Original article

Feasibility of using simulated patients for onsite structured practice feedback in Jordanian community pharmacy settings

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ABSTRACT

Simulated patient (SP) visits followed with structured feedback is useful to outline training needs as well as preference for continuing professional education in community pharmacy settings. This study aimed to investigate community pharmacists' management of an over-the-counter (OTC) product request and feasibility of immediate SP feedback in Jordan. Four trained SP visited a sample of pharmacies in three main urban cities in Jordan requesting an antacid. Information request and professional behavior as well as content of information were evaluated. The SP provided structured immediate feedback. The pharmacy staff views on the visit and usefulness of the feedback were collected. A total of 57 visits were conducted. The average duration of SP visits was 1.55 min. The average score (±SD) for information seeking behavior was 16% (±7) and for professional behavior was 56% (±15). The average score for information provision provided spontaneously was 17.1% (±12). Upon demand by the SP; the average score for information improved to 47.6 (±18). Non-pharmacological advice was not offered often; only 6 (10.5%) visits. Written information was provided in 10 (17.5%) visits. Immediate feedback was accepted by all visited pharmacies. Participants expressed positive views about the SP visit and usefulness of the feedback. Community pharmacists supplied OTC drug without carful screening of symptoms and essential information. The SP approach with immediate feedback was shown feasible and well accepted. Further potential for use of SP with feedback formally in practice and professional development should be explored in future studies.

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1. Introduction

Being the most accessible health care provider, pharmacists can play a significant role advising consumers when they seek for self-medictaion due to minor ailments (Moullin et al., 2013). The quality and content of patient counseling in community pharmacy settings has been evaluated often using surveys, diaries or observations and these can introduce change in behavior due to knowledge of being observed (Alaqeel and Abanmy, 2015, Gokcekus et al., 2012, Naqvi et al., 2019, Rafie et al., 2017, Sadek et al., 2016,

Werner and Benrimoj, 2008). Simulated patient approach (SP) presents a real observation of practice and hence, the use of SPs has been growing in pharmacy practice evaluation and education (Berger et al., 2005, De Almeida Neto et al., 2000, Horvat et al., 2012, Puumalainen et al., 2005, Watson et al., 2009, Watson et al., 2006). SP is an individual who undertakes covert visit to a pharmacy in order to enact a scenario that tests a specific behavior without the object being aware of being tested (Watson and Bond, 2004, Watson et al., 2009).

Community pharmacies in Jordan are abundant and accessible; there are over 3,200 community pharmacies that are spread around the country. There is no professional or legal obligation for pharmacists to provide counselling services. In addition, there is no quality control system on drug supply and self-medication service except for controlled drugs (Abdel-Qader et al., 2021, El-Dahiyat et al., 2019, Elayeh et al., 2017, Elayeh et al., 2019, Gogazeh 2020, Hammad et al., 2018, Wazaify et al., 2019). SP methodology has been used in the area to investigate content and counseling practice and highlighted consistent suboptimal

counselling in responding to symptom scenarios such as headache, insomnia, cough and others (Alaqeel and Abanmy, 2015, Elayeh et al., 2019, Hammad et al., 2018, Paravattil et al., 2017, Wazaify et al., 2019, Yaacoub et al., 2019). It is not clear, if the content and input of the pharmacist vary if the visits were to request a specific product by name or to seek advice or information for example. Nevertheless, continuing professional development and education programs are widely advocated to enhance pharmacy practice (Aly et al., 2020, De Almeida Neto et al., 2000, Delucenay et al., 2017, Kansanaho et al., 2003, Micallef and Kayyali, 2019). These mainly focus on training pharmacists outside their practice settings via workshops, seminars and others. Despite shown to increase knowledge instantly, it left unclear whether they succeeded in targeting specific needs or promote practice development (Aly et al., 2020, Basheti et al., 2014, Elayeh et al., 2019). Thus, further investigation is needed to outline effective strategies to promote practice feedback and development in community settings.

