

The impact of training and delivering alcohol brief intervention on the knowledge and attitudes of community pharmacists: A before and after study

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Abstract

Introduction and Aims. Alcohol misuse is the third leading cause of ill health in the UK. Alcohol brief intervention can identify risky drinkers and motivate individuals to take action. Community pharmacists have been identified as having a role in providing brief interventions. This study aimed to evaluate: pharmacists' attitudes towards hazardous/harmful drinkers and knowledge before training and after delivering brief intervention; and their experience of training. **Design and Methods.** Pharmacists' attitudes to alcohol problems were assessed using Short Alcohol and Alcohol Problems Perception Questions before training and after brief intervention delivery. Alcohol misuse knowledge was assessed by questionnaire prior to and immediately after training, and after the delivery period. Following brief intervention delivery, pharmacists' experience of training was obtained using a questionnaire and focus groups. Qualitative thematic analysis identified experiences of brief intervention training. Quantitative data were analysed using SPSS. **Results.** One hundred and thirty-nine alcohol interventions were delivered by 19 pharmacists over five months (recruiters). Ten pharmacists completed no interventions (non-recruiters). Both groups improved their alcohol knowledge between baseline and immediately following training; and their knowledge decreased between the end of training and following service delivery. Pharmacists who were initially more motivated recruited more participants and increased their work satisfaction. **Discussion and Conclusions.** This confirmed findings of previous studies that pharmacists unfamiliar with brief intervention could be trained to deliver this service. Pharmacists with positive attitude towards drinkers delivered a greater number of alcohol interventions and experienced increased work satisfaction than those pharmacists with less positive attitudes. [Dhital R, Whittlesea CM, Milligan P, Khan NS, Norman IJ]. The impact of training and delivering alcohol brief intervention on the knowledge and attitudes of community pharmacists: A before and after study. *Drug Alcohol Rev* 2013;32:147–156]

Key words: attitude, alcohol brief intervention, community pharmacist, knowledge, pharmacy.

Introduction

Alcohol brief intervention

UK alcohol misuse is estimated to cost society £25.1 billion per annum [National Health Service (NHS) costs £2.7 billion] and to be the third leading cause of ill health [1]. It has been estimated that 31% of men and 21% of women exceed UK Government's daily alcohol

limits (women no more than 2–3 units and men 3–4 units/day) on at least one day in the previous week [2,3].

Early identification of alcohol misuse is important in preventing serious problems [4]. The Department of Health states that pharmacists should be involved in delivering alcohol brief intervention (BI) [5], which is included in the Public Health Strategy for England [6].

Alcohol BI includes all practices to identify a real or potential alcohol problem by asking individuals about

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drinking and motivating them to take positive action [4]. A review found those who received BI reduced their alcohol consumption by approximately five units of alcohol/week for up to one year, compared with a control group [7]. BI was more effective at reducing alcohol consumption of hazardous/harmful drinkers compared with dependent drinkers [7]. It was also cost-effective and reduced rates of accident and emergency admissions, crime and motoring accidents [8].

There has been interest in community pharmacists providing BIs [9]. One study found most customers (96%) were interested in discussing their drinking with a pharmacist [10]. Similar findings were found in a New Zealand study where customers were positive about being offered alcohol advice [11].

Studies have shown that health practitioners with positive attitudes are more likely to conduct BI and are more motivated to work with drinkers compared to practitioners with negative attitudes [12,13]. Although pharmacists in New Zealand were motivated to undertake this new role they reported lacking confidence, knowledge and skills to advise customers [14].

One review has supported the feasibility of BI in community pharmacies, because a small non-significant reduction in drinking was reported by customers [9]. However, only two studies have examined pharmacists' attitudes, training and BI experiences. One study of six pharmacists found an increase in knowledge, attitudes and self-rated competence [15]. The other study identified difficulty in approaching customers to undertake alcohol screening as the main barrier to service delivery [16].

There is a need to investigate if pharmacists' attitudes and knowledge of alcohol problems affect BI delivery and of pharmacists' experience of BI training and support, especially of pharmacists who have experienced barriers to implementing BI.

This study aimed to evaluate: (i) pharmacists' attitudes towards hazardous/harmful drinkers prior to training and after delivering BI, and change in attitudes between these time points; (ii) alcohol knowledge before and after training, and following BI delivery and changes between time points; (iii) experience of BI training; (iv) if these variables were linked to the number of BIs delivered; and (v) the training and support needs of pharmacists.

