

Stakeholders' perspectives about engagement in communication skills training in an integrated pharmacy curriculum: A qualitative study

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ABSTRACT: Investigating experiences of stakeholders on communication skills training in an integrated pharmacy curriculum is essential to reach high-level outcomes. This study aimed to explore the perceptions of the stakeholders who are connected with communication skills training (CST) in an integrated pharmacy curriculum using the theory of planned behaviour (TPB). A qualitative method was used, and semi-structured interviews were conducted with students, trainers, and simulated patients by using maximum variation sampling. The domains of TPB were adopted and mapped onto the data. All the stakeholders' attitudes toward engagement in CST were affected by the positive consequences of the behaviour. Support from peers and academics were the two factors affecting the students' and the simulated patients' behaviour. Beliefs about other institutions were indicators of the trainers' behaviour. Factors that negatively affect self-confidence of stakeholders' involvement were the most mentioned barriers in an integrated pharmacy curriculum. These findings may inform the development of interventions aimed at increasing the self-confidence of all parties in an integrated CST in pharmacy education. Pedagogies chosen, relationship with colleagues, managing multicultural cohort, organizing issues in an integrated curriculum need attention. The factors that determine students, trainers and simulated patients' dedication to CST is important to develop future arrangements and interventions to ensure the quality of pharmacy education.

KEYWORDS: communication skills training; pharmacy education; integrated curriculum; simulated patient; theory of planned behaviour.

1. INTRODUCTION

The integration of basic science disciplines and clinical sciences within pharmacy curricula has been seen as an increased strategy for facilitating learning and making coherent, engaging educational experiences, due to the multi- and inter-disciplinary nature of pharmacy. The concept of curricular integration where diverse disciplines are connected strategically to reach a facilitating higher-order learning and the boundaries between the disciplines are crossing to create a pharmacist as a cohesive whole is being adopted more widely [1]. Separating basic science and clinical science do not meet the current needs of interdisciplinary learning and practice [2]. Pharmacy degree programs are being encouraged to be provided in an integrated environment by several pharmacy regulatory bodies especially in the US and Europe [3]. In the UK, the most recent 2021 General Pharmaceutical Council (GPhC) standards for the initial education and training of pharmacists' state that Master of Pharmacy (MPharm) degree must be structured in a coherent way by linking the component parts of education and training [4]. The Accreditation Council for Pharmacy Education (ACPE) in the United States and the Canadian Council for Accreditation of Pharmacy Programs also stipulate curriculum integration in undergraduate education [5, 6].

Considering the main objective of pharmacy education is to empower students with the competencies providing them to manage patients' drug therapies for several medical conditions within complex healthcare settings, integrating disciplines and theory with practice is suggested [7]. Curricular integration includes horizontal and vertical dimensions which outlines the direction of integration. In pharmacy programs, horizontal integration usually alludes to same concepts from different perspectives provided within the

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same level/year of a program such as discussing pain in terms of chemistry, pharmacology or pharmaceuticals, while vertical integration alludes generally to outline the progression of information acquisition over time. In vertical integration, communication skills training is provided in a logical order where the complexity is increasing based on the prior learning [8, 9]. In horizontal integration, academics from different fields work on a certain content collaboratively [10]. A pharmacy curriculum might provide topics within modules placed in horizontal themes such as the respiratory system, the cardiovascular system, and so on, rather than offering content with courses in medicinal chemistry, pharmacology, etc. [7].

The importance of gaining communication skills throughout the years in undergraduate pharmacy education is indisputable [11]. Besides, providing communication skills training (CST) in an integrated environment contributes high-level outcomes. The basis of offering CST in an integrated environment is to provide students opportunity to contact with patients earlier in curriculum. Student motivation to develop attitudes including showing empathy, considering the needs of patients, and acknowledging professional identity, has been achieved in an environment where students find a chance to enable themselves to establish relationship with patients early in the curriculum. Making interactions with patient starting from the first year helps students to enter patients' world, to find many opportunities to realize how establishing effective communication would affect outcomes of treatment [12]. Additionally, teaching communication skills in an integrated curriculum help students develop basic skills in their earlier years and adopt these basic skills into specific clinical conditions related to different body functions-disease states with increased complexity.