One approach to reach out pharmacists during their daily practice is using SP with immediate or delayed feedback (Aly et al., 2020, Micallef and Kayyali, 2019, Shearer et al., 2018). SP visits followed with structured feedback was found to improve over-the-counter (OTC) drug supply previously in the UK, Europe and other countries (Berger et al., 2005, Delucenay et al., 2017, Kansanaho et al., 2003, Micallef and Kayyali, 2019, Watson et al., 2009). There is no previous investigation of feasibility and acceptability of SP feedback in community pharmacies in the area.

This study aimed to is to investigate community pharmacists' management of an OTC product request and to assess feasibility and acceptability of SP immediate feedback.

2. Materials and methods

2.1. Study design

A cross sectional study was conducted using SP method between November 2017 and May 2018. A Cluster, stratified sampling strategy was used to recruit community pharmacies from three main urban cities in Jordan: Amman (the capital city which is located at the center), Salt (at the west), and Zarqa (at the east). Within each location, a convenient sample of community pharmacies was selected.

A trained research assistant approached a senior representative from each pharmacy to provide information about the objectives and the design of the study and invite them to participate. A signed consent was obtained from those who agreed to participate in the study. Each individual staff member at the pharmacy was invited for study participation. Those who did not wish to participate in the study were given a sticker and asked to wear it for six months. Pharmacists were not given any details of the scenario or the SP identity or the time of the visit. Pharmacies were visited once by one of the SPs.

The visits were conducted by four trained SPs (3 females and 1 male) who were 4th year pharmacy students. SPs were trained via a 1-day program using mixed approaches including role plays, video evaluation, discussions and peer evaluation using the Maastricht Simulated Patient Assessment instrument (Resende et al., 2020). The training was delivered by a senior clinical researcher (EH) and focused on how to enact scenario and standardize completion of the study forms. They were trained to provide immediate structured feedback. Kappa scores were estimated and role plays were repeated to reach a "substantial to almost perfect" agreement. The study was piloted in eight pharmacies (each SP visited two pharmacies). Pilot visits were evaluated using selected items from the Maastricht Simulated Patient Assessment instrument.

Visits were discussed among the team to enhance authenticity and standardization of the SPs performance.

The SP had a dual role: collecting data through observation and educating pharmacy staff through immediate structured feedback. Information about pharmacy type; independent or chain; location, number of waiting customers, day and time of visit; pharmacy staff gender and estimated age, professional status (pharmacist, Pharm D, Pharmacy technician), years of experience in community settings were recorded. Privacy of the conversation and distracting factors were rated by the SP using a Likert scale; 1 indicating poor to 5 indicating very good.

The visits were audiotaped to improve the reliability of data recording and report duration of the visits.

Ethics approval

Ethical approval was obtained from the Institutional Review Board (IRB) at the University of Jordan Hospital (Ref number: 235/2014-30/09/2014).

2.2. Scenario and assessment of visits

A scenario was adapted with modifications based on previous research and presented in Table 1 (Alaqeel and Abanmy, 2015, Berger et al., 2005, Delucenay et al., 2017). The SP entered the pharmacy and enacted the scenario. The SPs convey their request at the beginning of the encounter in a standardized way based on predetermined script. The SP requested information if the pharmacy staff didn't provide the information spontaneously. The SP purchased the drug that was recommended by the pharmacy staff to authenticate the interaction.

Assessment criteria were adapted from previously published studies (Alaqeel and Abanmy, 2015, Berger et al., 2005, Delucenay et al., 2017). A standardized evaluation form was developed and completed immediately after the visit outside the pharmacy. The form assessed information seeking behavior and professional behavior of the pharmacy staff. The content and appropriateness of information provided to the SP were also evaluated.

2.3. Information seeking and professional behavior

A set of questions were deemed essential to enable full informed response to an OTC supply of antacid. Those were rele-

Table 1
Scenario for requesting antacid with concomitant use of iron supplement.

