Barriers and facilitators experienced in delivering alcohol screening and brief interventions in community pharmacy: a qualitative evidence synthesis

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Abstract

Background: Following increases in deaths due to alcohol during the COVID-19 pandemic, there have been renewed calls to increase resources in alcohol screening and brief intervention (SBI). Research has shown that community pharmacy could be a promising setting for SBI. This review aimed to investigate the barriers and facilitators to SBI delivery in community pharmacy to inform its further development.

Methods: A systematic search of four databases (MEDLINE, EMBASE, CINAHL, and PsycINFO) was conducted in October 2021 to identify relevant published qualitative or mixed-method studies. Relevant qualitative data were extracted from the included studies and a framework synthesis was performed using the Capability–Opportunity–Motivation–Behaviour (COM-B) model.

Results: Two thousand two hundred and ten articles were screened and nine studies were included in the review (seven in the United Kingdom and two in Australia). Identified barriers and facilitators to delivering SBI corresponded to all components of the COM-B model. Facilitators included non-confrontational communication skills, aligning SBI with existing pharmacy services and pharmacist role legitimacy. Barriers included multiple demands on staff time, a lack of staff experience with screening tools, and staff concerns of causing offence. Using the Behaviour Change Wheel (BCW), we propose five elements of a pharmacy SBI to address identified barriers.

Conclusions: Research into SBI in community pharmacy is limited in comparison to other healthcare settings and this review provides an understanding of the barriers and facilitators to the delivery of SBI in community pharmacy from a behavioural perspective. Through the use of COM-B and BCW, our findings could inform the development of future pharmacy-based SBI.

Keywords: clinical practice; community pharmacy; health promotion; alcohol; brief intervention

Introduction

Worldwide, alcohol use represents the seventh leading risk factor for disease and is the leading risk factor in people aged 15–49 years [1]. The World Health Organization (WHO) estimates that 5.3% of all deaths globally are a result of harmful alcohol use, contrasting with other causes such as diabetes (2.8%), road injuries (2.5%), and hypertension (1.6%) [2]. The socioeconomic impacts can be highlighted by data from England showing more working years of life are lost due to alcohol than from the 10 most common cancers combined [3].

The number of people drinking alcohol is increasing globally and this trend is projected to continue [4]. The COVID-19 pandemic has had a further impact with increases in deaths due to alcohol seen in both the United States of America and

England [5, 6]. In England, a sustained increase in high-risk drinking post-pandemic has been shown and the Institute for Alcohol Research has highlighted the need to increase resources for primary and secondary prevention such as alcohol screening and brief interventions (SBI) [7].

SBI are an internationally recognized and advocated method of reducing alcohol consumption [8]. A unifying definition provided by the WHO is 'those practices that aim to identify a real or potential alcohol problem and motivate an individual to do something about it' [9]. The widely cited evidence supporting the effectiveness of SBI in primary care populations is a systematic review and meta-analysis [10]. The analysis found that when compared to minimal or no intervention, SBIs can reduce alcohol consumption in hazardous and harmful drinkers. None of the included studies were

set in community pharmacy and hence there is uncertainty around the applicability to community pharmacy settings.

Community pharmacy continues to expand its roles into improving the health of the public [11, 12], but there is limited evidence regarding the effectiveness of SBI in this setting. A landmark randomized- control trial (RCT) testing SBI in community pharmacy did not show an effect on alcohol use disorder identification test (AUDIT) score. However, there was a reduction in AUDIT-C score in both the intervention and control groups, indicating a decrease in alcohol consumption [13]. This mirrors the results of a large primary care SBI RCT in the UK and may be explained by the process of just undergoing an alcohol assessment having an impact on a person's drinking behaviour [14].

Pharmacy-delivered SBI has shown a sustained impact on alcohol intake. Khan *et al.* [15] followed up on hazardous drinkers 3 months after a pharmacy-delivered SBI and found a statistically significant decrease in the number of drinking days reported and a reduction in the number of alcohol units consumed. Hattingh *et al.* [16] followed up a small number of participants after a pharmacy-delivered alcohol SBI and observed three of the five participants with hazardous or harmful alcohol use had reduced their level of drinking at follow-up.

It is recognized that implementation of SBI into routine healthcare practice has been limited [17]. Systematic reviews have been conducted to understand the barriers and facilitators to implementing SBI in primary healthcare settings, which can subsequently inform design, delivery, and commissioning [18–21]. However, SBI in the pharmacy setting was not examined.

Pharmacy-based SBIs show potential to impact alcohol consumption and recommendations from Public Health England support their practice [22] with commissioned SBI services currently being delivered in around 5% of pharmacies in England [23]. With a global trend in increasing alcohol use, potentially worsened by the pandemic, increasing SBI delivery in pharmacies could help combat the negative consequences of this.

Given the uncertainties around the practice, the aim of this study is to understand barriers and facilitators experienced in delivering alcohol SBI in community pharmacy to inform future development and delivery as well as policy.

Methods

In order to achieve our aim, we performed a qualitative evidence synthesis informed by behaviour change theory. Qualitative evidence synthesis is a recognized method to gain a greater understanding of individuals' experiences of interventions and factors influencing intervention delivery [24]. This review is reported according to the enhancing transparency in reporting the synthesis of qualitative research (ENTREQ) guidance [25]. The protocol was pre-registered on PROSPERO (CRD42021284130).

Data sources, search strategy, and selection criteria

The electronic databases MEDLINE (via Ovid), EMBASE (via Ovid), CINAHL (via EBSCOhost), and PsycINFO (via EBSCOhost) were searched using a search strategy developed with the input of an experienced research librarian to identify all relevant studies (see Supplementary material S1). These databases were selected as per recommendation in the Centre for Reviews and Dissemination guidance for undertaking reviews in healthcare [26]. Reference lists of included studies were manually searched for relevant studies. Searches were conducted in October 2021 and were limited to publication from January 2003 onwards. This date was chosen to obtain contemporary findings as 2003 marks the publication of 'A Vision for Pharmacy in the New NHS' by the Department of Health in England [27]. There were no language exclusions imposed.

The articles eligible for this review were qualitative or mixed-method primary research studies published in peer-reviewed journals. Grey literature including conference abstracts, commentaries, book chapters, PhD theses, and reports was excluded. The selection criteria summarized using the setting, perspectives, intervention, comparison, evaluation (SPICE) framework [28] are presented in Table 1.

Table 1. Study inclusion and exclusion criteria according to SPICE framework.

	Inclusion	Exclusion
Setting	Alcohol SBI conducted in community pharmacy in any country	Alcohol SBI not conducted in community pharmacy
Perspectives	Any of: Community pharmacy staff Community pharmacy customers Pharmacy policymakers Pharmacy commissioners	
Intervention	Any alcohol SBI delivered by community pharmacy staff to community pharmacy customers. We define alcohol screening as an assessment of an individual's alcohol consumption (with or without using a screening tool) that identifies their level of risk of alcohol-related problems. We define a brief intervention as per the WHO definition of 'practices that aim to identify a real or potential alcohol problem and motivate an individual to do something about it' [9]. At minimum this is feedback of risk from screening.	Studies where an intervention has not been delivered
Comparison	N/A	
Evaluation	Phenomena of interest are perspectives, attitudes and experiences of participants regarding the feasibility, acceptability and barriers and facilitators to alcohol SBI delivered in community pharmacy	Studies where data were only analysed quantitively

SBI, screening and brief intervention; SPICE, setting; perspectives, intervention, comparison, evaluation.

