INTRODUCTION

A growing number of randomized controlled trials have shown the effectiveness of brief interventions among persons with excessive alcohol use in both primary health care and hospital settings (Heather et al., 1987; Wallace et al., 1988; Drummond et al., 1990; Gentiello et al., 1995; Israel et al., 1996; Fleming et al., 1997; McIntosh et al., 1997; Ockene et al., 1999; Dihn-Zarr et al., 1999). However, there is not yet a consensus on the efficacy of primary health care interventions for problem alcohol consumption (Kahan et al., 1995; Ashenden et al., 1997; Edwards and Rollnick, 1997; Poikolainen, 1999). Thus, the enthusiastic conclusions of some meta-analyses have been questioned since they did not consider the length of the included interventions (Poikolainen, 1999). Another potential bias arises from lost subjects. Most studies of brief intervention have had an attrition rate of eligible subjects of 40–80% and the non-participants have often been heavier drinkers than the rest (Edwards and Rollnick, 1997). This could indicate that only those most susceptible to intervention have been included, leading to an overestimation of the effectiveness of brief intervention in a routine health care setting. Furthermore, most previous studies did not discuss the bias of having special project staff involved in the screening process, which will have to be done by ordinary staff in a routine practice setting (Kahan et al., 1995; Richmond et al., 1995; Fleming and Manwell, 1999; Poikolainen, 1999).

Thus, despite the possible effectiveness of brief alcohol intervention, a number of questions need to be addressed before we can recommend a more widespread dissemination into routine clinical practice (Anderson, 1993b; Ashenden et al., 1997; Fleming and Manwell, 1999; Kaner et al., 1999; Andréasson et al., 2000). On the other hand, brief intervention for alcohol problems is still rarely seen in regular health care practice (Israel et al., 1996; Deehan et al., 1998b; Kaner et al., 1999; Andréasson et al., 2000).

Primary health care has long been identified as a suitable setting for brief interventions for patients with harmful alcohol consumption (Anderson, 1985, 1993a; Searight, 1992; Deehan et al., 1998a,c; McAvoy, 2000; Owens et al., 2000). One of the main reasons given for this is the high proportion of the total population seeking primary health care annually (Anderson, 1993a; Deehan et al., 1998a; Magruder-Habib et al., 1991; Searight, 1992; Tomson et al., 1998; McAvoy, 2000). Another reason for focusing on primary health care with regards to alcohol interventions is that health promotion is a normal element of primary health care, performed by all members of the health care team (Owens et al., 2000). In Sweden, every primary health care centre has a number of practice or community nurses employed fulfilling various tasks, including health promotion. In the UK, the number of practice nurses has doubled during the last decade as a response to a new emphasis on health promotion (Deehan et al., 1998c; Owens et al., 2000).

Most previous studies concerning brief intervention for alcohol problems in primary health care settings have focused upon the role of the physicians (Wallace et al., 1987; Warburg et al., 1987; Roche, 1990; Rush et al., 1994; Townes and Harkley, 1994; Adams et al., 1997; Herbert and Bass, 1997; Fleming and Manwell, 1999; Kaner et al., 1999). However, a few studies have involved nurses in a more active role with regard to brief intervention for alcohol problems (Persson and Magnusson, 1989; Israel et al., 1996; Arthur, 1997; McIntosh et al., 1997; Tomson et al., 1998; Ockene et al., 1999). In some recent studies from the UK, nurses were seen to be
willing to give advice to problem drinkers, but many nurses were, however, lacking the knowledge to give appropriate advice to problem drinkers (Deehan et al., 1998c; Owens et al., 2000). These authors therefore called for more training to practice nurses since this has so far largely been left to chance. In the USA, Ockene et al. (1997) assessed the impact of a brief training programme for both primary care physicians and nurses. Nurses and physicians were not analysed separately, but the study revealed a significant improvement of skills and attitudes in both nurses and physicians from the same health care setting (Ockene et al., 1997). In a study from Sweden (Andréasson et al., 2000), nurses displayed a more negative attitude than doctors concerning asking patients about their alcohol use. Consequently, it was suggested that nurses need more training and motivational efforts than doctors (Andréasson et al., 2000). Although the practice nurses appear to be an unexplored resource in the management of alcohol problems, the actual readiness among practice nurses, concerning working with secondary alcohol prevention, is still unclear (Deehan et al., 1998c; Bendtsen and Åkerlind, 1999; Andréasson et al., 2000; Owens et al., 2000). Indeed, the practice nurses might play a key-role when integrating alcohol prevention into regular practice (Israel et al., 1996; Tomson et al., 1998; Kaner et al., 1999; Ockene et al., 1999).