Scenario	Plot
Requesting an OTC drug (antacid)	The SP requested antacid (Rennie tab). If asked, the SP told the pharmacist the medicine is for her (his) heartburn and indigestion.
Instructions	SP first allow the pharmacist to ask questions and provide any counselling. If none provided by the time of the product purchase, the SP propped for information by saying "my friend advises me to buy Rennie for heartburn. I feel bloated (pointing to the middle of his/her chest if asked where the symptoms are located). This was for the last two days on an on–off basis. I do not normally suffer from that." SP allowed the pharmacy staff to comment or act to this information. If not discussed by the pharmacy staff, SP explicitly asked:
	▪ How to take Rennie?
	▪ At what time should I take it? Before or after meals?
	▪ I am using iron tablets for anemia, is it Ok to take both Rennie and Ferrous Gluconate (Glucofer®) at the same time?
	SP were instructed to show interest in getting information afrom the pharmacist, and be appreciative to any advice.

vant to: who is the medicine for, why it is needed, any previous use, other medications, known allergies, action already taken and precautions. For each question the pharmacists asked, a score of 1 point was given. A score of 100% indicate that the pharmacy staff sought all reverent information.

Ten criteria for professional behavior were evaluated and scored in similar ways. Those were relevant to: introduction of him/her self, explaining needs to ask questions, using of open body language, smile and eye contact, checking patient understanding and concerns, using of lay language and offering contact or access back to pharmacy.

Confidence of the pharmacy staff making recommendations was rated from 1 to 5; with 1 indicating poor confidence to 5 indicating very good confidence (Berger et al., 2005).

2.4. Information content and appropriateness

Content and appropriateness of information provided were assessed referring to practice guidelines (Smith, 2005). For each piece of information, a score of 1 point was given. Whether information was provided spontaneously or upon demand by the SP was recorded too. A score of 100% represented that the pharmacy staff provided all information expected correctly and appropriately. Whether pharmacy staff provided a written information and non-pharmacological advice was also recorded.

2.5. Immediate feedback

After completing the assessment form outside the Pharmacy, the SP re-entered the pharmacy and disclosed his/her identity with a thank you package including a souvenir mug. The SP provided verbal feedback with information about the scenario and summary of previous related evidence from Jordan (Elayeh et al., 2019, Hammad et al., 2018, Wazaify et al., 2019). The SP offered the feedback privately to the pharmacy staff. He/she gave detailed performance feedback and suggestions for improvement. The reaction on the re-entrance and disclosure of the SP identity was recorded.

2.6. Acceptability of the SP experience

A short form was handed to the pharmacy staff to assess their experiences and views toward the SP visits and the usefulness of the feedback. The completed form was collected in sealed envelope by an independent researcher in the next day.

2.7. Statistical analysis

Descriptive analysis was performed using SPSS version 20.0 (SPSS Inc., Chicago, IL). Descriptive statistics were used to describe demographic characteristics of participants. Categorical variables were presented as valid percentages to account for missing data with their frequencies, while continuous variables were presented as mean with standard deviation (SD).

3. Results

3.1. Participants' characteristics

Characteristics of the pharmacy staff and the visits are presented in Table 2. A total of 57 visits were conducted. The majority of pharmacy staff were females, below 30 years of age, with less than five years of experience and holding a BSc degree in Pharmacy. The average duration of SP visits was 1.55 min (range: 39 s − 5.5 min).

Table 2
Characteristics of pharmacy staff and visits, N = 57.

Staff & Visits characteristics	N (%)
Gender	
Female	25 (43.9)
Estimated age	
20–29	39 (68.4)
30–34	7 (12.3)
35–39	5 (8.8)
>40	6 (10.5)
Years of experience*	
1–5 years	33 (57.9)
6–10 years	6 (10.5)
11–15 years	4 (7.0)
>15 years	6 (10.5)
Professional status*	
Pharmacy technician	5 (8.8)
Pharmacist	40 (70.2)
Pharm D	5 (8.8)
Pharmacy Type	
Chain	26 (45.6)
Independent	31 (54.4)
Busyness	
Quiet (0 customers)	31 (54.4)
Low (1–2 customers waiting)	15 (26.3)
Moderate (3–5 customers waiting)	8 (14.0)
Busy (>5 customers waiting)	3 (6.0)
Time of the visit	
Day shift (8:00 am −4:00 pm)	27 (47.4)
Late duty shift (after 4:00 pm)	30 (52.6)
Days	
Weekdays (Sun-Thurs)	29 (50.8)
Weekend (Fri-Sat)	28 (49.2)
Location	
Amman	25 (43.9)
Zarqa	20 (35.1)
Salt	12 (2101)

*missing data might not add to 100%

3.2. Information seeking and professional behavior

Table 3 presents information sought and professional behavior by the pharmacy staff. The average score (±SD) for information request behavior was 16% (±7) and for professional behavior was 56% (±15).