Data screening and extraction

Results of searches were transferred first into Endnote (version 20.2), de-duplicated, and then imported into Rayyan [29]. Initial title screening was performed by one reviewer (A.S.). Two reviewers (A.S., H.S.) independently screened abstracts, and disagreement at the abstract level resulted in the study being included at the full-text review stage. The two reviewers (A.S., H.S.) then independently screened the full-text articles. Any disagreements were resolved through discussion and where disagreement was not met, a final decision was made by a third reviewer (K.I.).

Study characteristics were extracted by one reviewer (A.S.) into a Microsoft Word (Microsoft 365 version 2301) data extraction template that was created for the review. Information extracted included: study title, authors, year of publication, country, study design, study aim, qualitative data collection and analysis method(s), number of participants in qualitative work, type of participant(s), details of alcohol screening, and brief intervention.

Two reviewers (A.S., Q.T.) independently extracted relevant data from the results and discussion sections of the included studies. Data related to experiences of SBI delivery were extracted regardless of whether the terms barrier or facilitator were used. This included first-order constructs (quotations from participants) and second-order constructs (interpretation of authors). The extracted data were compared between the two reviewers and any differences in extraction were discussed and agreed. The data were then imported into NVivo (release 1.6.1) for analysis.

Quality appraisal

The quality of each study was appraised independently by two reviewers (A.S., K.I.) using the critical appraisal skills program (CASP) checklist for qualitative research [30]. Each question in the checklist was assigned one point if answered 'yes' so that each study had a score out of 10. Disagreements were resolved by discussion and the quality of each study was recorded. The methodological quality assessment did not influence the inclusion of the studies.

Data analysis

We utilized a framework synthesis for our review, which involves familiarization with the literature, identification of a thematic framework, selecting articles and extracting the data from the articles ('indexing') using the framework to categorize, code and synthesize the data into charts ('charting') and finally mapping and interpretation of the identified themes in reference to the research question [31]. This approach was selected as it generates outputs that are more relevant to policy makers, practitioners, and designers of interventions [32], as is the target audience of our review.

Two reviewers (A.S., K.I.) initially independently inductively open-coded extracted data from two studies. Initial open coding was chosen to allow analysis to be grounded in the data and to avoid forcing data into pre-defined themes/codes at this stage. Coding was discussed and agreed to form a coding manual. The coding manual was then applied to the other studies by AS with regular meetings with KI to discuss any generated codes. If analysis of a study produced a new code then the coding manual was updated and previously analysed studies were re-analysed and re-coded if indicated.

Descriptive sub-themes were inductively derived from the open codes, led by A.S. with regular discussion with K.I.

During this process concepts mirroring the COM-B model were evident in the data. The COM-B model describes three interacting factors required for a behaviour to occur, namely 'Capability', 'Opportunity', and 'Motivation' [33]. The included studies described influences on individuals' behaviour of delivering (or engaging with) alcohol SBI and, therefore, the COM-B components were considered by A.S. and K.I. to be a naturally good fit for the data.

A simple framework consisting of each of the COM-B components (see supplementary material S2) was then used to map sub-themes and form three themes. All sub-themes could be mapped to one of the COM-B components with no sub-themes being mapped to more than one. Themes were then charted to create summaries of the evidence and examined to describe barriers and facilitators identified within themes. Links within and between themes were examined through the lens of the COM-B model. This synthesis process was led by the primary researcher AS with regular discussion on theme development with senior qualitative researcher KI.

We subsequently utilized the Behaviour Change Wheel (BCW) to identify potential intervention functions that could address the barriers to delivery. The BCW maps intervention functions that address one or more target components of the COM-B model (see supplementary material S2) and further links these intervention functions to policy categories that may enable them [33]. We identified BCW intervention functions of facilitators to incorporate into proposed elements of community pharmacy SBI that would appropriately target the identified barriers [33]. A.S. performed BCW intervention function mapping which was regularly discussed and revised with K.I. to gain agreement on the proposed elements.

RESULTS

Included articles

A total of nine articles were included in this review. The PRISMA flow diagram of the study screening process is shown in Figure 1.

Details of the included studies are shown in Table 2. Studies were conducted in either the UK (n = 7) or Australia (n = 2). Five of the studies were qualitative and four of the studies were mixed methods with qualitative components. The qualitative methods were interviews (n = 7) or focus groups [2] with two studies also conducting observation. SBI was delivered as a research activity (i.e. requiring participant consent) in three of the studies, as a formal pharmacy service in four studies either as part of a pilot (n = 3) or already commissioned service (n = 1), or as part of routine care in two studies. The total number of participants in all of the studies was 133: 78 pharmacy customers, 51 pharmacists, and 4 pharmacy support staff. Observation was conducted in 10 pharmacies across 2 studies for a combined total of 181 h. The results of the quality assessment using the CASP qualitative appraisal tool are available in supplementary material S2. The scores ranged from 3 to 9 with the majority of the studies scoring 6 or more.

Synthesis findings

We report our synthesis findings using the identified sub-themes within each of our three themes that correspond to a component of the COM-B model. This structure and supporting quotes are shown in Table 3.

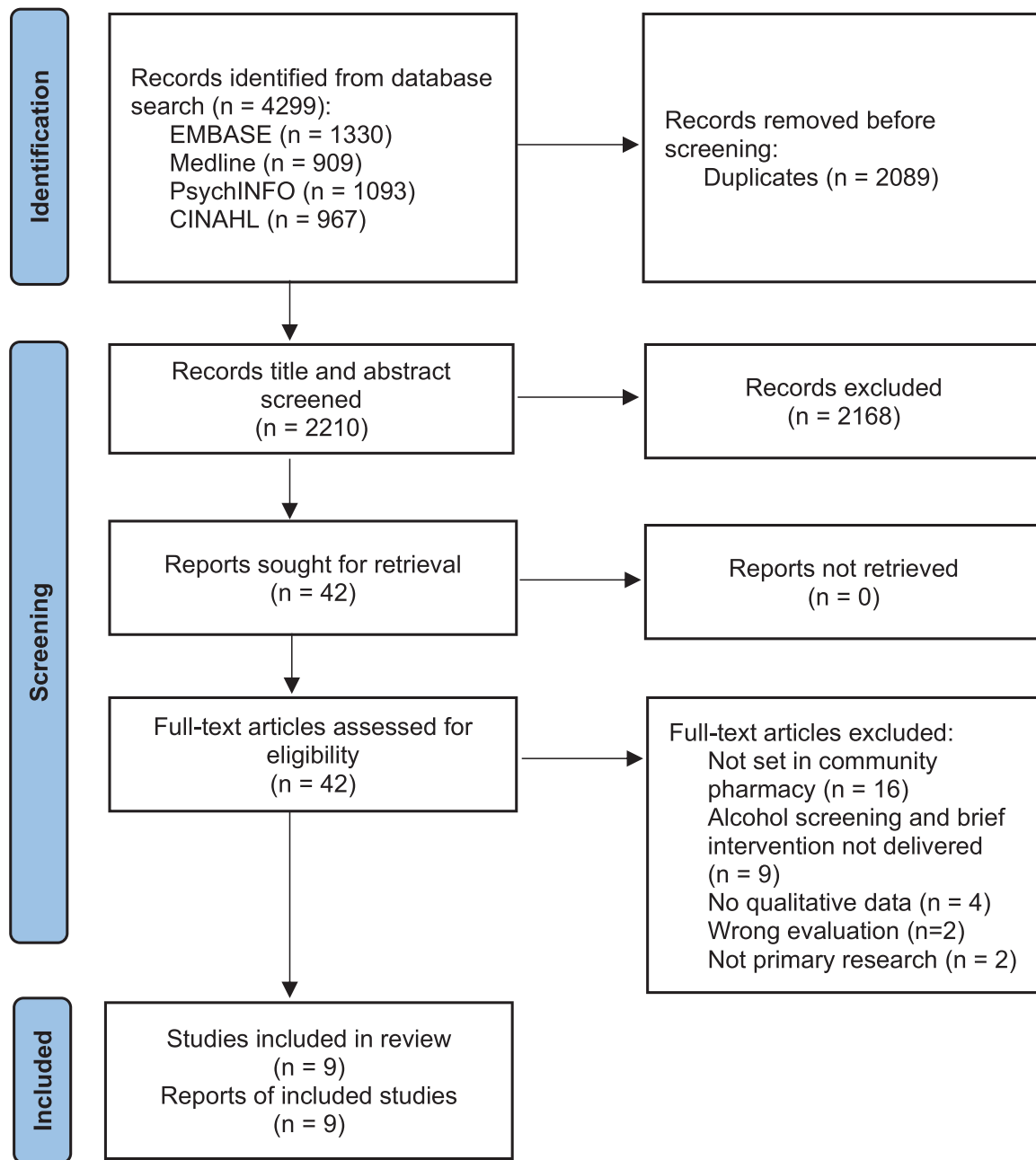**Figure 1.** PRISMA flow diagram illustrating the study selection process.