1.1. CST in an integrated environment at the University of Nottingham

University of Nottingham, School of Pharmacy (UoN) implements a fully integrated model whereby the curricula of pharmacy are delivered as an approach designed based on a body function/disease-state. The content is structured starting with single disease states and progressing through to complex co-morbid situations [13]. Gülpınar et.al described detailed information about the structure of integrated undergraduate education and its relevance with communication skills at UoN.[13]

UoN offers basic communication skills with lectures and is providing an environment, which enables students to encounter with real patients at the first year under the "Fundamentals of Pharmacist" mandatory module. When moving on through the years with the basic knowledge of communication skills, i.e. showing empathy, asking open-ended question, reflective listening, managing conflicts, which provide students to use communication skills efficiently, is designed in the different modules including different body functions/disease states. CST within the curriculum was assessed by using integrative assessment methods, including written examinations, case-based examinations, and objective structured clinical examinations (OSCEs).

Even though there are some studies exploring integrated curriculum from various perspectives in pharmacy education, no studies have been found investigating experiences of stakeholders on CST in an integrated pharmacy curriculum. In order to understand the impact on learning, students' perceptions of teaching and assessment procedures are seen important as well as the teaching method used [14]. Learners' point of view on materials used, their learning approach and outcomes are affected by their perceptions [14, 15]. Positive dispositions make students more available to attain richer, more stable knowledge structures in its field [16]. Additionally, negative perceptions of communication skills might lead to lose the importance of these skills and students might decide not to improve these skills when interacting with patients [17]. Students' and the other stakeholders' perceptions and experiences should be examined in order to develop better CST [18].

This study is the first study aiming to explore the factors related to the stakeholders' perceptions on engagement in CST in an integrated pharmacy curriculum by using Theory of Planned behaviour (TPB). Preferring to use of theory helps in organizing data by using constructs of theory to understand participants' behaviour in a richer and deeper way. This in-depth understanding of the factors that discern students, trainers and simulated patients' dedication with CST is essential to develop future arrangements and interventions to ensure the quality of education all over the world.

2. RESULTS

In total, thirty-five participants were interviewed (Table 1). The average age of the students, trainers, and simulated patients were 18, 45, 50, respectively. The average numbers of community pharmacy placements that the students attended across multiple years (Year 1, 2, 3, 4) were 0, 1, 3, 4 respectively. The average

numbers of hospital pharmacy placements that the students attended across multiple years (Year 1, 2, 3, 4) were 0, 1, 5, 4 respectively. No participants dropped out of the study. This section includes the three main themes (perceived attitudes toward stakeholders' engagement in CST in an integrated pharmacy curriculum, perceived normative beliefs, perceived control beliefs) that emerged from the data which were underpinned to the TPB as shown in Figure. The quotes from students, trainers, and SPs were presented respectively under these three main themes.

Table 1. Participant demographics

Demographics		n	Total	
Students	Sex	Female	11	20
		Male	9	
	Academic year	1 st year	5	
		2 nd year	5	
		3 rd year	5	
		4 th year	5	
	Native English speaker		5	
Non-native English speaker		10		
Trainers	Sex	Female	4	8
		Male	4	
	Mean years of experience at the school		11	
	Mean years of experience at other institutions		7	
Simulated Patients	Sex	Female	5	7
		Male	2	
	Mean years of experience at the school		7	
	Mean years of experience at other institutions		6	
Total			35	

2.1. Attitude toward engagement

2.1.1. Beliefs about positive consequences

Students' positive beliefs about the engagement in CST had a significant impact on their judgements about the consequences of the behaviour. Positive judgements cultivated positive feelings that were related to satisfaction and feeling valued in relation to experiences of the students. One student expressed her feelings:

I know being successful in the OSCE exams is an indicator of my success. I can say this training will make it easy to approach patients. I would say I enjoyed the OSCE assessments here because that's when I feel it's my time to shine. I always get high marks for that. That makes me feel like my work is paying off. (S5, 3rd year)

Students believed that the positive consequences of the engagement in CST was high when they realized that extrinsic outcomes (valence) were widely affected by the skills and knowledge gained from training (expectancy):

Yeah, of course we need those skills, because we need to have direct communication with patients... maybe later in the process of our career we might not need these skills intentionally, but at the start of the career we need them. This helps us to, like a guidance of how to ask questions and gather information because we don't have experience, we need this scientific knowledge to use in the real world. (S6, 2nd year)

Trainers and simulated patients were all had positive beliefs about the consequences of engaging in CST. Their experiences in teaching communication skills along the way had a high impact on the positive emotions they felt related to the behaviour. Seeing students' progress caused them to feel satisfied had a considerable influence on the behaviour of the trainers and simulated patients. Trainers and simulated patients explained their satisfaction when seeing students achieved in communicating with patients well:

You can see that they will make the sort of pharmacist that we need and I think that is satisfying; some of the teaching has gone in... Sometimes I say to them "have you worked in a pharmacy?" They might have done. I had one student who was really good at talking to the patient, she had never worked in a pharmacy... (T1, teacher practitioner)