Method

Recruitment of pharmacists

Community pharmacists at the 62 pharmacies within one inner London, Primary Care Trust, with NHS contracts and a private consultation room were invited to participate (November 2009). Those who responded

completed a questionnaire, describing their pharmacy premises and services. Suitable training dates were identified (January to February 2010).

Pharmacists' alcohol BI training and support

A one-day BI training course (8 h) for pharmacists and educational materials were developed from the Drinkless program [17]. During the course, pharmacists practised delivering BIs to actors playing simulated customers and received feedback on their performance. Pharmacists provided feedback using a piloted questionnaire which collected ratings of: satisfaction with administration, theoretical and practical course content, and their confidence to deliver BI. Open questions sought views on helpful aspects of training and course improvements. Open questions were coded and themes identified.

Following training, pharmacists were asked to discuss with at least one member of their support staff, using the Counter Staff Training Pack designed for the study, how to: (i) direct customers to project posters/leaflets; and (ii) identify and inform potential participants about the study. Pharmacies were visited approximately fortnightly by a member of the project team (R. D. or N. S. K.), who collected customer data and answered queries. Observations of good practice and study information were distributed to pharmacies via a newsletter (June 2010).

Pharmacists' attitudes towards hazardous/harmful drinkers

Pharmacists' attitudes towards hazardous/harmful drinkers was assessed using the validated Short Alcohol and Alcohol Problems Perception Questions [18], which had been piloted on a small sample ($n = 4$) of community pharmacists not involved in the study and modified to refer to 'hazardous/harmful drinkers' rather than 'problem drinkers'. The Short Alcohol and Alcohol Problems Perception Questions comprised 10 statements, which addressed five subscales: (i) role adequacy; (ii) role legitimacy; (iii) motivation; (iv) task specific self-esteem; and (v) work satisfaction. Role adequacy and role legitimacy are concerned with role security, i.e. how practitioners perceive 'the adequacy of their skills and knowledge in relation to "hazardous/harmful drinkers" and how appropriate it is for them to work with such individuals'. The subscales relating to self-esteem, motivation and work satisfaction are concerned with the practitioner's therapeutic commitment, that is the extent 'to which they seek to engage drinkers in treatment . . . and the extent that they find the work rewarding' [19].

Responses to these statements were scored from 1 (strongly disagree) to 7 (strongly agree), so generating possible median scores which ranged from 1 to 7. To keep the same 1 to 7 scale for subscales as for the total attitude, the total scores of the two items in each subscale was added and divided by two. In addition, the scores from negatively worded items were reversed to follow the same 1 to 7 scale. Attitudes towards alcohol problems are considered to be relatively stable variables and are thought to change only slowly through engaging with people with alcohol misuse problems [20,21]. Pharmacists' attitudes were measured prior to training (in November 2009) and again post-BI (in August 2010).

Pharmacists' alcohol misuse and BI knowledge

As no validated tool to measure pharmacists' knowledge of alcohol misuse was identified, three brief questionnaires were developed covering: (i) drinking limits; (ii) drinking behaviour patterns and consequences; (iii) alcohol metabolism; (iv) alcohol BI; and (v) assessment and treatment for alcohol misuse. Questionnaires (which incorporated multiple choice, single answer and open questions) were administered on three occasions. The pre-training questionnaire was administered via mail prior to BI training (November 2009) and completed by pharmacists who were instructed to use any educational resources they wished; our aim was to encourage pharmacists to gain knowledge about alcohol misuse and so maximise their knowledge prior to BI training. The questionnaire was administered for the second time post-training (February 2010) and completed by pharmacists in class without access to educational resources; our aim was to assess pharmacists' knowledge of alcohol misuse following training. This assessment contained additional open questions to assess pharmacists' understanding of delivering BI. The questionnaire was administered for a third time, post-BI (in October 2010), to pharmacists without access to resources; our aim was to assess change in pharmacists' alcohol misuse knowledge following BI delivery.

With the exception of additional questions included in the second assessment, the three questionnaires were identical, although the alcohol units questions which required single word answers used different numbers. Questionnaires were piloted on pharmacists not involved in the study ($n = 4$). Questionnaires were scored by one author (R. D.) and sample batches independently checked for marking consistency by authors N. S. K., I. J. N. and C. W.