Awareness, training, and communication skills

This theme covers attributes held by staff and customers that could influence delivery of SBI, reflecting the 'Capability' component of COM-B and in which four sub-themes were identified.

Non-confrontational, empathetic communication skills

Pharmacy staff demonstrated the importance of non-confrontational, empathetic communication skills with customers when engaging them with SBI. This staff skill was seen as important by staff and customers when raising the topic of alcohol [16, 34–40] with some customers' further engagement with SBI and perceptions of acceptability being contingent on it [34–37, 40, 41]. Staff empathy and non-judgmental approach were also reported to potentially promote customer honesty in an alcohol assessment [35].

Not all staff demonstrated these communication skills, finding engaging customers difficult as a result [34, 36] but the benefit of training in communication skills was recognized by pharmacists in one study [34].

Alcohol-related knowledge

In addition to being empathetic, pharmacy staff alcohol-related knowledge also influenced how alcohol SBI was delivered. Pharmacists' knowledge of medications [16, 34, 36] and conditions affected by alcohol use such as blood pressure [16] enabled some to personalize the intervention given to customers who were drinking at risk.

However, pharmacists in one study examining provision of 'alcohol-related health information and advice' to older customers reported a lack of knowledge and skill beyond giving advice about medications in the context of their alcohol

Table 2. Details of included studies.

Study, year and country	Study design	Study aim(s)	Number and type of participant(s) in qualitative component	Qualitative data collection and analysis method(s)	Details of SBI	Staff involved in SBI delivery	Details of customer eligibility for SBI	Did staff have training?
Brown et al. 2014, UK	Mixed methods	Evaluate the acceptability of alcohol screening and brief interventions to women accessing emergency hormonal oral contraception in community pharmacies	Pharmacists (n = 14)	Interviews; thematic analysis using a framework approach	Service pilot of AUDIT and brief advice (not described further) to women presenting for emergency contraception. If AUDIT score >19 then no brief advice but referred on to appropriate services.	Pharmacists only	Women presenting for emergency contraception	Yes[a]
Dare et al. 2017, Australia	Qualitative	Explore the barriers and enablers influencing Western Australian community pharmacists' knowledge, confidence, willingness and practice in engaging older clients in alcohol-related health discussions	Pharmacists (n = 14)	Focus groups; thematic analysis	'Alcohol related health information and advice' as part of existing care. No further detail.	Pharmacists only	Customers aged >60 years	Not specified
Fitzgerald et al. 2008, UK	Mixed methods	Evaluate the feasibility and acceptability of the provision of brief interventions on alcohol in community pharmacies	Pharmacists (n = 6); Pharmacy customers (n = 19)	Interviews; framework analysis approach	Following consent for study customers completed FAST questionnaire with pharmacist and given a brief intervention[b] if score >2.	Pharmacists only (medicine counter assistants could offer study involvement)	Customers enquiring about the study or asking for certain products or services[c]	Yes[d]
Hall et al. 2019, UK	Qualitative	Identify the key contextual influences on perceived appropriateness and feasibility of delivering IBA in alternative community settings by non-specialist staff	Pharmacists (n = 6); Pharmacy technician (n = 1); counter staff (n = 2); health champion/smoking cessation advisor (n = 1; supervisor (n = 1)	Interviews; thematic analysis	Service pilot of AUDIT-C self-completion scratch-card and information leaflet tailored to each risk category identified from AUDIT-C (category thresholds not reported). Staff engaged increasing risk customers in a targeted brief conversation about alcohol consumption[e]. Participants in the "high risk" category advised to contact their GP or local alcohol support services.	Pharmacists and non-pharmacist staff	All adult customers	Yes[f]

Table 2. Continued

Study, year and country	Study design	Study aim(s)	Qualitative data collection and analysis method(s)	Number and type of participant(s) in qualitative component	Details of SBI	Staff involved in SBI delivery	Details of customer eligibility for SBI	Did staff have training?
Hattingh et al. 2016, Australia	Mixed methods	To evaluate an SBI intervention in community pharmacies through assessing (i) the feasibility of recruiting and training pharmacists in SBI techniques, (ii) the acceptability of SBI for alcohol use among consumers in pharmacies, (iii) process outcomes for pharmacists delivering SBI and (iv) reten-tion' of consumers at three months	Interviews; analysis using general in-ductive approach	Pharmacists (*n* = 10)	Customers provided study information then consented to AUDIT questionnaire with pharmacist followed by brief intervention[g] if AUDIT score ≥8 and provided alcohol booklet. If AUDIT >20 also ad-vised to see doctor or specialist.	Pharmacists only	Customers requesting cer-tain prescrip-tion or non-prescription medications[h]	Yes[a]
Jamie et al. 2019, UK	Qualitative	1. Explore patients' experiences of alcohol-related discussions within MURs 2. Understand the particular experiences of patients from socio-economically deprived areas vis-a-vis pharmacy-based alcohol-related discussions.	Focus groups; the-matic analysis	Pharmacy customers (*n* = 9)	'Alcohol-related discussions' within a medication use review as part of existing care. No further detail.	Pharmacists only	Customers undergoing MUR	Not specified
Krska and Mackridge 2014, UK	Mixed methods	1. Explore the views of com-munity pharmacy staff, the general public and other stakeholders towards phar-macy- based alcohol screening and advisory services 2. Involve all relevant stakeholders in design-ing acceptable and feasible pharmacy-based alcohol screening and advisory serv-ices 3. Evaluate a pilot pharmacy-based alcohol screening and advisory service from multiple perspectives	Interviews and direct observa-tion of pharmacy environment; the-matic analysis	Pharmacy customers (*n* = 10); pharmacies (*n* = 5)	Service pilot of AUDIT-C pre-screen followed 'as appropriate' by referral to pharmacist for com-pletion of AUDIT and discussion in private area. Direct referral to local al-cohol treatment service could be offered	Pharmacy support staff did AUDIT-C Pharmacists did full AUDIT and dis-cussion	All customers	Yes[i]
Mackridge et al. 2015, UK	Mixed methods	To develop and apply a model for in-depth scrutiny of community pharmacy-based screening and intervention services with feedback to service providers to support development of best practice	Ethnographic observation, interviews, and interactive feedback with pharmacy staff; constant compar-ison technique	Pharmacies (*n* = 5); SBI consultations (*n* = 9); pharmacy customers (*n* = 16)	Commissioned service. Customers pre-screened using AUDIT-C and if scored >5 then offered an in-depth consulta-tion framed around a full AUDIT assessment.	Any member of staff could do AUDIT-C Pharmacist or other trained member of staff did AUDIT and consultation	Not specified	Yes[a]