The present study was designed to explore whether the prevailing attitudes and practices differ, among GPs and nurses, concerning identification of problem drinkers and brief intervention. Furthermore, the study explored the readiness and barriers for implementing secondary alcohol prevention in primary health care before the start of an intervention programme.

**MATERIALS AND METHODS**

All GPs and nurses in 19 primary health care centres were invited to participate in a brief alcohol intervention project. The health centres were all located in the county of Östergötland, Sweden and constituted a convenience sample of about half of all centres in the region.

The project focused on educating the staff concerning screening methods for excessive alcohol consumption and intervention methods for brief counselling advice. The education session took ~2 h for nurses and ~1 h for GPs and was followed up by personal visits to, or contacts with, the health care centre by the project staff. In order to elucidate attitudes and practices concerning early identification and intervention in respect of excessive alcohol use, a written questionnaire was distributed to the GPs and nurses before the start of the educational session. The questionnaire was handed out and completed by the participants at the educational session with full anonymity.

The majority of the invited staff at the 19 health care centres participated in the training programme. Thus, a total of 65 GPs (57% of the total number of GPs) and 141 nurses (63% of the total numbers of nurses) participated in the project. Those GPs and nurses not participating were not analysed further, but the general impression was that those not participating had other urgent matters to attend to. In the group participating, 48% of the GPs and 97% of the nurses were women. The mean age of the GPs was 46, and of the nurses, 49, years. The GPs had served ~10 years and the nurses ~14 years in primary care.

The questionnaire, adapted from Romelsjö and Karlsson (1986), consisted of 28 questions divided into three areas. First, eight questions explored past and current job experiences with a focus on patients with alcohol-related health problems. Secondly, in four questions, the participants were asked to assess their own knowledge and perceived skills concerning identification and intervention in patients with alcohol-related problems. Answers were to be given on a 5-point Likert scale, from ‘very satisfying’ to ‘very unsatisfying’. Thirdly, sixteen questions explored attitudes and beliefs about the role of primary care in identifying and treating alcohol-related problems. Answers were to be given on a 5-point Likert scale from ‘agree completely’ to ‘disagree completely’. One of these items concerned the overall attitude to alcohol prevention in primary health care. The remaining 15 items are displayed in Table 1.

The SPSS software version 9.0 was used for statistical analyses. For comparison of affirmative answers between GPs and nurses, the Mann–Whitney test was applied. For within-group comparison, the Wilcoxon signed ranks test was used.

Differences between GPs and nurses in the attitude part were tested by the Mann–Whitney U-test after dichotomizing into non-affirmative and affirmative answers. A number of bivariate Spearman correlation analyses were performed in order to explore the relations between perceived knowledge, skills, attitudes and practices.

**RESULTS**

**Current practice and perceived competence**

As would be expected, GPs and the nurses reported that they currently more often asked the patients about alcohol use when they believed health status was influenced, than when not influenced, by alcohol consumption ($P < 0.001$). In either case, nurses significantly less often than GPs said they asked about alcohol consumption ($P < 0.001$). Thus, a majority of the nurses reported that they very seldom asked about alcohol consumption when health status was assumed not to be influenced by alcohol consumption. This stands in contrast to the majority of GPs, who reported that they at least ‘sometimes’ or ‘often’ asked about alcohol consumption.