Pharmacists' experience of using training pack and project support

At the end of the BI delivery period, pharmacists' experience of using the training pack and feedback on

project support was obtained using a validated questionnaire and through focus groups (September to October 2010). Pharmacists provided feedback by rating statements about the training pack, the project support and satisfaction with the project's organisation. Open questions were about project support and training improvements. Responses to these were thematically analysed by R. D. and checked by I. J. N. and C. W.; disagreements were resolved through discussion. The focus group schedule was developed using current guidance [22,23].

Pharmacists were invited to participate in one focus group. Three groups were organised: Group 1—up to eight pharmacists who completed most interventions; Group 2—pharmacists who were not in Group 1 but had completed more than one intervention; and Group 3—those who had completed one or no interventions. This ensured each group had no more than eight participants and encouraged discussion between pharmacists with similar experiences [22]. Focus groups were recorded using a digital voice recorder and transcribed verbatim. Three focus groups were analysed thematically, to describe pharmacists' experience of delivering BI. The computer program NVivo [24] was used to manage the data. Transcripts were coded by R. D., identified themes checked by I. J. N. and C. W. and disagreements resolved through discussion.

Statistical methods

Data were analysed using SPSS 19 [25]. Pharmacists' alcohol and BI knowledge scores were transformed into percentages for analysis. Attitude and knowledge scores were ordinal level and have no 'unit', therefore non-parametric statistical methods were used to analyse the data. Tests used included: Mann-Whitney (compare sub-groups); Wilcoxon Signed Ranks (compare two time points) and Friedman (compare three time points). Significance was set at $P \leq 0.05$ and means reported with ($\pm$) standard deviation and, where appropriate, median values with the 25th and 75th percentile range (Q1, Q3). Test statistics and P -values are presented only for significant results.

Pharmacists' costs and remuneration

Pharmacists were remunerated for: (i) locum costs for attending training; (ii) undertaking alcohol screening using the Alcohol Use Disorder Identification Test—Consumption [26] and seven-day drink diary; (iii) delivering BI; and (iv) attending a focus group.

Ethical consideration

The study protocol was presented to the National Research Ethics Service which considered the study a

service evaluation (November 2009). It was conducted in accordance with ethical principles as required by the Research and Development Centre for South East London NHS organisations and following NHS Lambeth approval.

Results

Response rate

Thirty-seven pharmacists expressed an interest in participating, of whom two were not eligible due to not having a consultation room in the pharmacy and a further six were not recruited because they did not attend the training. Therefore, 29 pharmacists from 27 sites were recruited.

Demographics and professional background of community pharmacists

Of the 29 pharmacists, 26 provided their age. The mean age of this group was 38 years ($SD \pm 9.3$). A total of 27 pharmacists who provided additional demographic information reported being registered pharmacists for a mean of 12 years ($SD \pm 10.2$), having practised in community pharmacy for a mean of 12 years ($SD \pm 10.0$) and worked in their current pharmacy for a mean of 6 years ($SD \pm 8.0$). Since registering, respondents reported undertaking a mean of 21 h ($SD \pm 24.4$) of drug misuse, and 20 h ($SD \pm 17.1$) of smoking cessation training but only 2 h ($SD \pm 3.5$) of alcohol misuse training. Only four study pharmacists had heard of the term 'Alcohol Screening Brief Intervention' prior to the study.

Characteristics of study sites

Study sites characteristics and health services offered are presented in Table 1. Most study sites were independent pharmacies ($n = 17$; 63%). Most offered stop smoking ($n = 24$; 92%), emergency hormonal contraception ($n = 24$; 92%), and medication use review services ($n = 23$; 92%).

Brief interventions delivered

A total of 139 interventions were delivered by 19 pharmacists (recruiter group) over five months. Two pharmacists completed between 26 and 38 interventions (46% of total), five pharmacists completed between 6 and 12 interventions (32%), 12 pharmacists completed between 1 and 5 interventions (22%) and 10 pharmacists completed no interventions (non-recruiter group).