Table 2. Continued

Study, year and country	Study design	Study aim(s)	Qualitative data collection and analysis method(s)	Number and type of participant(s) in qualitative component	Details of SBI	Staff involved in SBI delivery	Details of customer eligibility for SBI	Did staff have training?
Quirk et al. 2016, UK	Qualitative	Use qualitative data from a process study nested within a community pharmacist brief intervention trial to study research participation effects	Interviews; framework analysis	Pharmacy customers (n = 24)	Customers given study information and asked 'how often do you have three or more drinks on a single occasion?'—if monthly or more then offered AUDIT by pharmacist in consultation room. If AUDIT score 8–19 then consented to study and randomized to leaflet or brief intervention.[j] If AUDIT score >19 then given written materials and letter with AUDIT result and advise to see GP. Pharmacist also offered to fax letter and book appointment with GP.	Pharmacists and pharmacy support staff asked single question. Pharmacists did AUDIT and brief intervention.	Customers exhibiting one or more specified behaviours[k]	Yes[l]

SBI, screening and brief intervention; AUDIT(–C), alcohol use disorder identification test(–consumption); FAST, fast alcohol use screening test; GP, general practitioner.

[a]Details of training given not provided.

[b]Included: feedback on screening and risks to health; explanation of sensible drinking and units in clients' preferred drink(s); discussion of pros and cons of current drinking pattern and link with presenting issue, discussion of options for cutting down, recommendation to seek further advice, written information.

[c]Emergency hormonal contraception; advice or products to address sleep difficulties or fatigue/lethargy/a feeling of being 'run-down', smoking cessation/reduction.

[d]Pharmacists received 2-day training course covering problem alcohol use in Scotland, attitudes to alcohol use, drinking guidelines, screening tools, motivational interviewing and brief intervention, how and where to refer clients and the study protocol. Medicine counter assistants had a day of training to enable them to correctly identify possible clients for study participation.

[e]This involved three questions: how does your score make you feel?; what other benefits might you get from drinking a little less?; how do you think you could drink a little less?

[f]Staff involved received a self-explanatory IBA kit developed specifically to be self-explanatory and require minimal training or explanation for non-expert staff.

[g]Conversation using motivational interviewing technique to facilitate behaviour change.

[h]Non-prescription medications relevant to alcohol use such as 'hang-over cures', reflux/heartburn medications and sleep aids; prescriptions for certain chronic conditions that require diet modification (e.g. peptic ulcer disease, diabetes); prescriptions for medications contra-indicated with alcohol; prescriptions for medications with increased risk due to increased drowsiness (e.g. certain anti-psychotics, hypnotics and opioid analgesics).

[i]Pharmacy staff received 2-h training event facilitated by local alcohol treatment service covering alcohol-related illness, units, local alcohol services and referral mechanisms, and the use of standard screening tools to categorize drinking and appropriate action to take. How to identify and approach potential service users was discussed, but this training did not cover delivery of behavioural interventions. Also provided with details of free electronic training.

[j]A 10-min discussion based on structured intervention protocol plus written information.

[k]Viewing study posters and flyers; making a general health query or seeking advice linked to alcohol use; purchasing over the counter products for smoking cessation aids, gastrointestinal remedies, sleep aids and central nervous system depressants; receiving any of the following pharmacy services: smoking cessation, medication use review, health check or emergency hormonal contraception; presenting medication prescriptions for: cardiovascular disease, depression or anxiety, diabetes or gastric problems (taken from *Dhital et al.*).

[l]Pharmacists received 7 h training on trial procedures and intervention delivery, involving communication skills training influenced by the perspective of motivational interviewing. Pharmacy support staff attended a brief training session on how to identify potentially suitable participants for the trial.

Table 3. Themes according to COM-B component and supporting quotes organized by sub-theme.

Theme (COM-B component)	Sub-theme	Supporting quotes
Awareness, training and communication skills (Capability)	Non-confrontational, empathetic communication skills	'"It's not 'do you drink alcohol?' It's 'I'm just letting you know', and then 'well, oh yes I have a drink every night', and then we'll be like 'oh well I'll choose a different product for you', or 'don't take this at the same time', or something, so that you can keep the conversation going a bit. .. .But that does need some training, because that's hardly a question, it's more giving information so it doesn't seem like a confronting interrogation."' (pharmacist, first order, Dare *et al.* [34]) '"it's more, amenable to talk here, about it because I - I can be honest and don't feel, that people are going to be judgmental"'(customer, first order, Jaime et al. [35])
	Alcohol-related knowledge	'"… some people that were on high risk obviously and moderate risk we spoke to them if they had any blood pressure problems or, you know you usually have the medication next to you because you have dispensed something and have a little bit of a discussion how reducing alcohol intake can reduce blood pressure"'. (pharmacist, first order, Hattingh et al. [16]) '"information's out there on interventions and that sort of thing but there's not really a... [guide] on how to do it"' (pharmacist, first order, Dare et al. [34]).
	Using alcohol screening tools	'All pharmacists agreed that working through the AUDIT scores with the consumers provided an opportunity to talk about alcohol use' (second order, Hattingh *et al.* [16]) '"The more you don't do it, the more and more you kind of, the knowledge kind of just slips away a little bit."' (pharmacist, first order, Brown *et al.* [36])
	Customers' awareness of their own risk	'many of them [customers] were not aware of the amount they were drinking and how that translated into units' (second order, Brown *et al.* [36]) '"I would say it would be worthwhile to other people but I didn't really find it worthwhile. I don't feel I've got a problem with alcohol."' (customer, first order, Fitzgerald *et al.* [37])
Physical and social opportunities for SBI (Opportunity)	Time and competing demands	'Researcher field notes identified inconsistent availability of trained staff owing to other work activities or shift patterns' (second order, Mackridge *et al.* [38]) '"The potential issue with that [lack of time] is people might be ready to have that conversation right now and they might [not have that]... desire to have that in... a weeks' time or they may not feel comfortable having that discussion with someone else, so that's a potential issue."' (pharmacist, first order, Dare *et al.* [34])
	Existing pharmacy services	'"When alcohol use comes up it is invariably associated with prescription medication – "it is 'will it be ok to drink while I'm taking this?' There is never any other time where I would feel comfortable bringing it up."' (pharmacist, first order, Dare *et al.* [34]) '"I just always bring it up anyway in when we are doing the smoking [cessation] and I think they're a bit more honest … but when you're outside in the shop we just sort of, I think they get a bit more embarrassed about it."' (counter assistant/smoking cessation advisor, first order, Hall *et al.* [39])
	Privacy and private spaces	'"… maintaining that level of privacy while you're discussing very personal questions, that was probably a big challenge"' (pharmacist, first order, Hattingh *et al.* [16]) '"There were no customers in so it wasn't too bad but if it had have been busy I wouldn't have done it..Just like err may be a private screened area just like you know like a photo booth style curtain or something just at the end of the counter – nothing more than that – I'm not talking about a private room or anything"' (customer, first order, Krska and Mackridge [40])
	Existing relationships	'"I think probably most of them [the clients who took part] know myself and the staff so I think they were comfortable with us discussing it."' (pharmacist, first order, Fitzgerald *et al.* [37]) 'in some cases the pharmacists made a judgement about whether or not to approach the topic with them, based on their knowledge about whether they had a regular partner and whether they were a potential candidate for an alcohol IBA' (second order, Brown *et al.* [36])
	Promotional and written materials	'"if the adverts and the promotional material are there sort of for people to see that can sort of lead for them to come in to speak to us rather than having to approach people about it"' (pharmacist, first order, Hall *et al.* [39]) '"The leaflet made me think about things......and in this case thinking about my drinking meant I drank slightly less"' (customer, first order, Quirk *et al.* [41])
	Corporate restrictions	'Key barriers to service provision raised by staff were […] constraints on commissioned service (e.g. maximum numbers of service episodes or restrictive targeting)' (second order, Mackridge *et al.* [38]) 'The pharmacists who participated in the alcohol SBI provided positive feedback and highlighted that flexibility in approaching and working with consumers worked well' (second order, Hattingh *et al.* [16])

