropriate standardised measures has clear benefits in enabling comparison between subject groups (such as public and professionals, and different professional groups) and different settings as well as across time (which, for instance, can enable evaluation of changes consequent upon education).

Certain questions concerning the validity of the DAQ as a measure of attitude in nursing and home care staff are not directly addressed by the study design: a more complete validation study of the attitude factors and ratings evident in this staff group would require examination of their relation to the results of other measures (alternative self-report instruments or findings obtained from interview), and more importantly the extent to which DAQ scores are associated with and predict relevant external criterion variables as assessed by independent informants or methods.

The current work does however provide indications of the underlying components of the DAQ for this staff group; and the stability of factor structure found across the respondent group (home care staff and registered nurses) provides support for the construct validity of this scale. Moreover, comparison of the derived factors with those found in prior studies with other professional groups indicates key areas of similarity, providing further support for this measure's validity (see *Table 3*).

Table 3: Relationship between DAQ components extracted by factor analyses

Attitude factors (Botega et al, 1992)	Items and loading	Attitude factors (Ross et al, 1999)	Items and loading	Attitude factors (Payne et al, 2002)	Items and loading	Attitude factors (Haddad et al, current)	Items and loading
GPs: *n*=72		GPs: *n*=407		NHS Direct nurse advisers: *n*=527		District nurses and home care staff: *n*=217	
Preference for antidepressants/ biochemical model over psychotherapy	4, 7, 16, and 18 positive 3 and 20 negative	Social model of depression: arises from life events, intervention may not be required	2, 3, 8, and 12 positive	Preference for antidepressant treatment over psychotherapy	18 positive, 3 and 20 negative		
Professional unease with depressed patients: uncomfortable, unrewarding, better with specialist	13 and 19 positive 9 and 15 negative	Professional confidence in dealing with and treating depressed patients	9, 15, 18, and 20 positive 13 negative	Positive attitude to nurse's role with depressed patients	2, 4, 9, 12 and 15 positive	Positive attitude to nurse's role with depressed patients	9, 12 and 15 positive
Inevitable course of depression, pessimism about modifying illness course	8, 10 11 and 17 positive	Inevitable course of depression	10, 11, 14, 16 and 17 positive	Depression treatment seen as unrewarding and unsuccessful	7, 8, 10, 11, 13, 14 and 17 positive and 15 negative	Pessimism about depression and lack of confidence in its treatment	7, 8, 10, 11, 14 and 16 positive
Identification of depression: lack of confidence in recognition or additional treatments	2, 5 and 14 positive			Identification of depression: lack of confidence in recognition	5 positive		
				Specialist psychotherapy regarded as appropriate for depression	19 and 20 positive	Tendency to defer to expert authority	17, 19 and 20 positive

There may be questions about the durability of staff attitudes to illness, but as this study relies upon single source of information (DAQ) at a single point in time, it provides no elucidation in this area. Future work employing longitudinal designs will be needed to increase knowledge as to the durability and malleability of these attitudes as well as to the test-retest reliability of the measure.

A further limitation may be response bias. Those completing the survey are likely to have differed from the non-respondents. It is probable that those who did not participate in the survey were less interested in mental health and this could in part account for the optimistic results found in this study. It was not possible in this study to determine whether non-respondents differed significantly from respondents in terms of their demographic characteristics. However the response rate was similar to that found in similar studies conducted in primary care (Ross et al, 1999). Missing values analysis for DAQ items indicated that home care staff were less likely to complete the questionnaire; but selected analysis of responses by staff group indicated that this is likely to have had only limited effect on overall findings.

4.2. KEY FINDINGS
Despite these limitations the results from this study provide a useful insight into the attitudes of district nursing staff to depression, as well as a considered analysis of the characteristics and factor structure

of the DAQ when used with this staff group. Prior studies employing the DAQ have provided insufficient detail of the instrument's psychometric properties, with internal reliability measures for the questionnaire and its subscales lacking in the published works, and with some reports neglecting to provide indication as to the particular items comprising the factors derived from the measure.

This report has provided explicit detail concerning the process of factor analysis. The number of factors described in this paper differs from an earlier paper, which presented a four-factor solution based on an initial analysis of this sample (Haddad et al, 2005). The solution presented herein involves a more parsimonious view of the measure components, with items indicating a negative view of depression combined with those revealing a pessimistic view of treatment and outcome. These different solutions also indicate the extent of the role of judgement and interpretation in the conduct of such analysis. Internal reliability values for the measure and derived components were found to be marginally lower than conventionally acceptable levels. This is both a reflection of the breadth of related areas noted by the questionnaire items, and a function of the (sub)scale length.