2.1.2. Beliefs about negative consequences

Students did not mention any negative consequences about the behaviour. However, witnessing students being unsuccessful in OSCEs appears to have an effect on the behaviour of both trainers and

simulated patients. Trainers generally mentioned they became upset when observing unsuccessful students when interacting with patients. One trainer mentioned her memory with a student in an exam:

I have had somebody cry on me, that was awful in an exam. I had a girl who felt she wasn't doing very well with it. In fact it wasn't as bad as she thought but she burst into tears. I had to sit with her and calm her down a bit. That was upsetting for me as a trainer. (T2, teaching practitioner)

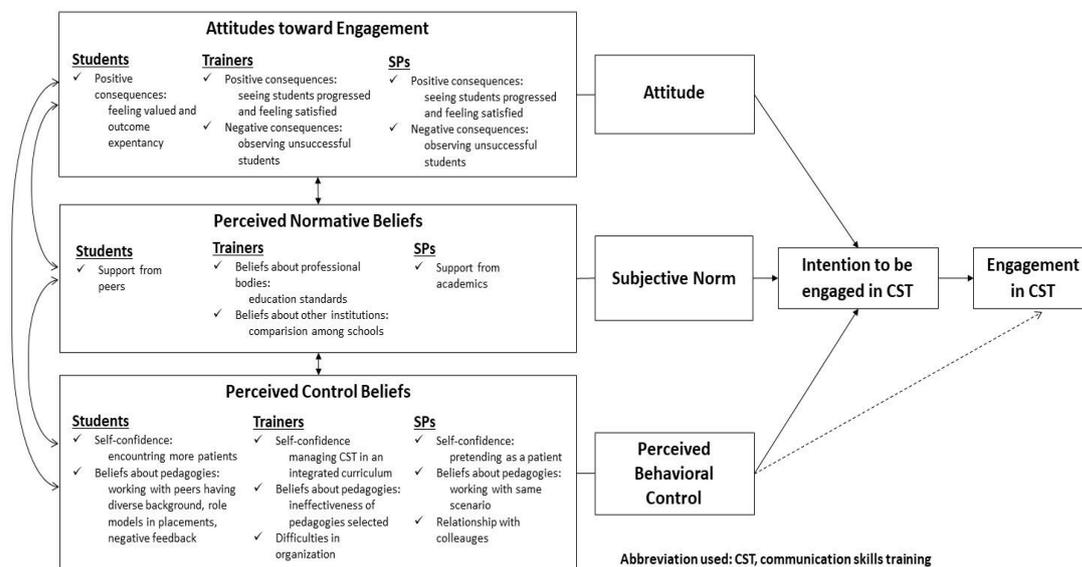


Figure. The theory of planned behaviour framework adapted from Ajzen

2.2. Subjective norms

2.2.1. Support from peers

Encouragement and support received from peers seemed to influence students' willingness to participate in CST. Some of the students explained how other students, especially students from later years assistance to develop their communication skills is seen so essential to feel a part of CST:

We run more OSCEs as well to help us prepare. They are completely if you wish, they are run by the students, they just book a few rooms about 2-3 weeks before the OSCEs and they just help us practice... They are run exactly like a normal OSCE but it is just a mock OSCE. They are really quite helpful. (S3, 4th year)

2.2.2. Beliefs about professional bodies

Education standards for undergraduate pharmacy education, which regulators set had a significant determinant on the engagement behaviour of the trainers. Some of the trainers expressed they have a mandatory task to fulfil to ensure high-level of CST offered by GPhC, which is the regulator for pharmacy education in the UK:

Since 2007 we got the first code of ethics for pharmacy in the UK, and as a consequence of that we started with the initial concept of put patience first in care... But very much about this first concept of patient centred care, and with the new standards of pharmacy professionals which came in 2011, much stronger ethos throughout the course of the patients and person and understanding their need. If we want to improve students' communication skills the external bodies become important (T3, academic)

2.2.3. Beliefs about other institutions

Some of the trainers made a comparison between other schools' activities on CST effects trainers' engagement in CST. Efforts on moving the school forward and feeling like competing with each other might have an impact on the behaviour of the trainers. One trainer expressed his feelings about trying to be good at the way of providing CST that makes him more committed:

...well I'm pretty sure that we are like in a competition... You know what they (mentioning other pharmacy schools) are doing and ... to be in an effort to make your best makes you feel motivated. (T5, teacher practitioner)

2.2.4. Support from academics

Positive and motivating attitudes of academics toward simulated patients has a significant impact on the behaviour of simulated patients and students. Nearly all of the simulated patients expressed that they felt valued when trainers and academics pay attention to their opinions and experiences. As a result, they felt motivated to be engaged in CST. One of them mentioned her happiness when considered by an academic:

A couple of years ago we were invited to an end of term meeting... That was fantastic. They put little snacks on for us ... and just wanted some feedback. And to say thank you. Do you know what, we went out feeling 10 foot tall. Because it was like oh! they consider us part of them. (SP2)

2.3. Perceived behavioural control

2.3.1. Self-confidence

The level of feeling self-confident could be both a facilitator and barrier to the engagement in CST by all stakeholders. Integration of the science and practice in CST has an impact on the development of students' self-confidence. Some students compared themselves from where they were in the first year and how they felt confident by using communication skills with patients throughout the years. This feeling of self-confident with the patient made students engaged with CST in the school:

I think there is a big difference, to be honest if you just look back generally, what it was like in 1st year ... there is a massive difference. I wish I had a video recording of myself in first year and then a video from PLM, it might be quite good to compare then. There is almost I certainly feel ... you become more confident, you come across more scenarios, you know how to deal with them... Cause in one module the science is given you at the same time and owing to that, it definitely helps patients feel more confident if you can just confidently say it... (S1, 4th year)

On the other hand, being a foreign student and the ability of speaking English fluently proved to have a considerable influence on the behaviour of the students. Usually, international students whose native language was not English were feeling pressure when communicating with patients which might have a negative impact on self-confidence:

... for my first practical I think I didn't prepare a lot because I haven't done this before and I feel really nervous and I can't speak very fluent English, I don't dare to ask them questions, I'm afraid if I can't answer them, it will be really embarrassing. (S6, 2nd year)

From the trainers' perspective, the sense of professional achievements in practice settings had an impact on feeling confident to share expertise in education sector. The efforts spent to create innovative pedagogies and the commitment to train students were the predictors of likelihood to feel engaged in CST training. One trainer mentioned his award being given to him in return for his efforts made him excited and felt motivated to be engaged in CST:

The reason I'm in this job is I saw very quickly in my professional career that, whilst I was doing good work on the front line clinically, I could have an awful lot more influence if I was in the education sector. ... why I thought actually I can influence lots of people and also do some really interesting things where my research interests are, new innovative ways of teaching. I spent quite a lot of time developing tools for electronic teaching and just delivering things, especially communication skills, in new and exciting ways. That's what given me two Lord Dearing awards for teaching. (T3, academic)

Personal capability to pretend as a patient and to memorize scenarios are the two indicators of simulated patients that makes them feel confident:

You have to learn scenarios... some are really involved, I have to have heart attacks, I have to have fits. You have to really get into it. Do you know what I can learn the most complicated scenario but ask me a date of birth (laughing). As I have got older ... so sometimes I have to write it on my hand. It is like a comfort blanket. (SP4)

2.3.2. Beliefs about pedagogies

Beliefs about appropriate pedagogies for the effectiveness of CST were evaluated by all stakeholders as a barrier to feeling engaged. Some trainers emphasized having to provide lectures rather than being included in practical classes has a negative impact on the behaviour. Sometimes realizing the ineffectiveness of the pedagogy that is been selected for a certain session makes the trainers confused:

They are forgetting that what we are trying to do in PLM is looking at their behaviour, their mannerism, how they are dealing with each other and the patients. I don't know how they can forget, they are in these pharmacies, in their formal wear, in their teams. We do all this practising about communication and behaviour, maybe we

have to put a few more lectures as a group to show them the importance of communication...maybe when they are practising so much, they forget, why we are doing this again. I think what we do here we do it really well, though sometimes finding the best way works for students needs a lot of thinking. (T4, academic)

Some of the students mentioned working in a small group of different dynamics is leading them to a difficulty in motivation:

My only gripe would be sometimes you work in a group where you have got people who are working at a lower level or can't really be bothered because they don't really care too much about it or they are from a really different backgrounds (means cultural differences) which causes low harmony in the group. You have sometimes difficulties in understanding the groups' dynamics. (S9, 4th year)

Additionally, the placements included as a type of pedagogy in the curriculum to support CST and clinical experience at UoN where students find various chances to interact with patients, which is called experiential learning, had an impact on the behaviour of students. Attitudes of some pharmacists in placements making students feel useless during placements had an impact on feeling engaged in CST:

While I was expecting for the placements to improve my way of approaching patients, I remember saying back at the time my placements in 2nd year were just a waste of time. They didn't want us there, we were just stuck in the back, checking boxes and labelling stuff for two days and I gave feedback on that saying it was pointless for developing my communication skills and clinical knowledge as well. (S9, 4th year)

Obtaining negative feedback from trainers and simulated patients appears to affect the behaviour of students. Most of the students could not pass without mentioning their experiences with trainers and simulated patients providing negative feedback.