Table 3. Continued

Theme (COM-B component)	Sub-theme	Supporting quotes
Balancing beliefs of worth with concerns of taboo (Motivation)	Belief in ability to help	'"I think doing the alcohol study and the screening process it sort of, it makes the invisible visible. It brings that out … It allows the person to evaluate their own condition more objectively. … It will definitely allow them to think about what they're doing and their whole lifestyle so it may have an implication on their health, eating habits as well because often alcohol is associated with going out"' (pharmacist, first order, Hattingh *et al.* [16]) '"Not everyone was really wanting to cut down even though they knew they were drinking more than was recommended. But I mean everyone I think learned something from it."' (pharmacist, first order, Fitzgerald *et al.* [37])
	Alcohol as taboo	'"There are certain patients where you can smell the alcohol on them and they are regulars and you know they do have an issue, and bringing it up is sometimes a little bit difficult and uncomfortable, so generally we don't like to"' (pharmacist, first order, Dare *et al.* [34]) 'service users did not report concerns regarding discussing alcohol in the pharmacy' (second order, Mackridge et al. [38])
	Staff role legitimacy	'"We do enjoy doing all the service and different promotional activity that we do here"' (pharmacist, first order, Brown *et al.* [36]) '"I definitely found everybody quite honest and open and I think people especially with all this publicity about pharmacies people do sort of see you as a health professional."' (pharmacist, first order, Fitzgerald *et al.* [37])
	Impact on staff	'"… it made the pharmacists to be more aware and to be more proactive as well when they approach customers"' (pharmacist, first order, Hattingh *et al.* [16])
	Remuneration	'Without clear financial incentives, screening and brief intervention cannot be expected to be undertaken during busy times' (second order, Hattingh *et al.* [16]) '"It wouldn't make any difference to me how much we got paid. I would do the service if I felt it was the right thing to do)"' (pharmacist, first order, Brown *et al.* [36])

use. In this study by Dare *et al.* [34] staff did not receive formal training in SBI and this may partly explain this perceived lack of capability. Staff were reported to have had prior training relating to SBI in seven of the nine included studies (see Table 2). However, there was limited detail of what the training involved and its impacts on staff and customer behaviour.

Using alcohol screening tools

Three studies elicited staff experiences of using alcohol screening tools, all of which involved the AUDIT [16, 36, 38]. Pharmacists in one study found the AUDIT easy to use and that the tool facilitated discussion about alcohol use [16]. Conversely in another study [36] some pharmacists reported feeling unfamiliar with the AUDIT, consequently reducing motivation to undertake SBI. A reason for the different views of the AUDIT between the two studies may be a consequence of differences in opportunities to gain experience in its use. In Hattingh *et al.* [16] the AUDIT could be completed with any adult customer whereas in Brown *et al.* [36] it was only done within an emergency hormonal contraception (EHC) service. Authors in the latter noted pharmacists with a low demand for the service did not gain experience with AUDIT use thus ability to use the tool was not acquired or even lost.

In a third study, researchers observed staff using the AUDIT and noted some were uncomfortable asking the AUDIT questions and changed question wording as a result, reflecting a significant influence of motivation on staff ability to use the AUDIT [38]. The limited detail about the training provided to staff in these three studies meant it was not possible to examine if the varying staff perceptions of the AUDIT were related to differences in training.

Customer awareness of their own risk

When considering the capability aspects of customers, it was evident that many customers engaging with SBI were unaware if they are drinking at risk or not [16, 35–38]. This was a result of a lack of knowledge of recommended low-risk drinking levels [37, 38], an unawareness of amount consumed [16, 36, 37], or a lack of knowledge of how to calculate the amount consumed to compare to recommended levels [36, 38]. This lack of customers' awareness of their own risk may be less relevant to those drinking at the highest risk, with some pharmacists [16] and customers [41] reporting that those at the highest risk were mostly aware of their problem but were less motivated to engage in SBI.

When considering those customers who engage with SBI, there is an evident group of 'deniers'—those who undergo alcohol assessment and are identified as drinking at risk but do not perceive themselves to have a problem. Consequently 'deniers' may not see a brief intervention as relevant or of benefit to them [34, 37, 38]. Why some customers saw benefit from SBI and others did not in part reflected their underlying knowledge and understanding of risk from alcohol with some 'deniers' seeing a 'problem' only equating to alcohol dependence, a view that could also be acquired through comparison with others [37, 41].

Physical and social opportunities for SBI

Our second theme concerns the 'Opportunity' component of the COM-B model and covers aspects of the community pharmacy setting and features of the SBI that can influence delivery. Six sub-themes were identified within this theme.

Time and competing demands

Undertaking SBI in the context of time and competing demands in pharmacy was a challenge experienced by pharmacists and non-pharmacist staff across the majority of the studies [16, 34, 36–40]. This was exacerbated when a pharmacy was busy [16, 36, 39], no dedicated staff time for SBI [39], and when only certain staff could undertake SBI as engaging customers were reported to be dependent on availability of these staff [36, 38–40].

Competing demands on staff time were reported to potentially lead to fewer customers being engaged by staff [34, 37, 39]. Timing of SBI can be crucial and staff should be able to engage customers at the right time. Competing demands and lack of time were reported by some to reduce staff ability to grasp opportunities when customers may be ready and willing to engage [34]. Additionally, for some pharmacists who experienced significant time pressures from their existing work demands, undertaking SBI was perceived to add to this pressure, consequently reducing motivation for it [36].

With regard to customers' time, observation in one study noted how customers declined alcohol assessment for the reason 'don't have the time', although did not elicit whether this was a genuine reason for not engaging or merely an excuse [38].

Existing pharmacy services

Although existing pharmacy services are a demand on both staff and customer time, these services presented an opportunity for SBI. For example, dispensing medication was reported as a good opportunity to ask about alcohol use whilst customers were waiting [16, 39]. It also created opportunity through targeting customers whose medication requests may suggest alcohol misuse, for example, heartburn [16], and through discussions about potential interactions between medication (or condition being treated) and alcohol [34–36]. Discussions of alcohol interactions may be initiated by staff or customers with the latter circumventing staff motivational barriers to asking customers about their alcohol use [34].

Formal medication reviews (medication use reviews in UK practice and home medicine reviews in Australian practice) [34–36, 39], smoking cessation [37–39] and health assessments [34] were also successfully used by some staff to engage customers with SBI. Staff were more confident asking about alcohol within these services, perceiving it as a more routine part of such services and less likely to make clients feel targeted [34, 36, 39].

