Is there value in routinely obtaining a report from the general practitioner as part of pre-entry health screening of students for nursing studies?

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Introduction

One of the stages in the development of occupational health services for health care workers in the National Health Service (NHS) in the UK was the transfer of the health assessment of nursing students from colleges of nurse education to NHS Occupational Health Services. Colleges of nurse education in Scotland had relied on the applicant’s general practitioner (GP) completing a medical report with or without examination of the applicant. The GP was placed in a conflicting dual role of being the applicant’s physician while being asked to report independently of that role on fitness for entry to the course. There is no published evidence of the merit of the use of the GP in this way.
When NHS Occupational Health Services took over this role, a system of assessment was introduced [1]. The role of Occupational Health Services was to provide independent advice to the training colleges on fitness for entry to the course. Some services sought reports from applicants’ GPs when clinically indicated, while others continued routinely to obtain reports from GPs in addition to assessment. The variation in use of GPs’ reports has not previously been the subject of clinical audit. Previous research on the value of the pre-employment assessment process suggests that routine pre-employment medical assessment is of limited value [2,3]. Alternative processes, with referral to a physician where necessary, have shown no significant difference in the restriction or rejection rates compared with medical assessment [4].

There was evidence that some of the criteria used to exclude applicants from employment should be treated with caution [4], and this has led to revised guidelines from the Association of NHS Occupational Physicians (ANHOPS) [5]. Others have also published guidance [6].

During the 1990s, investigation into the circumstances surrounding the deaths of patients in NHS facilities in England resulted in the conviction of nurses for murdering patients. In one case, a diagnosis of Munchausen’s syndrome by proxy was made. Independent of the criminal procedures, reports were produced following inquiry into the circumstances surrounding the employment of these nurses [7,8]. One of these reports [7] made a number of recommendations about occupational health practice in the area of recruitment of staff. One of the recommendations was that a report be obtained from the GP to certify the fitness of all applicants for nurse training. This recommendation was made despite the fact that the GP of the nurse investigated had indicated that there was no information within her health record that would have provided concern about her fitness to nurse. Regardless of this and other criticism of the value of screening for psychiatric disorders of concern [9], a trend to require a report from the GPs of applicants for nurse training has emerged.

When asked to introduce this process as part of the contract to provide a service to a University Department of Nursing Studies, an opportunity occurred to determine the value of obtaining a report from applicants’ GPs. An audit project was designed to compare also the information obtained from a self-completed health declaration form and a structured report form provided to GPs.

Methods

Health assessment

All applicants for nurse training who attended the Occupational Health Service during 1998–1999 completed a standardized self-administered health declaration form. One occupational health nurse scrutinized the questionnaires and sought further information from the applicants on the health problems declared. The nurse also performed a physical assessment, including measurements of cardiovascular and respiratory function. Each applicant was asked to consent to a report being provided by their GP, to which they could have access under the Access to Medical Reports Act 1988. The GP was then requested to complete a structured report form seeking specific information on the medical history of the applicant. A number of closed questions were asked requiring yes or no answers, with space for additional descriptive information if an affirmative response was provided. These closed questions were used to compare with the answers to equivalent questions in the health declaration form (see the Appendix). A medical consultation with an occupational physician occurred when the information collected from the questionnaire, assessment and/or report indicated that a medical opinion on fitness was required. Referral to an occupational physician occurred when the nurse was unable to pass an applicant as fit according to criteria in keeping with the ANHOPS guidance [5].

Data collection

A standard proforma was developed to summarize the health problems identified from each of the four parts of the process. The problems that were identified at each stage of the process were identified separately. Health problems that had resolved or were controlled with treatment were classed as passive. Newly identified problems and those that were not controlled with treatment were classed as active; for example, treated hypothyroidism was classed as passive, while untreated or inadequately treated hypothyroidism was classed as active and previous or currently treated depression without symptoms was classed as passive, while untreated or inadequately treated depression was classed as active.

Study questions

The study sought to investigate the following questions.