Both the GPs and the nurses rated their knowledge about identification of alcohol-related problems significantly better than their knowledge concerning intervention methods ($P < 0.001$). None of the staff rated their knowledge as ‘very satisfactory’. Nurses significantly rated their knowledge about identification and intervention as less satisfactory than the GPs ($P < 0.001$).

Both GPs and nurses rated their skills concerning identification as better than their skills concerning intervention ($P < 0.001$). None of the staff rated their skills as ‘very satisfactory’. The GPs rated both their identification and intervention skills as satisfactory significantly more often than the nurses ($P < 0.001$).

**Attitudes towards intervention**

The 15 questions exploring attitudes to working with alcohol-related problems in primary care are displayed in Table 1. About two-thirds of both GPs and nurses agreed about the role legitimacy of the primary health care concerning working with harmful alcohol consumption. But, on the other
hand, both GPs and nurses lacked confidence in the actual possibility to influence patients’ alcohol habits.

Most of the GPs and the nurses believed that primary care staff in general do not have good knowledge of how to identify and treat alcohol-related disorders. Despite this, the majority of both GPs and nurses found working with alcohol-related problems cost-effective but, somewhat contradictory, only about one-third of the participants agreed that working with alcohol-related problems was rewarding.

Disincentives included lack of time and resources in primary care in order for patients with excessive alcohol consumption. Three of the attitude questions revealed a significant difference between GPs and nurses, after dichotomizing into non-affirmative and affirmative answers. Thus, the nurses indicated that they, more often than GPs, believed that the ‘other patients suffer as alcohol problems take a lot of time’, and ‘most patients react negatively to questions about alcohol habits’, and ‘patients might not dare to seek help in primary care if they knew they would be asked about their alcohol habits’.

Very few of the staff considered alcohol consumption a private matter, although about half of the nurses stated that the patients react negatively to questions about alcohol habits.

Relationship between current practice and perceived competence

A number of bivariate correlation analyses of perceived knowledge/skills and current practice were performed. A significant association was seen between the frequency of asking patients about alcohol use and perceived knowledge ($P < 0.05, r = 0.35$) and skills ($P < 0.001, r = 0.44$) concerning early identification among the GPs. For the nurses, there was a similar significant association ($P < 0.01, r = 0.24; P < 0.005, r = 0.26$ respectively). Thus, when the staff believed that the health status of a patient had not been influenced by alcohol consumption, those with a better perceived competence more frequently asked the patients about alcohol consumption.

On the other hand, when GPs and nurses believed that the health status of a patient was influenced by alcohol consumption, there was only a significant association for the nurses, but not for the GPs, between perceived skills and the frequency of asking about alcohol consumption ($P < 0.001, r = 0.40$).

DISCUSSION

Although brief intervention for excessive alcohol consumption is reported to be effective in controlled clinical trials, dissemination into regular practice has so far been disappointing (Townes and Harkley, 1994; Richmond et al., 1995; Adams et al., 1997; Deehan et al., 1998c; Fleming and Manwell, 1999; Andréasson et al., 2000). One important question that has to be addressed is to what extent the research results from controlled clinical trials can be generalized to, and implemented in, routine clinical practice (Edwards and Rollnick, 1997; Poikolainen, 1999; Aalto et al., 2000; Andréasson et al., 2000). Among other potential biases, most controlled clinical trials have had special trained staff to interview and motivate the patients to participate in the brief alcohol intervention trials (Bien et al., 1993; Kahan et al., 1995; Fleming and Manwell, 1999).