Despite staff perceptions of opportunity for SBI being provided by these services, two studies conducting in-pharmacy observation highlighted such opportunities were not always taken [38, 40]. No reasons for this were reported in the studies.

A possible exception to the opportunity from existing pharmacy services was indicated in Brown *et al.* where SBI was exclusively offered within an EHCservice [36]. Restricting SBI to customers using a single service meant SBI was dependent on uptake of that service, with low uptake a reality for some pharmacists and consequently fewer opportunities for SBI [36]. Some of the pharmacists also saw alcohol as a particularly sensitive topic for this customer group.

When considering services outside of pharmacy, SBI can involve offer of onward referral of those drinking at risk to other services. Two studies made a brief reference to this, indicating the presence of clear pathways to refer to other services seems to be a facilitator [39] and their absence a barrier to SBI delivery [16].

Privacy and private spaces

Privacy and private spaces in pharmacies were also important factors for consideration. Having sufficient privacy when undergoing SBI was important to customers [37, 38, 40], and some staff and customers regarded its absence to prevent customers engaging with and being honest in SBI [39, 40]. Some staff found attaining privacy in the pharmacy setting difficult, especially when the pharmacy was busy [16, 34, 39] but the use of consultation rooms or private areas was perceived by both staff [16, 39] and customers [38, 40] to facilitate the required level of privacy.

However, it was noted in one study that staff use of private areas for SBI was mostly only when it was performed in conjunction with an existing service that used such areas [39]. As discussed earlier, using existing services to ask customers about alcohol was perceived to prevent customers from feeling 'targeted' about their alcohol use. This same concern may in part explain this limited use of consultation rooms solely for SBI as some pharmacists in one study felt use of consultation rooms could also make customers feel 'singled out' [34]. However, customers in the included studies did not express this view and were supportive of using consultation rooms or private areas to attain privacy [37, 38, 40].

Existing relationships

For some staff, knowing their customers was as an opportunity for SBI through approaching customers they suspected may be drinking [16, 39]. The presence of an existing relationship could also encourage customer engagement and honesty with SBI. This was perceived by some pharmacists to be a consequence of these customers feeling more comfortable with staff and was reflected in customer views [34, 37, 38].

Existing relationships between staff and regular customers receiving SBI also provided an opportunity for staff to ascertain changes in drinking behaviour when these customers re-attended the pharmacy [16, 39]. However, the opportunities for SBI provided through existing relationships could become saturated once most regular customers had been engaged. This was of most significance in pharmacies with a high proportion of regular customers [38, 39].

Additionally, existing relationships could limit opportunity if pharmacists perceive an 'over-familiarity' with customers through knowing them very well or knowing them outside of the work environment [34, 36, 39]. This could increase staff perceptions of difficulty and feelings of embarrassment in engaging these customers [36, 39] and through staff believing some customers do not 'need' an alcohol assessment [36].

Promotional and written materials

Promotional materials such as displays, posters and leaflets prompted some customers to 'make the first approach' about alcohol use [36, 37, 39, 40]. Staff also used promotional materials to broach SBI with customers, including the use of local or national alcohol awareness campaigns [34, 39]. However, for many staff the opportunity that promotional

materials provided for customers to bring up their alcohol use was particularly valued [36, 37, 39].

In addition to promotional materials, staff were provided with written materials to give customers in four of the studies [16, 36, 39, 41]. Staff reported that these materials should be easily accessible and printed format seems to be favoured [34, 41]. Providing written materials to customers as part of SBI was perceived by some pharmacists to enhance delivery through increasing customer knowledge relating to their alcohol use and risk and consequently motivation to reduce their drinking [16, 36, 41]. Written information may also serve as a reference for customers after SBI and could benefit customers such as the 'deniers' who do not perceive a verbal intervention as relevant to them [41].

Corporate restrictions

Limitations on displaying promotional materials were an instance of corporate restrictions potentially reducing the opportunity for SBI, as seen in two studies [36, 40]. Restrictions on who could be engaged with SBI were similarly seen to reduce opportunities as did restricting the number of interventions staff could undertake per week/month [36, 38].

This contrasts with pharmacists from other studies where such restrictions were not imposed and as such pharmacists used a variety of existing services and approaches, perceiving this flexibility to be beneficial for engaging customers [16, 39].

Balancing beliefs of worth with concerns of taboo

The 'Motivation' component of the COM-B model is reflected in this third theme. Five sub-themes within this theme cover the influences of staff and customers' thought processes on the delivery of SBI.

Belief in ability to help

Motivation for many pharmacists to deliver SBI surrounded their belief in ability to help customers [16, 34, 36, 37]. Many pharmacists perceived they could help through providing customers knowledge and enabling them to understand their risk from alcohol [16, 36, 37].

The desired effect of SBI for people who are drinking at risk is a reduction in their alcohol consumption. Some staff saw positive impacts of SBI on drinking behaviour through being able to follow-up with existing customers [16, 39], increasing their motivation to undertake SBI with other customers. For other pharmacists there was uncertainty about changing customers' drinking behaviour, perceiving that some customers will and others won't [37, 39]. However, staff still delivered SBI despite this view as they perceived customers gain knowledge from it and the process could enhance staff-customer relationships [16, 36–38].

Customer experiences were in keeping with perceptions of pharmacists, showing an acquisition of knowledge and risk awareness for many [38, 40, 41] but also mixed motivation to reduce alcohol consumption.

Alcohol as taboo

A barrier to staff motivation to deliver SBI was individual perceptions of the alcohol topic. Some staff perceived alcohol as a taboo topic and had a lack of confidence in asking customers about their alcohol use, driven by feeling uncomfortable or embarrassed [34, 36, 38]. Such feelings could be exacerbated if staff perceived customers to have an alcohol problem and could lead to reduced motivation to engage customers [34, 37].

For staff who engaged customers, feelings of discomfort could also impact their use of alcohol screening tools, as shown by observation of some pharmacists changing the wording of AUDIT questions in one study [38]. For other staff who saw alcohol as a sensitive topic, motivation to engage was impacted by concerns of offending customers and the possible negative consequences of this including loss of custom [36], damaging existing relationships [16], and aggressive reactions [34, 37].

Conversely, to these staff concerns, customer participants did not describe feeling offended nor embarrassed when being asked about alcohol [35, 36, 38].

Staff role legitimacy

Despite the concerns about the alcohol topic expressed by some, pharmacists across five of the studies regarded SBI to be an appropriate activity to undertake as a community pharmacist [16, 34, 36, 38, 39]. Further perceptions of role legitimacy for pharmacists were through the view that SBI was in keeping with the expanding roles of pharmacists into health promotion services, providing motivation through meeting contractual requirements as well as enjoyment of such roles [16, 36, 39].

Customer views largely reflected those of pharmacists, perceiving SBI by pharmacists to be appropriate [16, 35, 36, 38, 40] apart from one study describing a minority of customers seeing general practice to be more appropriate but provided no further detail to gain a deeper understanding of this finding [38].

Four of the studies described non-pharmacist staff being involved in SBI delivery (see Table 2) but the role legitimacy for non-pharmacist staff was not clear from these studies. An apparent exception to this were UK staff in healthy living champion roles, which were seen to be appropriate for delivering SBI and perceived to enhance delivery [38, 39].

When considering customer motivations to engage with SBI relating to staff role legitimacy, pharmacists believed many customers view them as health professionals and see pharmacy as part of healthcare [16, 37, 39]. This was perceived to encourage customers to engage with SBI through creating an atmosphere of trust [34, 37, 39]. Conversely, it was perceived by a pharmacist in one study that being seen as a health professional could reduce customer honesty about alcohol use [39] but none of the studies gave customer's views or experiences regarding honesty to understand the truth of this perception.