1. What was the frequency of health problems declared by applicants for nurse training?
2. What was the frequency of additional problems identified by occupational health nurse assessment?
3. What was the frequency of health problems recorded on reports from GPs?
4. What was the agreement in the information obtained from the self-completed questionnaires and the reports from GPs?
5. How frequently did the report from the GP provide additional information used in the assessment?
6. In how many of the applicants certified as unfit or fit with a restriction did the report from the GP provide the only information on which the certification decision was reached?

**Statistical analysis**

The comparison between the questionnaire and medical reports was limited to eight measures:

- health declaration form and report clear of information;
- psychiatric problems;
- skin problems;
- back problems;
- surgical operations;
- diabetes;
- epilepsy and loss of consciousness;
- health declaration form and report contain other health problems.

The analysis of the data was conducted in two parts. Descriptive summaries of the cohort studied and the rate of health problems were compiled. The frequency of advice on fitness for training was also summarized.

The agreement between the responses in the self-administered questionnaire and the health problems recorded on the reports from applicants’ GPs was analysed using the Statistical Package for Social Sciences (SPSS v. 9.0). The agreement was investigated using the $\kappa$ statistic [10,11]. Based on the $\kappa$ result, the strength of the agreement was classed as slight (0–0.2), fair (0.21–0.4), moderate (0.41–0.6), substantial (0.61–0.8), or almost perfect (0.81–1.0).

**Results**

Information was obtained from 254 applicants (Table 1).

A total of 532 problems were identified. Problems were declared by 63% of applicants, with 285 problems (11 active) declared on the questionnaires (mean: 1.1 problems/applicant).

Sixty-two per cent of reports from the GP included health problems; 133 of the declared problems were confirmed by the medical reports (10 active); and 192 additional problems were recorded in the medical reports (all passive). The mean rate of problems identified on the GP report was 1.3/applicant.

The nurse assessment identified 46 (12 active) additional problems (9% of all problems recorded; mean 0.2/assessment) and the limited number of physician assessments added nine (two active) health problems to the total (Tables 2 and 3).

All the active problems were identified from the health declaration form, nurse assessment and physician assessment. The reports from the GPs did not provide information on any additional active problems.

For psychiatric problems, 38 were declared by applicants and 64 recorded on the GP report. Four of the declared problems were not confirmed by the GP report. A further 30 problems (all passive) were recorded by the GP. These included anxiety reactions, eating disorders, depression and bipolar conditions. No cases of Munchausen’s syndrome by proxy were identified among this group of applicants from any data source.

The agreement for psychiatric problems and the other seven measures categorized is represented in Figure 1. The agreement between the applicants’ declarations and the information reported by GPs was classed as almost perfect for diabetes and fair to moderate for all other measures.

The GP report was considered to have provided additional information in 62 (24%) assessments. The majority of the problems identified by the GP were passive and, though more information was provided by
the reports, they had no influence in most cases (57 cases; 92% of these 62 assessments) on the conclusion regarding fitness for training.

In this group of applicants, only four (1.6%) were classed as fit with a recommendation to adjust the training to accommodate the applicant. The medical report added useful information in three of these cases (skin and musculo-skeletal problems). One report of ‘cervical spondylosis’ had not been declared and, though the applicant was asymptomatic, a recommendation was provided to the university due to the manual handing tasks involved in nursing. In addition, four applicants were classed as unfit at the time of assessment to commence the course. In all four cases, mental health problems existed and were declared on the questionnaire and evidence of previous self-harm was noted in two of these cases at the occupational health nurse (OHN) assessment stage. All were cases of depression. No cases of Munchausen’s syndrome by proxy were noted. In two of these mental health problem cases, the information provided by the GP contributed to the assessment of fitness. The information obtained by the questionnaire and OHN assessment in all four cases would have led to medical assessment and a request for a report prior to making a conclusion on fitness for training.

Discussion

The recommendation from Clothier [7] and Bullock [8] that the GP provide a report for all applicants for nurse training is not evidence based. This study showed only fair to moderate agreement between the information provided by the GP and the self-completed questionnaire responses of applicants in all categories except for diabetes. This study showed that additional information is provided by the reports from GPs in 24% of reports, but in most instances the additional information did not adversely affect the conclusion regarding fitness for training.

In five cases, the report was of help in concluding that a candidate was unfit or fit with adjustment. In the four cases classed as unfit, information was available from the questionnaire and OHN assessment that would have raised a concern. In three of the four cases classed as fit with adjustment, the GP report added information and in one case this was about a health problem not declared at assessment.