### Table 1. Attitudes to early identification and intervention in alcohol problems in GPs and nurses

<table>
<thead>
<tr>
<th>Incentives:</th>
<th>% affirmative answers</th>
<th>GPs ($n = 65$)</th>
<th>Nurses ($n = 141$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Primary care should have the main responsibility for patients with high alcohol consumption with regard to early detection and intervention</td>
<td>67 ($n = 63$)</td>
<td>62 ($n = 132$)</td>
<td></td>
</tr>
<tr>
<td>2. It is important for health care to reach patients in an early phase</td>
<td>97 ($n = 65$)</td>
<td>97 ($n = 137$)</td>
<td></td>
</tr>
<tr>
<td>3. Working with alcohol-related problems in primary care is worth the cost and work effort</td>
<td>82 ($n = 62$)</td>
<td>82 ($n = 130$)</td>
<td></td>
</tr>
<tr>
<td>4. Primary care staff have good knowledge with regard to detection and intervention in patients with high alcohol consumption</td>
<td>10 ($n = 64$)</td>
<td>18 ($n = 129$)</td>
<td></td>
</tr>
<tr>
<td>5. It is rewarding to work with alcohol-related problems</td>
<td>28 ($n = 65$)</td>
<td>39 ($n = 117$)</td>
<td></td>
</tr>
<tr>
<td>6. The community nurse is an important resource in the intervention for alcohol problems</td>
<td>63 ($n = 65$)</td>
<td>75 ($n = 125$)</td>
<td></td>
</tr>
<tr>
<td>7. Anyone can develop alcohol problems</td>
<td>73 ($n = 65$)</td>
<td>75 ($n = 127$)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Disincentives:</th>
<th>% affirmative answers</th>
<th>GPs ($n = 64$)</th>
<th>Nurses ($n = 134$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>8. The time and resources in primary care are insufficient to care for patients with high alcohol consumption</td>
<td>78 ($n = 64$)</td>
<td>81 ($n = 134$)</td>
<td></td>
</tr>
<tr>
<td>9. Other patients suffer as alcohol problems take a lot of time and energy</td>
<td>48 ($n = 64$)</td>
<td>58 ($n = 126$)**</td>
<td></td>
</tr>
<tr>
<td>10. The possibility of influencing patients’ alcohol habits is small</td>
<td>36 ($n = 65$)</td>
<td>31 ($n = 132$)</td>
<td></td>
</tr>
<tr>
<td>11. The main reason why it is difficult to reach patients with high alcohol consumption in an early phase is that they do not want any help</td>
<td>48 ($n = 65$)</td>
<td>53 ($n = 129$)</td>
<td></td>
</tr>
<tr>
<td>12. Most patients react negatively to questions about alcohol habits</td>
<td>11 ($n = 65$)</td>
<td>43 ($n = 127$)**</td>
<td></td>
</tr>
<tr>
<td>13. Patients might not dare to seek help in primary care if they know they would be asked about their alcohol habits</td>
<td>18 ($n = 64$)</td>
<td>28 ($n = 130$)**</td>
<td></td>
</tr>
<tr>
<td>14. Patients’ alcohol consumption is a private matter</td>
<td>6 ($n = 65$)</td>
<td>3 ($n = 129$)</td>
<td></td>
</tr>
<tr>
<td>15. Care of patients with high alcohol consumption is more tiring than the care of other patients</td>
<td>53 ($n = 65$)</td>
<td>66 ($n = 121$)</td>
<td></td>
</tr>
</tbody>
</table>

Affirmative answers: ‘completely agree’ and ‘almost agree on the whole’.

**$P < 0.001$, Mann–Whitney U-test after dichotomizing non-affirmative/affirmative answers.**
1999). In the light of this, research into the role of both the GPs and the practice nurses is important, in order to develop new and more effective models that might more easily be disseminated into regular practice (Israel et al., 1996; Deehan et al., 1998c; Andréasson et al., 2000; Owens et al., 2000).

In previous studies, authors have commented that an initial screening before an intervention can be a barrier to the implementation of an intervention programme (Israel et al., 1996; Andréasson et al., 2000). Thus, in the study of Arborelius et al. (1995), 22 GPs and 13 nurses managed only to identify 45 individuals with problem alcohol consumption during a 6-month period. The majority of the patients were known alcohol misusers. In our study, GPs and nurses said they more frequently asked about alcohol consumption in cases where they believed the patients’ health status was influenced by alcohol. This indicates that both nurses and GPs are selective with regard to which patients they ask about alcohol consumption, and thereby rely on their own subjective judgement as to whether a person drinks alcohol in excessive amounts. As reported in previous studies, GPs and nurses seem only to be prepared to raise the question about alcohol when there are clinical signs of alcohol problems (Deehan et al., 1998b; Andréasson et al., 2000). However, problem drinkers in primary care might not present with the classic clinical signs and symptoms of alcohol-related disorders, and the staff probably cannot rely on their clinical judgement as to whether a person has alcohol-related problems without asking questions about alcohol habits (Olsson and Braham, 1992).