Pharmacists' knowledge

Table 2 reports Pharmacists' alcohol and BI knowledge. For the 21 pharmacists who completed all assess-

Table 1. Characteristics and health services offered at pharmacy sites ($n = 27$)

Characteristics of pharmacy sites	Number of study sites (%)
Site type ^a	
Independent chemist	17 (63)
Multiple chemist	10 (37)
Site location	
Main road	17 (63)
Housing estate	7 (26)
Residential area	2 (7)
Supermarket	1 (4)
Average number of NHS prescription items dispensed per site per day ^b	
0–100	2 (8)
101–150	10 (40)
151–200	6 (24)
201–250	3 (12)
251 +	4 (16)
Advanced and enhanced NHS services ^c	
Emergency hormonal contraception ^d	24 (92)
Stop smoking ^d	24 (92)
Medication use review ^c	23 (92)
Supervised administration (consumption of prescribed medications) ^d	17 (65)
Minor ailment service ^d	16 (62)
Needle and syringe exchange ^d	4 (15)
Other health services ^f	9 (33)

^aSite type: 'Independent chemist', operates retail pharmacy businesses from 9 or less premises. 'Multiple chemist', operates retail pharmacy businesses from more than 9 premises [34]. ^bAt 4 sites pharmacists declined to respond. ^cAdvanced and Enhanced Services, The New Contract for Community Pharmacy [35]. ^dMissing data for 1 site. ^eMissing data for 2 sites. ^fOther health services (number of study sites): antiviral medication supply (1), blood glucose monitoring (2), blood pressure screening (3), chlamydia screening (2), cholesterol testing (1), flu vaccination (4), health checks (1), oral contraception supply (1), swine flu medication supply (1) and weight checks (1). NHS, National Health Service.

ments, there were highly significant knowledge changes across the time points: pre-training, post-training and at post-BI ($W = 17.24$, d.f. = 2, $P \leq 0.001$). The median increase of 6 in the percentage alcohol knowledge score from pre-training to post-training was significant ($P = 0.029$). Also the median decrease in knowledge score of 20 from post-training to post-BI was highly significant ($P \leq 0.001$).

Pharmacists' attitudes towards hazardous/harmful drinkers

Table 3 details pharmacists' attitudes towards harmful and hazardous drinkers at pre-training and post-BI. There was a significant increase in total positive attitude of study pharmacists from pre-training to post-BI

Table 2. Alcohol knowledge of pharmacists, reporting the median at: pre-training, post-training and post-BI periods, and knowledge change

Knowledge assessments	<i>n</i>	Median percentage score (Q1, Q3)
Alcohol knowledge:		
Pre-training	27 ^a	62 (52, 69)
Post-training	29	64 (59, 71)
Post-BI	22 ^b	48 (38, 54)
Knowledge change assessment periods:		
Pre-training to post-training	27 ^a	6 (−5, 16)*
Post-training to post-BI	22 ^b	−20 (−29, −7)**

*Significant difference ($P \leq 0.05$). ** Highly significant difference ($P \leq 0.001$). ^aTwo pharmacists did not complete an assessment. ^bSeven pharmacists did not complete an assessment. BI, brief intervention; Q1, 25th percentile; Q3, 75th percentile.

(0.3 median increase, $P = 0.044$). There was a highly significant increase in role adequacy (1.3 median increase, $P = 0.001$), and a significant decrease in role legitimacy scores (1.0 median decrease, $P = 0.049$).

Comparison of motivation pre-training for recruiter and non-recruiter pharmacists found that recruiters had significantly higher motivation ($U = 45$, $P = 0.021$) to work with drinkers than non-recruiters. Post-BI, recruiters had significantly higher motivation ($U = 20$, $P = 0.008$) than non-recruiters.

Recruiter pharmacists significantly increased their role adequacy ($P = 0.004$) and work satisfaction ($P = 0.046$), from pre-training to post-BI. In contrast, non-recruiters showed no significant change. There was significant reduction in non-recruiters' role legitimacy scores towards working with drinkers from pre-training to post-BI ($P = 0.024$).

Feedback on BI training and project support

Pharmacists positively rated BI training for: administration, theory and practical content, presentations, written materials, and confidence to conduct BI (median rating 4, scale 1–5). Most pharmacists rated the pace of training adequate ($n = 27$; 93%) and reported it met their overall learning needs ($n = 27$; 93%). There were no significant differences between ratings of BI training by recruiter and non-recruiter pharmacists. Themes identified from the open questions are presented in Table 4.