I felt quite emotional, I wasn't ready to hear that. Even though it was the truth, it wasn't appropriate to do at the time. The way that the feedback was given just wasn't good. It was harsh. (S8, 3rd year)

Some simulated patients expressed working on the same scenario during practical classes lessen their dedication to being engaged in CST:

When you have done the same scenario all day that can be a bit challenging and boring because you do think I do want to be consistent, so you find yourself repeating all day long. (SP1)

Having pressure during OSCEs has an influence on the behaviour of all the stakeholders. Feeling nervous when interacting with simulated patients during exams was a determinant that causes less engagement in CST by the students. Most of the students expressed their nervousness in OSCE exams:

I like exams with communication skills more than I do other exams, but I do feel nervous... For me the last few years, the nervousness around exams makes me study a lot or it will make me do nothing... (S3, 3rd year student)

2.3.3. Relationship with colleagues

Relationship with colleagues is a determinant of SP's engagement behaviour. Negative attitudes toward simulated patients can be considered as a barrier in engagement. One simulated patient described she felt underestimated when trainers adopt a condescending attitude towards them. This attitude made them less engaged with CST:

I haven't noticed it recently, but there is a little bit of them and us. I do find that especially at exams, the OSCEs. They bring in examiners, and some of them are dare I say a little bit pompous. That means a bit sort of full of themselves... Sometimes they feel themselves as "I have been in a very high position", just because I am retired it doesn't mean I am any less than you. (SP3)

2.3.4. Difficulties in organization

Experienced difficulties in organizing CST in an integrated environment has an impact on the behaviour of trainers. One academic considered the big cohort size, managing cultural diversity, increasing the number and range of simulated patients, and crowded timetable as the challenges in organizing CST:

I have an idea, one of things I'm really aware of and I've picked up doing communication skills over the year is we have a very mixed, multicultural cohort and I think there's great opportunity there, and I don't think we take that opportunity as well as we could. I think both staff and students need enhanced cultural competence. Additionally, cohort size is always a big issue! We are at about 180-200 in first year is big, we're fortunate now we have the staff, so we have more teacher practitioners than we have had before... The other thing I would say that's a big challenge is, it would be absolutely ideal if we could get more patients in and we could get them to do more inter-professional placements. And then timetabling is horrific. (T3, academic)

The same academic mentioned lack in finding more effective techniques by including technology to improve students' communication skills was a challenge:

The use of technology for feedback is going to be important but again it's not just going 'here's a video of what you've just done' that doesn't help, that puts people off because they don't want to watch themselves. It has to be a tool in the toolbox to help people to develop themselves, it's not just a video there needs to be something with it. (T3, academic)

The other academic expressed the difficulty in organization arose from the nature of the topic itself: *Managing to organize is challenging because with science, and mode of actions, side effects, it is memory knowledge. You can explain to the students, this is this, and they can learn it, whereas with communication, I don't think you can just give somebody lots of information to how to be a good communicator. It has to be in you, you have to practice. It needs to come a little bit naturally. So, I think it is a difficult topic to teach but definitely an interesting one.* (T4, academic)

3. DISCUSSION

The findings of this research document an in-depth understanding of the factors affecting the stakeholders' intention to be engaged in CST in an integrated curriculum. This section is held by discussing students', trainers', and simulated patients' results under the three main themes which were described in the results section.

3.1. Attitude toward engagement

Positive beliefs about engagement in CST had a significant impact on students' appraisals of the consequences of the behavior. Positive appraisals led to positive feelings associated with satisfaction and feelings of appreciation related to the student experience. Students indicated that educational outcomes impacted their engagement. This finding is consistent with previous studies [15, 17]. Good communication skills experiences led all instructors and SPs to feel positive, and this positive feeling affected their engagement in CST. Nevertheless, instructors and simulated patients stated that seeing students being unsuccessful made them unhappy and completely affected their motivation to engage. Hands-on teaching that gives students the opportunity to interact with patients is the preferred teaching method for CST in an integrated setting. Thus, teaching communication skills through hands-on modules with simulated patients could lead to this feeling. Teaching in which students have less opportunity to communicate, such as lectures, could make it more difficult to confront students' failures and evaluate their performance. Although it has been said that there is a negative consequence of engaging in CST related to the feeling of witnessing students' distressing experiences firsthand during practice, this negative feeling could be a motivation for instructors and simulated patients to be helpful to students at the same time.