3.3. Information content and appropriateness

The average score (±SD) for information provided spontaneously was 17.1% (±12). Upon request by the SP; the average score for information improved to 47.6 (±18). Table 4 presents information provided for the SP.

Non-pharmacological advice was offered by 6 (10.5%) visits and only happened after an SP request. Written information was provided in 10 (17.5%) visits in the form of providing drug leaflets and promotional materials from the manufacturer.

The privacy of the conversations was rated very good or good in 51 visits (89.5 %). Distracting factors were rated as good or very good in 46 visits (80.7%). Confidence of the pharmacists was rated as good or very good in 50 visits (87.7%).

3.4. Acceptability of immediate feedback

Immediate feedback was accepted by all visited pharmacies. For majority of the visits (87.8%, N = 50), the pharmacy staff reported that the SP acted like a real patient and (96.5%, N = 55) believed the SP fitted well the role. Most pharmacy staff expressed that the feedback was not confrontational (96.5%, N = 55), conducted in a professional manner (96.5%, N = 55), and was easy to under-

Table 3
Information seeking and professional behavior, N = 57.

Information sought by the pharmacy staff	N (%)
Who is the medicine for?	15 (26.3)
Did you have the medicine before?	13 (22.8)
Action already taken (if any)	8 (14.3)
What are the symptoms	10 (17.5)
Duration?	12 (21.1)
Frequency?	12 (21.1)
Reliever or aggravator?	6 (10.5)
Associated or other symptoms	3 (5.3)
Actions already taken (if any)	1 (1.8)
Other medical problems or prescribed medicine	8 (14.0)
Checked for drug or known allergy	3 (5.3)
Professional behavior	
Introduced himself /herself	2 (3.5)
Welcomed (smiled at) the SP	53 (93.0)
Explained need for questions	12 (21.1)
Maintained eye contact	53 (93.0)
Asked if there are questions/ concerns	49 (86.0)
Used open body language	43 (75.4)
Showed appropriate listening skills	18 (14.0)
Checked understanding of recommendations	16 (10.5)
Used appropriate language	54 (94.7)
Offered patient access back to the pharmacy (e.g. phone number)	0

Table 4
Provision of the information provided to the SP, N = 57.

	N (%)
Active ingredient / scientific name	38 (66.7)
How the drug works	13 (22.8)
How much to take	39 (68.4)
How to take	41 (71.9)
When to take	30 (52.6)
Duration of use	13 (22.8)
Side effects	7 (12.3)
Special instructions/ precautions	2 (3.5)
Non-pharmacological advice for heartburn and indigestion (Avoid spicy food/ reduce coffee intake).	5 (8.8)
Taking with ferrous gluconate	
Can bind to iron and prevent absorption	9 (16.1)
Separate by 1 h before or 2 h after your antacid	23 (40.4)
Counseling on anemia/ iron tab (Take iron tablets about 1 h before meals with water.)	10 (17.5)
Non– pharmacological advice on anemia (Eat greenly vegetable, liver and beans, chickpeas)	1 (1.8)
Precaution/side effect for use of Iron	
You might experience any stomach upset. If so, take it after meal by one hour	0
You might become constipated, drink water and leafy vegetable	0
Your stool might get dark ashen color, not alarming	0

Table 5
Usefulness of the feedback, (N = 57).