Impact on staff

Negative SBI experiences with customers were acknowledged by some pharmacists in one study to impact motivation to undertake it in the future [34]. However, it was evident across the studies that staff gaining experience in SBI delivery increased their confidence to ask customers about alcohol. These gains in confidence consequently increased staff motivation to proactively engage customers both in SBI [16, 39] as well as pharmacy services in general [38]. Pharmacists in two studies also saw that delivering SBI could positively impact staff-customer relationships through showing an interest in their customers' health [16, 36].

Remuneration

The final aspect of motivation relates to remuneration for delivery of SBI, for which perceptions from three studies were mixed [16, 34, 36]. None of the studies reported an amount of remuneration. For some pharmacists, remuneration could have a motivating role to overcome challenges relating to time and competing demands [16, 34]. However, remuneration does not appear to be a driving factor for some pharmacists who reported that the ability to help customers was far more important [36].

Application of behaviour change wheel

A summary of the barriers and facilitators that were described above under the different themes mapped against the COM-B model is provided in Table 4.

The application of the BCW resulted in five potential elements of community pharmacy SBI that address the identified barriers. First, a formal training program for all customer-facing staff. This should focus on communication skills, use of screening tools and educating about customers' willingness for SBI in addition to conducting brief interventions. The second element is aligning SBI with multiple other pharmacy services including dispensing medication, medication reviews, smoking cessation and health assessments. As is common practice with many of these services, our third element is delivering SBI in private areas of the pharmacy or consultation rooms. The fourth element is the use of displays, adverts, posters and leaflets within the pharmacy promoting pharmacy SBI and highlighting alcohol health risks. Additionally, easily accessible written information about alcohol use and its effects on health should be available to give to customers. The final element is offering to follow-up customers, including the option of referral to other services using accessible, clearly defined pathways. Further detail of these elements, the purpose of the intervention functions operationalized, and the barriers being addressed is provided in Table 5.

Discussion

To our knowledge, this is the first qualitative evidence synthesis examining barriers and facilitators to SBI in community pharmacy. We used the COM-B model to describe influences on SBI delivery and understand how these influences facilitate or impede this delivery from a behavioural perspective. Facilitators include: (i) non-confrontational, empathetic communication by staff; (ii) aligning SBI with multiple other pharmacy services; (iii) role legitimacy of pharmacists along with staff belief in their ability to help. Notable barriers include: (i) lack of staff knowledge and experience of screening tools; (ii) multiple other demands on staff time; (iii) staff concerns of causing offense or feeling uncomfortable. The greatest proportion of both barriers and facilitators identified were within the 'Opportunity' component of the COM-B model but we regard each component as equally important, reflecting the

Table 4. Summary of barriers and facilitators to SBI delivery organized by theme reflecting each COM-B component.

Theme (COM-B component)	Facilitators	Barriers
Awareness, training and communication skills (Capability)	+ Staff non-confrontational, empathetic communication skills + Training in communication skills + Staff knowledge of conditions and medications affected by alcohol use + Having and gaining experience in using screening tools + Many customers unaware of own risk	- Staff with limited non-confrontational communication skills - Lack of training and knowledge in delivering SBI - Staff lack of experience with alcohol screening tools - 'Deniers' - customers drinking at risk but don't see this as a problem
Physical and social opportunities for SBI (Opportunity)	+ Aligning SBI with medication dispensing + Aligning SBI with medication reviews, smoking cessation and health assessments + Clear pathways to refer to other services + Private areas and/or consultation rooms + Staff knowing existing customers that SBI could benefit + Existing customers' familiarity with staff + Regular returning customers + Posters and displays promoting SBI + Local/national alcohol awareness promotions + Easily accessible written materials to provide customers	- Multiple other demands on staff time - Pharmacy busy with customers - No dedicated staff time for SBI - Insufficient staff able and available to undertake SBI - Delivering SBI only within a single pharmacy service - Lack of referral pathways to other services - Lack of privacy due to presence of other customers - A high proportion of customers being regulars - Over-familiar staff-customer relationships - Restrictions on number of permitted SBI per week/month - Restrictions on which customers can be targeted - Restrictions on using promotional materials
Balancing beliefs of benefits and appropriateness with concerns of taboo (Motivation)	+ Staff believing they can help customers + Staff seeing positive changes in customers drinking behaviour + Most customers not embarrassed or offended to be asked about alcohol use + Pharmacist and healthy living champion role legitimacy to deliver SBI + SBI in keeping with expanding roles in community pharmacy + Pharmacists seen as trusted health professionals + Staff confidence in engaging customers + Remuneration for delivery of SBI	- Staff seeing alcohol as a taboo subject to raise - Staff feeling uncomfortable or embarrassed talking about alcohol - Staff concerns or experience of offending customers - Uncertainty on intervention effect on customer drinking - Some customers see GP surgeries as more appropriate for SBI

COM-B, Capability Opportunity Motivation—Behaviour; SBI, alcohol screening and brief intervention; GP, general practitioner.

Table 5. Proposed elements of community pharmacy SBI, the BCW intervention functions used and the barriers being targeted.

Proposed element of community pharmacy SBI	BCW intervention function(s) used and purpose	Barriers targeted (component of COM-B model)
Training programme for all customer-facing staff. Training provided should include communication skills, use of alcohol screening tools and brief intervention delivery.	*Training* Provide staff beneficial communication skills and ability in using alcohol screening tools and performing brief intervention with customers. Training all staff who can be involved in SBI delivery in a given pharmacy to maximize staff availability.	Staff with limited non-confrontational communication skills (C) Lack of training and knowledge in delivering SBI (C) Staff lack of experience with screening tools (C) Insufficient staff able and available to undertake SBI (O) Staff feeling uncomfortable or embarrassed talking about alcohol (M)
	Education Educate staff that most customers are not embarrassed or offended to be asked about alcohol. Educate about screening tools, the effectiveness of brief interventions and that the majority customer lack of awareness of their risk and hence engaging a broad range of customers	Lack of training and knowledge in delivering SBI (C) Staff seeing alcohol as a taboo subject to raise (M) Staff concerns or experience of offending customers (M)
Aligning SBI with multiple other pharmacy services such as dispensing medication, medication reviews, smoking cessation and health assessments	*Environmental restructuring* Undertaking SBI when delivering other services to reduce the additional time demand for SBI and facilitate staff using private areas/consultation rooms. The use of multiple services provides multiple different cues for staff to undertake SBI and multiple contexts acceptable to staff to engage customers in SBI.	Multiple demands on staff time (O) No dedicated staff time for SBI (O) Lack of privacy due to other customers (O) Staff feeling uncomfortable or embarrassed talking about alcohol (M)
	Enablement Align with multiple services, as opposed to a single service, to enable staff to conduct SBI more frequently and thereby increase experience. Align with medication services and health services to enable staff to apply their existing alcohol-related knowledge used within these services to SBI.	Aligning SBI with a single pharmacy service (O) Staff lack of experience with alcohol screening tools (C) Restrictions on which customers can be targeted (O)
Delivering SBI in private areas or consultation room	*Environmental restructuring* To enable the attainment of the level of privacy desired by both customers and staff	Pharmacy busy with customers (O) Lack of privacy due to other customers (O)
Using displays, adverts, posters and leaflets promoting pharmacy-delivered SBI and having easily accessible written information about alcohol and effects on health to provide customers	*Environmental restructuring* Materials displayed serve as a cue for staff to engage customers with SBI. Having easily accessible materials to provide customers minimizes staff time spent sourcing such materials.	Multiple other demands on staff time (O) Staff feeling uncomfortable or embarrassed talking about alcohol (M) Restrictions on using promotional materials (O)
	Education Promotional materials used to educate customers aware that SBI is being provided as part of community pharmacy care. Providing written information to increase customers knowledge and understanding of their risk(s) from alcohol.	Some customers see GP surgeries as more appropriate for SBI (M) 'Deniers'—customers drinking at risk but don't see this as a problem (C)
	Persuasion Promotional materials used to stimulate customers to raise their alcohol use with pharmacy staff	Staff seeing alcohol as a taboo subject to raise (M)
Offering to follow-up customers after SBI and/or referral to other services using accessible, defined pathways	*Enablement* Follow up enables staff to see positive effects of SBI delivery, enhancing confidence and motivation for conducting with other customers. Accessible, defined referral pathways can enable staff to offer customers further help that may be beyond their capabilities.	Lack of referral pathways to other services (O) Uncertainty on intervention effect on customer drinking (M)