3.2. Subjective norms

Several factors were determined as subjective norms affecting stakeholders' engagement. The influence of support from peers, which could be considered as beliefs affected by peers, was the predictors of subjective norms of students. Additionally, the support from academics, including beliefs influenced by supervisors and departments, significantly referred to subjective norms of simulated patients towards engagement in training. Previous studies have also shown that social external support to be an important influence in SPs' decision to engage in training [19]. Thus, it can be said that managers and colleagues can have a positive influence on employees' willingness to take part in training programs. Aside from seeking external support, standards and competencies set by regulatory bodies had an impact on the motivation of trainers and academics to be engaged in CST. Previous studies have described mandatory requirements set by regulatory bodies to ensure the quality of undergraduate education of pharmacy [1-3, 20]. This study explicitly shows regulatory bodies have an impact on the trainers' and academics' willingness to participate in CST. A unique finding in this study was comparing the organization (UoN) with others in terms of curriculum implementation was seen to have an impact on trainers' engagement. Trainers who feel they are in a competition had higher commitment to the organization. The commitment of the entire organization has been emphasized as a prerequisite for successful education [21, 22].

3.3. Perceived behavioural control

In reviewing the literature, very little was found on perceptions of students, trainers, and SPs towards facilitators and barriers in integrated curriculum in pharmacy [3, 18, 23]. However, no study was found expressing facilitators or barriers on implementing CST in an integrated pharmacy curriculum from various perspectives. The level of self-confidence was determined for all stakeholders as a facilitator or sometimes a

barrier to feel engaged in training. The students who do not have English as a mother tongue were experiencing communication barriers. Communication barriers due to their limited language skills were leading these students to feel less confident. Foreign students often cited speaking in a language different from their native language has been the most anxiety-producing experience [24, 26]. Previous studies that addressed students' varied behaviours due to lacking domestic language proficiency expressed that students sometimes chose to withdraw and stay in the back in placements, and this caused them not to feel self-confident.[27] Teaching staff (trainer/ simulated patients) should keep their English language in the teaching environment as simple as possible to develop the students' confidence. Additionally, host institutions that support international students to develop their communication skills and their confidence in using them while helping them to better integrate into their new learning environment is needed. The level of self-confidence in managing CST in an integrated environment was a predictor of trainers' engagement in training as well. Previous studies discussing the barriers in implementing integrated curriculum in pharmacy reported trainers should feel self-confident and competent in organizing teaching [18]. In this study, SP's ability to role-play was explored as an indicator of self-confidence to engage in CST. The literature argues that the more SPs can imitate a real patient in a self-confident way, the better indicator of a SP's performance they were.⁴⁹ Evaluation tools improved to assess the performance of simulated patients should be used periodically to minimize the risk of ineffectiveness of training.

Beliefs about pedagogies were found to have an impact on the behaviour of all stakeholders. From the students' perspective, feeling useless during placements because of pharmacists' attitudes; obtaining negative feedback from trainers and simulated patients; working in a small group of different dynamics; and feeling exam pressure were some barriers to inhibit the motivation of engagement. Pharmacists as role models in workplace environment during placements has also a significant role not just for teaching communication skills but also for forming professional identity [29]. When designing integrated CST in pharmacy curriculum, it is important to pay attention to select optimum workplace environment for students' professional identity formation. Impact of negative feedback is consistent with previous studies [30, 31]. As the second barrier for students, working in a small group of different dynamics had an impact on students' motivation for CST. Given that knowing about others' backgrounds helps to put into context some of the different opinions and perspectives expressed [32], providing opportunities to meet with different students in small groups would lead to an increased motivation. However, designing integrated curriculum where the cohort is high proportion of international and ethnically diverse students such as at the UoN [32] might be a challenge, which was found to be a barrier for trainers; as one of the trainers commented: "It would be great if we could actually work more on our staff training around different cultures and then we can work with the students to then develop that. Maybe one of those things where the students should design it". Training on cultural differences should be prioritised in an integrated curriculum in pharmacy education, which requires small group interactions especially for teaching communication skills where there is a multicultural cohort. Future research showing the impact of CST on an integrated pharmacy curriculum on a multicultural cohort is warranted. Aside from the beliefs of students, pedagogies selected might sometimes be a problem for both trainers and SPs. Observing the ineffectiveness of various sort of pedagogies in a well-designed CST within an integrated curriculum would have a negative control on trainers' engagement. On the other hand, working with same scenario was affecting the SPs motivation to keep being involved in CST. Much could be done to improve the effectiveness of pedagogies where the communication skills are provided in an integrated curriculum.