Following the end of BI delivery, pharmacists rated the training pack as 'very useful' (median 4, scale 1–5). Using the same scale, project support was considered

'very adequate' (median 4), and pharmacists were 'very satisfied' (median 4) with project administration. No significant differences were found between recruiters and non-recruiters. Through open questions, pharmacists reported the training pack was useful and project support was motivating. However, pharmacists suggested simplification and reduction of project paperwork.

Three focus groups were conducted with 21 pharmacists (response 75%); Group 1—seven pharmacists (completed 6–38 BIs); Group 2—six pharmacists (completed 2–6 BIs); Group 3—eight pharmacists (completed 0–2 BIs). Eight pharmacists did not attend. Of these two pharmacists (completed four and two BIs) had previously confirmed their attendance but failed to attend. Two pharmacists (completed one and no BIs) had work commitments; two pharmacists (completed no BIs) were unable to attend due to their health and two pharmacists (completed no BIs) were not interested in attending.

The following themes were identified from analysis of the focus groups.

Inclusion of role-plays during training: Pharmacists reported that the role-plays supported their understanding and prepared them to deliver BI. Pharmacists from Group 1 (who completed between 6–38 interventions) reported that conducting role-plays with actors and with other study pharmacists:

... was a way of seeing what we'd learnt in action (Pharmacist 29, P29)

But when it came to approaching customers I felt a bit more comfortable having watched the role-plays. (P48)

I came with the preconception that it was going to be for alcoholics. So it was good to just to explain it was going to be for everybody. (P01)

Group 2 (who completed between 2 and 6 interventions) reported more barriers than Group 1 and that the role-plays may not have fully prepared them to deliver interventions:

I can't remember if we did it in the role-play ... the theory and the knowledge bit was excellent ... how you'd physically do it in practice I think that's the bit which has taken us by surprise. (P33)

The role-plays was okay, but it did not take into account the extent of barriers that we were going to face. We saw some ... in some of the role-plays, but as to people who were refusing and reasons why people were in denial and also conflict of interest. (P14)

Table 3. Pre-training and post-BI attitude and attitude change of pharmacists towards risky drinkers using SAAPPQ subscales: reporting the median for 29 total study pharmacists, 19 recruiter and 10 non-recruiter pharmacists

Subscales	Time points	Total study pharmacists (n = 29)	Recruiters (n = 19)	Non-recruiters (n = 10)
Role adequacy	Pre-training	4.0	4.0	4.8
	Post-BI	5.8	5.5	6.0 ^b
	Attitude change (Q1, Q3)	1.3 (0.5, 2.1)*	1.0 (0.5, 2.5)*	1.5 (−0.5, 1.5) ^b
Role legitimacy	Pre-training	5.0	5.0	4.8
	Post-BI	4.5	5.0	3.5 ^b
	Attitude change (Q1, Q3)	−1.0 (−1.6, 0.0)*	0.0 (−1.5, 0.5)	−1.0 (−2.0, −1.0) ^{b*}
Motivation	Pre-training	6.0	6.0	4.3
	Post-BI	5.5	5.8 ^a	4.0 ^b
	Attitude change (Q1, Q3)	0.0 (−0.5, 0.5) ^a	0.0 (−0.6, 0.6) ^a	0.0 (−0.5, 0.5) ^b
Self-esteem (task specific)	Pre-training	5.0	5.0	4.8
	Post-BI	5.5	5.5	6.0 ^b
	Attitude change (Q1, Q3)	0.0 (0.0, 1.6)	0.0 (−0.5, 2.0)	0.5 (0.0, 1.0) ^b
Work satisfaction	Pre-training	4.0	4.0	4.5
	Post-BI	4.8	5.0	4.5 ^b
	Attitude change (Q1, Q3)	0.3 (−0.1, 1.0)	0.5 (0.0, 1.0)*	0.0 (−1.5, 1.5) ^b
Total	Pre-training	4.5	4.5	4.5
	Post-BI	4.9 ^a	5.0 ^a	4.7 ^b
	Attitude change (Q1, Q3)	0.3 (−0.1, 1.0) ^{a*}	0.9 (0.0, 1.1) ^a	0.0 (−0.3, 0.3) ^b

*Significant difference in total attitude between recruiters and non-recruiters ($P \leq 0.05$). ^aOne missing value. ^bThree missing values. Recruiter: pharmacists correctly completed one or more BIs with pharmacy customers. Non-recruiter: pharmacists correctly completed no BIs with pharmacy customers. SAAPPQ score: 7 = maximum positive attitude, 1 = minimum positive attitude. BI, brief intervention; Q1, 25th percentile; Q3, 75th percentile; SAAPPQ, Short Alcohol and Alcohol Problems Perception Questions.