This factor analysis of DAQ responses yielded attitude factors broadly similar to those identified in studies using this measure with other professional groups. As may be seen in *Table 3*, the common attitude factors relate to:
- treatment orientation and confidence in treatment types;
- professional confidence and ease in managing the needs of depressed patients;
- beliefs concerning the inevitability of depression and its malleability.

Additional factors concerning the identification of depression and employment of specialist approaches have been identified by some studies.

Differences in individual DAQ items and attitude factors are evident between professional groups. In general, GP responses have indicated greater ease and sense of reward in their working with depressed patients than nurses (Botega et al, 1992; Kerr et al, 1995). In this study, staff rated these areas less highly, but indicated more ease than did NHS Direct nursing staff responses (Payne et al, 2002).

Previous studies have indicated that GPs strongly disagree with the notion that depressed patients are better managed by specialists (Botega et al, 1992; Kerr et al, 1995; Ross et al, 1999), this view seemingly shared to a lesser extent by NHS Direct nursing staff (Payne et al, 2002). However the merit of specialist treatment was strongly endorsed by staff responses in this study.

Rejection of ageist attitudes to depression was identified in the responses of all groups surveyed with the DAQ, this statement attracting most disagreement of all items by both nurses and doctors, with very similar levels apparent.

5. CONCLUSION
Primary care has become the key domain for the management of common mental health problems. GP roles have been extended to include needs assessments, commissioning and the development of community services. Nursing staff too are increasingly becoming involved in the assessment and management of these conditions. Their attitudes about common mental health problems are potentially an important determinant of the clinical care patients receive. This is the first study we are aware of to explore attitudes to depression in district nursing staff using a validated measure.

District nursing staff have the potential to play a vital role in the management of depression, not only in recognition but also within a chronic or stepped care management model. Knowledge of their attitudes is important in determining how best they may be supported in such roles. This study has demonstrated that these staff have a generally positive attitude towards depression and their role in its management. It also highlights potential areas for training and education such as the management options available for patients suffering from depression. It remains necessary to determine whether these attitudes actually affect clinical practice and whether particular attitudes are associated with the recognition and management of depression in this professional group. These are important areas for further research.

REFERENCES

Angermeyer MC, Matschinger H (1996) Public attitude towards psychiatric treatment. *Acta Psychiatrica Scandinavica 94 (5):326–336.*

Angermeyer MC, Matschinger H (2004) Public attitudes to people with depression: have there been any changes over the last decade? *Journal of Affective Disorders 83 (2-3)177–182.*

Bland JM, Altman DG, (1997) Cronbach's alpha. *BMJ 314 (7080):572.*

Boardman AP (1987) The General Health Questionnaire and the detection of emotional disorder by General Practitioners. A replicated study. *British Journal of Psychiatry. 151:373–381.*

Botega N, Mann A, Blizard R, Wilkinson G (1992) General Practitioners and depression—first use of the Depression Attitude Questionnaire. *International Journal of Methods in Psychiatric Research 2:169–180.*

Caldwell T, Jorm AF (2000) Mental health nurses' beliefs about interventions for schizophrenia and depression: a comparison with psychiatrists and the public. *Australian & New Zealand Journal of Psychiatry 34 (4):602–611.*

Cooper LA, Brown C, Vu HT, Palenchar DR, Gonzales JJ, Ford DE, Powe NR (2000) Primary care patients' opinions regarding the importance of various aspects of care for depression. *General Hospital Psychiatry 22 (3):163–173.*

Crisp AH, Gelder MG, Rix S, Meltzer HI, Rowlands OJ (2000) Stigmatisation of people with mental illnesses. *British Journal of Psychiatry 177:4–7.*

Department of Health (1999) A National Service Framework for Mental Health. www.doh.gov.uk/nsf/mentalhealth.htm.

Department of Health (2001) Mental health national service framework (and the NHS plan) workforce planning, education and training underpinning programme: adult mental health services: final report by the Workforce Action Team—special report (primary care). http://www.publications. doh.gov.uk/mentalhealth/watspecialreport.pdf.

Goldberg D, Huxley P (1992) Common Mental Disorders: A Bio-Social Model. Routledge, London.