SBI, alcohol screening and brief intervention; BCW, Behaviour Change Wheel, GP, general practitioner, (C), Capability, (O), Opportunity, (M), Motivation.

model's described interaction of components to produce behaviour [33]. For example, the use of dispensing services in pharmacy (Opportunity) can facilitate delivery of SBI as it provides time (Opportunity) but also utilizes staff knowledge of medications related to alcohol use (Capability) and reduces staff feelings of discomfort (Motivation). Through application of the BCW, we describe five proposed elements of community pharmacy SBI that address the barriers identified in our synthesis.

Our findings are given in acknowledgement of the limitations of the studies included in our review. A strength of our study was the use of a comprehensive search strategy to include all contemporary published evidence; however, identified studies were conducted in the UK and Australia only, and as such application of our findings to other countries may not be appropriate. We highlight that only one of the studies sought

the perspectives of non-pharmacist staff [39]. As such there may be unidentified barriers and facilitators specific to non-pharmacist staff and we suggest that future research should include examining the experiences of customer-facing non-pharmacist staff in SBI delivery.

We used a broad definition of SBI in our inclusion criteria. This meant there was heterogeneity in SBI delivered across the small number of studies included. Additionally, there was limited or no detail on intervention content and as a result, our findings are not specific to one SBI approach. However, we see this primarily as a strength as we believe this enables our findings to be applied more broadly.

It is well known that socioeconomic factors impact alcohol behaviours [2] but these factors may not be captured by the COM-B model as it focuses on the behaviour of individuals [33]. However, the included studies did not report findings

concerning these factors so we believe COM-B was appropriate to our data but recommend further research should also examine the influence of socioeconomic factors on pharmacy SBI. The use of COM-B and BCW enabled identifying intervention functions that could address some of the barriers to delivering SBI in community pharmacy. However, more research is needed to discuss and refine these strategies through a co-design approach and the involvement of relevant stakeholders before testing the intervention elements in community pharmacies.

We are aware of four systematic reviews exploring barriers and facilitators to implementing SBI in healthcare settings for primary care populations but none of these included studies of SBI in community pharmacy [18–21]. A number of barriers reported in these reviews were also identified in our study, suggesting they are not setting-specific. These included a lack of training, time and existing workload, and staff concerns relating to causing offence or embarrassment. Barriers relating to staff time for SBI amidst existing workloads are well recognized in the delivery of other pharmacy services [42, 43]. Barriers in delivering public health services in community pharmacy relating to a lack of staff knowledge, skills and training are also well recognized [12, 42, 43].

Similarly, the facilitators of training, belief in benefit of SBI and staff role legitimacy have also been reported in other settings [18–21]. The key facilitator of aligning SBI with other services was only described in one review of SBI in primary care populations. In this example aligning SBI with well-being clinics or registration sessions was a reported facilitator [21]. However, the role of privacy and private spaces and the importance of non-confrontational, empathetic communication skills have not been reported in the primary care setting [18–21]. Non-confrontational, empathetic communication is recommended by the WHO to effectively deliver alcohol brief interventions [9] and non-judgemental attitudes and communication skills enhance customer use of pharmacy services [44]. With regard to privacy and private areas, the lack of this finding in the primary care setting likely reflects most professional practice here being conducted in private rooms as a norm. However, public and pharmacy customers' perception of a lack of privacy is a well-recognized barrier to use of extended pharmacy services and public health roles [44, 45]. Importantly, our review found sufficient privacy for customers was attainable through the use of private areas and consultation rooms in keeping with research into privacy in the pharmacy setting [46].

Our proposed elements identified through the application of the BCW are considered in relation to SBI implementation research in the primary care setting given the absence of such research in the pharmacy setting.

We describe multiple different elements to be used, in keeping with evidence indicating utilizing multiple strategies is beneficial in increasing SBI implementation in primary care [47]. We first propose a formal training program for all customer-facing staff. Training for staff increases SBI delivery in primary care [48] as does increasing the number of staff trained [49]. Additionally, the need for pharmacy staff training in SBI delivery is in keeping with a number of studies [50–52].

Our proposed element of aligning SBI with other pharmacy services is supported by a UK expert consensus concerning SBI implementation in primary care [53]. We also specify the use of multiple existing services to avoid dependency on a single service. A risk of aligning with a single service was shown in a UK study that integrated an alcohol intervention with existing community pharmacy medication review services [54]. The decommissioning of medication use reviews in the UK meant there was no longer a service for the intervention to integrate with [54].

We are not aware of any evidence to show that the use of private areas or consultation rooms increases SBI delivery (in pharmacy or other settings) but believe it could overcome barriers to privacy in the main pharmacy that prevent customer engagement with SBI. This could help SBI fit into the pharmacy context, an important process in primary care SBI implementation [55].

We suggest using promotional materials to increase customer awareness and promote discussions. Promotional materials in primary care waiting rooms are supported by expert consensus [53] and may increase the occurrence of alcohol discussions between patients and general practitioners [56]. Expert consensus also supports clear referral routes as a way to increase delivery, something recommended in WHO guidance [9, 53] and included in our proposed elements. We also highlight follow-up of customers after SBI to allow staff to see positive effects. Staff being able to see and share the positive effects of SBI is believed to improve SBI implementation in primary care [57].

Conclusion

Our review provides an understanding of the barriers and facilitators to the delivery of SBI in community pharmacy from a behavioural perspective. Using the behavioural change wheel we propose five elements of community pharmacy-based SBI that could facilitate its delivery including training, aligning SBI with other pharmacy services, ensuring privacy, using promotional materials and customer follow-up and referral. Research into SBI in community pharmacy is limited in comparison to other healthcare settings and this review adds to this limited body of research. We propose future research into community pharmacy SBI should use the evidence generated from this review to design interventions that facilitate SBI delivery in community pharmacies and encourage developers to consider using the BCW to identify intervention functions suitable to their context.

Supplementary Material

Supplementary data are available at *International Journal of Pharmacy Practice* online.

Conflict of interest statement

The authors declare that there are no conflicts of interest.

Author contributions

Alexander Smith was the main author and researcher of the synthesis. Kinda Ibrahim was a senior qualitative methodologist

co-conducting the synthesis and contributing author. Helen Stone was co-researcher for the screening and article selection. Qian Y Tan was a co-researcher for data extraction. Alexander Smith, Kinda Ibrahim, Ryan Buchanan and Julie Parkes co-designed the study and prepared the manuscript for submission.

Data availability

No new data were generated or analysed in support of this research.

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