Furthermore, we found nurses to be significantly less often engaged than GPs in asking about alcohol use. In particular, the great majority of nurses ‘very seldom’ asked about alcohol in cases where they believed that the health status had not been influenced by alcohol. Although the GPs’ and nurses’ attitudes in general were positive in our study (Table 1), the nurses displayed more reluctance than the GPs towards giving advice about alcohol, especially with regard to how the patients react to alcohol counselling. These findings are important to consider when establishing intervention teams consisting of both GPs and nurses, since there seems to be no difference in effect, irrespective of whether alcohol advice is given by nurses or GPs (McIntosh et al., 1997; Ockene et al., 1999).

One explanation for this reluctance to screen for alcohol problems among both GPs and nurses could be an uncertainty about their role legitimacy. Thus, GPs and nurses might be uncertain whether patients with high alcohol consumption are their responsibility (Deehan et al., 1998a). On the other hand, the majority of the health care staff in the present study indicated that they agreed that they should have the main responsibility for patients with high alcohol consumption (Table 1). Once again, this reflects the ambivalence towards brief alcohol intervention reported previously (e.g. Deehan et al., 1998a; Andréasson et al., 2000).

Another possible explanation for the observed reluctance to screen for alcohol problems could be a lack confidence among both GPs and nurses concerning their own ability to intervene. In our study, GPs and nurses lacked confidence concerning their own ability to intervene with alcohol problems. In particular, the nurses stated that they were poorly qualified and trained to work with alcohol interventions. This is in line with some previous reports concerning physicians (Roche, 1990; Searight, 1992; Townes and Harkley, 1994; Adams et al., 1997; Kaner et al., 1999; Aalto et al., 2001) and reports concerning nurses (Owens et al., 2000; Aalto et al., 2001). On the other hand, GPs have been reported to be reluctant to give lifestyle advice simply because they are not convinced about the effectiveness of the methods (Wallace, 2001).

Training for practice nurses has often been left to chance and our study and others emphasized the need for more systematic training for nurses before one can expect them to be engaged in alcohol prevention (Deehan et al., 1998a,c; Fleming and Manwell, 1999: Kaner et al., 1999). However, training by itself will only assist the integration of secondary alcohol prevention into regular practice if the reality of routine primary health care is taken into consideration (Andréasson et al., 2000).

Different models of brief alcohol interventions need to be tested. Depending upon local preconditions, the nurse could screen for alcohol problems and the GPs do the brief intervention or vice versa.

Besides training, a lack of resources was also given as a disincentive for alcohol intervention. Thus, 78% of the GPs and 81% of the nurses stated that resource allocation was insufficient. This has been pointed out by Andréasson et al. (2000). The tasks of primary health care are many, and various demands from administrators can cause frustration among GPs and nurses. There is a need for a clear policy from health care purchasers concerning financial support for brief interventions (Fleming and Manwell, 1999; Andréasson et al., 2000).

Practice nurses seem to be an unexploited resource in primary health care in both Sweden and the UK, as well as in other similar settings (Deehan et al., 1998c; Bendtsen and Åkerlind, 1999; Andréasson et al., 2000; Owens et al., 2000).

Importantly, nurses need to be convinced that an active role does not interfere with the nurse–patient relationship. Building teams at primary care centres involving both GPs and nurses might be the key to a more widespread dissemination of secondary alcohol prevention into regular practice. GPs might be readier to accept screening for alcohol problems if practice nurses trained and engaged in brief intervention are available.

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REFERENCES