Usefulness of the feedback to pharmacists	Useful to Very useful, N (%)
The feedback highlighted positive points in my practice	57 (100)
The Feedback helped in identifying what I need to improve my practice	51 (89.5)
The feedback helped to enhance confidence in my counselling skills	51 (89.5)
The Feedback gave an opportunity to discuss important issues about patient counselling	54 (94.7)
The feedback will improve my future practice	54 (94.7)
The feedback helped in understanding my training needs	46 (80.7)
Using SP routinely as education and training method for community pharmacists	56 (98.2)

SP: simulated patient

pharmacist was affected by information request by the patient. The provision of information provided was improved when the SP asked explicitly for information. Patient question-asking behavior appeared a catalyst for provision of information (Alaqeel and Abanmy, 2015, Berger et al., 2005). Understanding perceptions underlying this behavior from both ends of the encounter is vital and warranted for future evaluation.

A strong aspect of this study is assessing feasibility of SP approach in providing structured and individualized immediate feedback to community pharmacists in their natural practice settings. Pharmacists potentially provide more socially desirable responses via questionnaires and interviews (Alaqeel and Abanmy, 2015) and thus SP methodology captures a very close reflection of practice. The SP approach was feasible and useful in collecting data from direct observation and one to one interaction. It captured key behaviors with respect to information seeking behaviors and communication skills. SP was also able to provide a structured feedback with focus on practice gaps and training needs. All pharmacy staff accepted feedback and expressed positive views about the usefulness of the feedback. With the immediate feedback, the pharmacy staff recollects their performance and thus were more likely to be open for corrective advice (Berger et al., 2005, Delucenay et al., 2017, Watson et al., 2009). Therefore, SP could serve a potential strategy for training and feedback in real practice setting and thus have potential for onsite practice feedback and professional development (Seubert et al., 2018, Watson et al., 2009).

However, training and process standardization should be warranted for effectives use of multi-simulated actors particularly to enhance generalizability and applicability for large scale purposes (Berger et al., 2005, Watson et al., 2006). Training and calibration of SPs in multicenter studies has been shown feasible and reliable using checklists with consideration to cultural background and skills of the SPs (Resende et al., 2020). Herein, formative implementation of SPs with immediate feedback for routine practice feedback or evaluation would require significant investment in SP training and standardization.

stand (98.2%, N = 56). Most of them also reported that they were comfortable and feedback was not stressful. Only 4%, the pharmacy staff preferred delayed feedback or over the phone. More than two thirds of participants welcomed the idea of being invited to workshops or training courses that include simulated patients.

Views on the usefulness of the SP immediate feedback are presented in Table 5.

4. Discussion

This study is the first to evaluate the management of a specific OTC drug request in community settings in Jordan using the SP approach. In line with previous studies, (Elayeh et al., 2019, Hammad et al., 2018, Wazaify et al., 2019) the information request behavior of community pharmacy staff in Jordan was suboptimal, and the drug was supplied often without careful screening or investigation for symptoms, known allergy, medications and actions already taken. Additionally, the counselling input of the

5. Limitations

The response rate of the current study might be artificial. Previously, negative attitudes of pharmacists towards covert visits by SP were reported (Watson et al., 2009). Upon re-entrance, SP gave the pharmacy staff a "thank you" mug and purchased the drug recommended. Acceptability of the covert SP visit might not the same for other scenarios such as counselling or asking for information. These encounters do not end by direct purchase for example. This warrants future studies.

Despite shown to be feasible and acceptable, the extent at which subsequent practice might change was out of the study scope. A mixed approach using workshops with on-site performance and immediate coaching and repeated SP visits has demonstrated potential for practice modification (Berger et al., 2005, De Almeida Neto et al., 2000, Neto et al., 2001, Watson et al., 2009). Therefore, future studies to map the formative role of SP methodology in practice feedback and professional development in Jordan are warranted using large representative sample and several scenarios.

6. Conclusion

The information seeking behavior of community pharmacy staff in Jordan was suboptimal, and they supplied OTC drug without through screening of symptoms or other essential information. The Information provision provided by pharmacy staff was influenced by the patient request for information. The SP approach with immediate feedback was shown feasible and well accepted. Models for formative use of SP with feedback methodology in practice feedback and professional development should be developed and further evaluated in Jordan.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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