Relationship with colleagues was seen another barrier for SPs in this study. Potential barriers regarding relationship between disciplines and colleagues in implementing integrated pharmacy curriculum have been discussed in the literature [3, 7, 18, 23]. No study was found mentioning the needs and expectations of simulated patients in an integrated pharmacy curriculum. In designing CST in an integrated pharmacy curriculum, encouraging relationship between academics, trainers, and simulated patients should be established, given that the motivation of SPs is affected by the dynamics between academics and colleagues. There should also be sensitivity in communicating with simulated patients, such as training on cultural differences to deal with multiculturalism mentioned previously.

The limitations of this study must be acknowledged. First, adopting a priori theory into qualitative research has both pros and cons. The most common advantage of using a theory is to being helpful in structuring data through preformed constructs and gleaning more insights to understand participants' behaviour in social context [33]. On the other hand, an unintentional exertion to fit the data into the established framework would be a risk of possibility. Second, the small sample size of participants based in

one institution, drawing on the perceptions of the participants as a snapshot in time. Third, COVID-19 pandemic forced a transition from face-to-face data collection to internet-based form of data collection, which is a debated issue in terms of its strengths and limitations in the literature [34-36]. Finally, some core principles of qualitative research to enhance trustworthiness of analysis and interpretation were applied in this study [37]. However, additional principles, such as the use of other data gathering techniques for triangulation, member checking were not possible given time, resource, and logistics constraints. This study presents a general perspective related to the factors affecting stakeholders' engagement in CST in an integrated pharmacy curriculum. Future research focusing on each dimension expressed in this study is warranted to extract detailed data.

4. CONCLUSION

Examination of attitudes, subjective norm, and perceived behaviors provided useful insights into stakeholders' views of CST participation in an integrated pharmacy curriculum. Peer support, academic support, regulatory agencies that set standards for pharmacy education, and other institutions were factors that positively influenced behavior. Factors negatively impacting confidence were the most frequently cited barriers to designing an integrated curriculum, not just communication skills. These findings may be useful in developing interventions to increase the confidence of all parties involved in some way with CST and integration in pharmacy education. Choice of pedagogy, relationships with colleagues, and organization of an integrated curriculum need attention.

5. MATERIALS AND METHODS

5.1. Study design

This research adopted a phenomenological approach [38], allowing the researchers to build a picture of the perceived reality from the participants' point of view, and a constructivist research paradigm [39]. A qualitative design was used to understand the perceptions of stakeholders toward the engagement in CST in an integrated pharmacy curriculum based on Theory of Planned behaviour (TPB). Semi-structured interviews were chosen to capture richness to these perceptions so as to acquire true feelings and meanings behind the participants' experiences.

5.2. Theoretical framework

TPB was developed as an intention-behaviour model to explore human behaviour by Ajzen [40, 41]. Three core components [attitude, subjective norm, and perceived behavioural control] of TPB are considered as the predictors of the behaviour in a specific context. Each variable may be explored directly or indirectly. Exploring individuals' overall attitude is a way of direct evaluation. Examining the specific beliefs of individuals by asking is considered as a way of indirect evaluation [42]. The first component of TPB-attitude- refers to an individual's overall evaluation of a particular behaviour in the direction of positive and negative beliefs, judgments, and emotions related to the consequences of particular behaviour. A behavioural evaluation is the person's subjective probability that performing a behaviour of interest will lead to a certain outcome or provide a certain experience. Specifically, the positive or negative valence of each anticipated outcome or experience contributes to the overall attitude in direct proportion to the subjective probability that the behaviour will produce the outcome or experience in question. The second component - subjective norm- is determined by the individual's perception of the opinions of others such as family, friends, or colleagues, to perform the particular behaviour. The last component -perceived behavioural control- refers to an individual's perception of his/her capability, including perception of resources and abilities available to them, to perform the behaviour of interest [43]. TPB has been broadly applied into the pharmacy practice to clarify pharmacists' behaviours, including willingness to provide specific service i.e., vaccination [44, 45], adherence-related improvement [46, 47], and medication management [48-50] and patients' behaviours on benefiting from certain type of pharmacy services [51] as well as in education research [19].

5.3. Participants and recruitment

The study population was taken from University of Nottingham (UoN) pharmacy students (4th year), trainers who were involved into CST, and simulated patients who were interacting with students during CST at UoN.

Maximum variation sampling was used for recruitment to maximize the diversity relevant to the research question. As for students, several year groups were sampled to catch a variety of perspectives from those with diverse levels of clinical exposure and proximity to CST. Recruitment for student participants occurred via a call which was prepared and placed on students' online platform called Moodle. All the trainers and simulated patients were invited to study by using email. Recruitment occurred till data saturation for each group of participants, which was decided when the last two interviews created no new themes. Ongoing preliminary data analysis was being conducted during data collection.