Haddad M, Plummer S, Taverner A, Gray R, Lee S, Payne F, Knight D (2005) District nurses' involvement and attitudes to mental health problems: a three-area cross-sectional study. *Journal of Clinical Nursing 14:976–985.*

Halter MJ (2004) The stigma of seeking care and depression. *Archives of Psychiatric Nursing 18 (5):178–184.*

Hugo M (2001) Mental health professionals' attitudes towards people who have experienced a mental health disorder. *Journal of Psychiatric and Mental Health Nursing 8:419–425.*

Jorm AF, Korten AE, Jacomb PA, Christensen H, Henderson S (1999) Attitudes towards people with a mental disorder: a survey of the Australian public and health professionals. *Australian and New Zealand Journal of Psychiatry 33 (1):77–83.*

Katon WJ, Lin E, Russo J, Unutzer J (2003) Increased medical costs of a population-based sample of depressed elderly patients. *Archives of General Psychiatry 60 (9):897–903.*

Kerr M, Blizard R, Mann A (1995) General practitioners and psychiatrists: comparison of attitudes to depression using the depression attitude questionnaire. *British Journal of General Practice 45 (391):89–92.*

Kingdon D, Sharma T, Hart D (2004) The Schizophrenia Subgroup of The Royal College of Psychiatrists' Changing Minds Campaign. What attitudes do psychiatrists hold towards people with mental illness? *Psychiatric Bulletin 28:401–406.*

Kline P (1994) An Easy Guide to Factor Analysis. Routledge, London.

Lester H, Glasby J, Tylee A (2004) Integrated primary mental health care: threat or opportunity in the new NHS? *British Journal of General Practice 54:285–291.*

Link BG, Phelan JC, Bresnahan M, Stueve A, Pescosolido BA (1999) Public conceptions of mental illness: labels, causes, dangerousness, and social distance. *American Journal of Public Health 89 (9):1328–1333.*

Link BG, Struening EL, Neese-Todd S, Asmussen S, Phelan JC (2001) Stigma as a barrier to recovery: the consequences of stigma for the self-esteem of people with mental illnesses. *Psychiatric Services 52 (12):1621–1626.*

Maginn S, Boardman AP, Craig TK, Haddad M, Heath G, Stott J (2004) The detection of psychological problems by General Practitioners—influence of ethnicity and other demographic variables. *Social Psychiatry & Psychiatric Epidemiology 39 (6):464–471.*

Naji SA, Gibb J, Hamilton RJ, Lawton K, Palin AN, Eagles JM (2004) How ready are practice nurses to participate in the identification and management of depressed patients in primary care? *Primary Care Mental Health 2:47–54.*

Nunnally JC, Bernstein IH (1994) Psychometric Theory. McGraw-Hill, New York.

Oladinni O (2002) A survey of inner London general practitioners' attitudes towards depression. *Primary Care Psychiatry 8:95–98.*

Paykel E.S, Hart D, Priest RG (1998) Changes in public attitudes to depression during the Defeat Depression Campaign. *British Journal of Psychiatry 173:519–522.*

Payne F, Harvey K, Jessopp L, Plummer S, Tylee A, Gournay K (2002) Knowledge, confidence and attitudes towards mental health of nurses working in NHS Direct and the effects of training. *Journal of Advanced Nursing 40 (5):549–559.*

Richards JC, Ryan P, McCabe MP, Groom G, Hickie IB (2004) Barriers to the effective management of depression in general practice. *Australian and New Zealand Journal of Psychiatry 38 (10):795–803.*

Rogers A, May C, Oliver D (2001) Experiencing depression, experiencing the depressed: the separate worlds of patients and doctors. *Journal of Mental Health 10:317–333.*

Ross S, Moffat K, McConnachie A, Gordon J, Wilson P (1999) Sex and attitude: a randomized vignette study of the management of depression by general practitioners. *British Journal of General Practice 49:17–21.*

Sirey JA, Bruce ML, Alexopoulos GS, Perlick DA, Raue P, Friedman SJ, Meyers BS (2001) Perceived stigma as a predictor of treatment discontinuation in young and older outpatients with depression. *American Journal of Psychiatry 158 (3):479–481.*

Thornett AM, Pickering RM, Willis T (2001) Dowrick et al. found no relationship between the scores on the Depression Attitude Questionnaire and GPs' ability to identify depressed individuals in the surgery. *Psychological Medicine 31:181.*

Tiemens BG, VonKorff M, Lin EH (1999) Diagnosis of depression by primary care physicians versus a structured diagnostic interview. Understanding discordance. *General Hospital Psychiatry 21 (2):87–96.*

Waller R, Hillam JC (2000) Assessment of depression in older medical inpatients: practice, attitudes and the effect of teaching. *Aging & Mental Health 4:275–277.*