There is evidence that the report from the GP may not always provide information on health problems. For example, 39 applicants declared skin problems. The GP confirmed 16 of these problems, but only five of nine cases that were receiving treatment. A further 12 passive skin problems were also identified by the GP.

Not reporting a problem may occur because the information is not recorded in the medical records, the client has requested that it not be reported, or the GP has not reported the problem, despite it being recorded in the notes. In the example of skin problems, the risks associated with health care work to the applicant and associated infection control risks for patients may not be known to the GP who does not report it in the structured report.

Overall, the GP report did not provide sufficient information to merit it being sought routinely in future.

The routine assessment of applicants by an OHN identified some important health problems (diabetes, hypertension) and evidence of self-harm. The assessment had a limited effect on the outcome. The medical problems identified would be controlled by treatment and would not have affected fitness to study. The evidence of self-harm occurred in applicants who had declared mental health problems which would have merited further investigation.

An OHN had a central role in the assessment process. The routine assessment by an OHN has significant resource implications [4]. It has been shown previously that there is no difference in rejection rates between routine paper screening and nurse interview because of potential problems and routine OHN interview as standard practice [19]. An interview with an OHN would continue to be required in this group of applicants for nurse training because they are required to be tested for hepatitis B prior to entering the course as they may train in areas where exposure-prone procedures would occur (e.g. Accident and Emergency).

It is noteworthy that mental health problems were
present in the four individuals who were classed as unfit for the course. In most of the applicants who declared a mental health problem, the problems were not considered active or uncontrolled. The problems noted on the GP report for the first time were all passive. No case of Munchausen’s syndrome by proxy was identified in this study. This is likely to be due to the limited size of the group studied. Such problems are rare and the GP report may not provide information about such a diagnosis [7]. A larger cohort study would be required to investigate this question. A similar study in a different population would also be of assistance to determine whether the conclusions are consistent in another cohort.

This audit attempted to limit inter-observer bias by using one nurse to screen the health declaration form and perform the nurse assessment. The classification of active or passive problems was agreed and based on the problem-orientated medical record approach. This was used to limit bias in classification. The reports from GPs were structured with a number of closed questions to ensure consistency of data collected. This avoided any gaps in information provided in the reports. With these actions, we hope to have limited the impact of bias on this study.

There is a literature on murder of patients in health care facilities from the USA [12–14] and the UK [15]. The recent actions of Harold Shipman, who was found guilty of multiple murders of patients in the community, highlighted opportunities that occur outside of hospitals [16,17]. History highlights that health professionals can be murderers [16]. These examples indicate that such problems are not a new phenomenon and that the perpetrators were established in their professions at the time murder occurred. The belief that screening for factors identifiable at the pre-employment assessment will be successful in identifying such cases has been questioned [9]. Others have suggested that a system of critical incident audit should be encouraged [18].

Stark et al. [15] highlighted that there is no consistent psychological profile of murderers in health care. They also noted that repeated hospital attendance and probable fabrication of illness might be significant in specific cases. The number of other staff who display these behaviours must be far higher than the very small number of murderers and so the positive predictive value of these behaviours, when used as a screening test, is likely to be small.

It would be naive to believe that an assessment of all applicants for nurse training and other health care workers will identify all those who could murder patients in the future. It is important that health care employers are aware of the limitations of these assessments and have robust adverse incident investigation mechanisms in place. Access to expert epidemiological investigators can assist in identifying real problems and measure the association between adverse events and specific health care workers.

References

### Appendix.

Questions included in structured report form completed by GPs

<table>
<thead>
<tr>
<th>Has he/she suffered from any significant (acute or chronic) medical or physical conditions?</th>
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<tbody>
<tr>
<td>e.g. Back conditions</td>
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<td>Skin conditions</td>
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<td>Epilepsy or other loss of consciousness</td>
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<tr>
<td>Diabetes</td>
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<tr>
<td>Surgical operations</td>
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<td>If YES, please give details</td>
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<th>Has this person consulted their General Practitioner with:</th>
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<td>Psychological/psychiatric symptoms of ill health?</td>
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