5.4. Data collection

Semi-structured interviews were employed. The interview guide was framed based on TPB constructs. The interview guide (Table 2) was developed by incorporating specifically written open-ended questions aiding rapport building, and if needed subsequent, more targeted questions with nonleading and not assumptive manner to placing the participants to express their feelings, attitudes, and experiences at ease [52, 53]. Clarity and comprehensibility of the interview guide was checked by the second author (CA), whose native language is English, and then piloted in a non-study group.

Table 2. General outline of the interview guide that was framed based on the theory of planned behaviour

Theme/ TPB Component	Question order	Question
Opening question		What do you feel to be included in CST* in your school?
Behavioural Beliefs		What do you feel about the way CST is being offered in your school?
	For trainers and simulated patients only	What do you think about your role to be engaged in CST?
		What do you think about the positive consequences of being engaged in the way CST being provided in your school?
	For trainers and simulated patients only	What do you think you contribute to the students' journeys to use their communication skills?
Normative Beliefs		What do you think about the negative consequences of being engaged in the way CST being provided in your school?
		What external factors/ individuals/ groups do effect you to engage in the way CST being provided in your school?
Control Beliefs		What circumstances would enable you to engage in the way the school provides CST?
	For students only	What are the challenges do you face while being trained with the way CST in your school?
	For trainers and simulated patients only	What are the challenges in implementing CST?
		How difficult would it be for you to deal with the challenges during CST?
Do you have any suggestions to feel more engaged in CST?		

* Abbreviation used: CST, communication skills training.

Information power [54] was considered to check whether data saturation was likely to have occurred. Interviews lasted 20 to 40 minutes. All interviews were conducted by the first author (GG) who is a qualified researcher. Recruitment (and interviews) occurred from February 2020–April 2020. Twenty-one of the total interviews were made face-to-face. During the data collection process of the study, the university closed down because of COVID-19 and the remaining eleven interviews were conducted by using online communication platforms (Microsoft Teams® and Zoom®). Interviews were conducted in English. The interviews were audio-recorded after obtaining participants' consent and field notes were employed to record observations both during and after.

5.5. Obtaining consent

Prior to the interview, a waiver of written consent was requested and obtained from the participants. An information sheet was provided to the participant to ensure the participant understood the purpose of the study, what the findings were to be used for and that they had the right to withdraw from the study at any time without consequence.

5.6. Data analysis

A thematic analysis approach, including deductive and inductive methods, was applied to the data presented within the transcripts. Deductive method refers to a-priori coding of the data back to the constructs of TPB, whereas inductive method refers to generating of codes and sub-themes from the transcripts. All the interviews were transcribed verbatim. Transcripts were not returned to participants. All the interview transcripts were assigned a code (The code for each transcript was created as follows: "S" (for students); T (for trainers); P (for simulated patients) and the sequence number of the interviewee (e.g., S8; T3; SH4). NVivo qualitative analysis software v12 for coding (QSR International Pty Ltd. Version 12, 2019) was used for qualitative analysis. Transcripts were coded independently line by line with the recurrent ones and compiled into a master codebook to identify prevalent codes by the authors for the first two interviews. The first author continued coding after consensus reached. Next, the prevalent codes of data were grouped together into relevant sub-themes. As a deductive coding, subthemes were placed under the main three constructs of TPB—attitude, subjective norm, and perceived behavioural control. The research team periodically discussed the coding frame and emerging themes.

The reflexivity was fostered by the presence of the authors with different backgrounds in the study. Authors have an academic background in pharmacy education. The first author has a research interest in pharmacists' and pharmacy students' attitudes toward pharmacy education. The second author is an academic with an interest in pharmacy practice, policy, and pharmacy education. The first author verified the findings with the second author along the way of analysis in order not to reflect researchers' beliefs, perspectives, and assumptions to the analysis process. Discussion between authors provide consensus. A consistent pilot-tested interview guide was to demonstrate study rigor and trustworthiness. Additionally, after each interview, reflective journaling to record the reactions was preferred to increase study rigor and trustworthiness. The research team used peer debriefing which is a technique used to answering questions from peer debriefer [37]. Answering questions asked by peer debriefer minimized biases that might affect both analysis process and methodological design. This study used the consolidated criteria for reporting qualitative research (COREQ) to ensure accurate and complete reporting [55]. Please see the completed checklist: 'COREQ' (Appendix).

The consolidated criteria for reporting qualitative research (COREQ) were used to ensure accurate and complete reporting of this study occurred.

5.7. Ethics approval

University of Nottingham (School of Pharmacy) granted ethical approval [Reference number: 006-2020-approval date: 02/02/2020] prior to commencement of the study. All participants signed a consent form.

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