A pharmacist from Group 3 (who completed between 0 and 2 interventions) said:

I thought the feedback was probably the easiest part of the whole process really. Because we were trained on what things to say. Had a few role-plays on what things would be alright to say. (P42B)

Project paperwork: All three groups reported they may have benefited from more practice with completing project paperwork and that the quantity of paperwork should be reduced and simplified: Group 1 said:

... if we initially went through the paperwork, we had a look through the drink diary, had practice filling it out in front of our role-play customers then I think we would have performed better. (P34)

The training day was very informative. It was well put together and its draw back at times you had too much paper to handle in front of everyone. (P57)

Group 2 said:

More practice on the paperwork ... letting us do the diary ourselves a couple of times. (P63)

A pharmacist from Group 3 said:

I think a bit more help with the paperwork. There was a lot of knowledge and things like that. And at the time for me [referring to the training day] everything seemed like, this is alright and quite straight forward. Then when we actually went back to try and do it I was all over the place to be honest. So I think maybe, maybe even cut down ... Because there was quite a lot of repetition in some parts if I remember correctly. (P42B)

Training pack: Pharmacists found the training pack useful and project workers' visits increased their motivation and commitment. Some pharmacists suggested the training packs could be improved for practical use in a busy pharmacy. Group 1 pharmacists said:

This training pack was very useful. It gave us good guidelines for the units and also the screening project as well helped us recruit patients. (P34)

It was just something I could go back to and double check ... so that the next time I was more confident. It was more a confidence in knowing that what you were saying was 100% right. (P01)

... but I think for me it was really helpful. Yeah occasionally I would lose track ... motivation ... ,

Table 4. Themes identified from Pharmacists' response to feedback on alcohol BI training (n = 27)**'Your views and experience of alcohol brief intervention training?'****BI training:****Most helpful:**

Role-plays (mentioned by 18 pharmacists, 67%)

Other comments:

Clarification about the service through reviewing information packs and project paperwork

An opportunity to interact with colleagues

Least helpful:

Too much information and paperwork (mentioned by four pharmacists: P02, P04, P18, P28, 15%)

Day was too long (P14, P17)

Other comments:

Difficulty reading some PowerPoint slides (P05, P10, P13)

End of day knowledge questionnaire (P03, P11)

Timing and duration of training:

Adequate and informative (mentioned by nine pharmacists, 33%)

Too long (mentioned by seven pharmacists, 26%)

Other comments:

The course was too intensive and could have been split into two-days.

Training environment:

Excellent venue (mentioned by 10 pharmacists, 37%)

Interesting and informative (mentioned by 6 pharmacists, 22%)

BI, brief intervention; P, participating pharmacists' code.

but then you know when you sort of come in and you trained my team as well [referring to author R. D.]. (P07)

Pharmacists from Group 2 said:

A reference should you need to look for something it's there, but it's almost like you tend to leave reference books on the shelf and refer to something which is one page long because it is quicker to memorise. (P33)

... you always able to answer my questions at least whatever I had sitting on my mind. ... you were always able to address that. And you went through the diaries with me, the first few that I did. And you were able to, weren't criticising, but you able to point out what I did wrong there. So I learnt from it again. You were always, the criticism was always constructive. It was always quite good [referring to author R. D.]. (P63)

Pharmacists from Group 3 said:

I think it was full of good information ... But then trying to navigate your way through it might have been a bit tricky. (P50A1)

But then you coming out to the pharmacy world is like, okay I can't remember what I learnt ... all those paper work that I had to do. But then you went through that one by one. You know it was a little bit more encouraging and motivating. (P56)

Support staff training: pharmacists reported that support staff training by the project workers was helpful. However, pharmacists from all groups suggested dedicated support staff training to allow these staff to more effectively inform and recruit participants. Pharmacist from Group 1 said:

I thought it was very helpful. particularly with training the staff, showing them the forms, the consent forms, when to refer to the pharmacist. I thought it was really good especially when you engage with them, that was really good. (P34)

Pharmacist from Group 2 said:

I think one of the crucial and critical factors was right at the beginning. With informing the patients and recruiting them. And that was the counter staff ... because that's how they recruit a lot of our patients for other things. And so with hindsight greater involvement and actually considering what we would need to enable them to recruit as part of the overall training package ... more time in terms of now that we know what the barriers are. (P33)

Pharmacist from Group 3 said:

Because I think you're quite more passionate than us [*slight laughter*] about the topic [referring to author R. D.], so being trained by someone you know more passionate, I think staff will latch on better in comparison to me just training them ... also give me a bit more confidence in terms of like you know in the training bit I knew what I was doing. (P56)

General feedback: Few pharmacists (from all three groups) suggested training could take place over two days and the overall content be reduced. Pharmacist from Group 1 said:

So I think it triggered my interest in the ... the alcohol screening. So straight away from day ... that day I tried to look a bit deeper into it. (P57)

Pharmacists from Group 2 said:

It would have been good if it was done over two-days because there was a lot to take in that day. (P28)

It was comprehensive, the day was about right and there was a lot of information. (P33)

Pharmacists from Group 3 said:

I think there was too much crammed in one day . . . it was quite exhaustive . . . I mean maybe two days or something? (P401)

There was a lot of knowledge and things like that. And at the time for me everything seemed like, this is alright and quite straight forward. Then when we actually went back to try and do it I was all over the place to be honest. (P25)

More practice or more interaction with own colleagues . . . (P25)

Discussion

Findings from this study indicate pharmacists with no prior BI experience can be trained to deliver BI and support findings from previous studies [15,16,27,28]. However, this is the first study to assess change in pharmacists' alcohol knowledge and attitudes towards drinkers and if these changes were related to the number of BIs delivered. Significant increase in the Pharmacists' alcohol knowledge after BI training was followed by a significant decrease in knowledge by the end of the study. While knowledge is likely to decay over time following education, additional training may be required to prevent knowledge loss if BI was offered as an ongoing service.

Positive attitudes towards risky drinkers have previously been found to be important in determining the effective delivery of alcohol services [20]. Studies involving GPs have found that training and support increased screening and intervention rates for practitioners who felt secure and committed to working with drinkers. But the attitudes of those who were insecure and uncommitted towards working with drinkers became less positive over time [12,21].

In line with these previous findings, this study suggests that pharmacists' attitudes towards risky drinkers affect alcohol service delivery. Although pharmacists' attitudes towards working with risky drinkers became significantly more positive, recruiter pharmacists were significantly more motivated to discuss drinking with customers than non-recruiters. In addition, recruiters significantly increased their role adequacy and work satisfaction scores. At the end of the study non-recruiters had significantly reduced role legitimacy. This suggests low initial motivation may act as a barrier to pharmacists delivering BI, and may adversely affect their role legitimacy towards working

with drinkers. Lack of training and pharmacists' low confidence have previously been highlighted as barriers to providing public health services in pharmacies, although alcohol BI was not specifically discussed [29].

Two previous studies have explored pharmacists' experience of alcohol BI training [16,30]. These reported pharmacists were positive about BI training; however a comparison of their experience with the number of interventions delivered was not undertaken. Analysis of data from focus groups identified the following themes on pharmacists' experience of BI training and project support: inclusion of role-plays, project paperwork, training pack, project support and support staff training. Future research is needed to confirm these themes and assess their relevance to the design of an effective pharmacy BI service. In addition, pharmacists were identified as being satisfied with project support and BI training, regardless of the number of BIs delivered. In line with other studies [16,31] the pharmacists also suggested dedicated training for support staff, to allow them to effectively identify and inform customers about the service.

Limitations of this study include a small sample of pharmacists from a single UK Primary Care Trust. However, the proportion of independent (63%) compared with multiple sites in the study were similar to that within the Primary Care Trust (62% independent) and for London (62%) [32,33]. The proportion of study pharmacies which offered the Medications Use Review service (92%) was similar to other English pharmacies (88%) [33], which suggest the results are representative for similar localities.

There has been limited research investigating the effects of BI on pharmacy customers' drinking and their experience of receiving the intervention. Future larger-scale studies should also consider assessing pharmacists' BI communication styles and whether this affects customers' drinking.

In conclusion, pharmacists unfamiliar with alcohol BI can be trained to deliver this service. In addition, pharmacists who were initially more motivated towards this role recruited higher number of pharmacy customers and subsequently increased their work satisfaction.

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