





JPHS 2020, 11; 255–260  
© 2020 Royal Pharmaceutical  
Society (RPSGB)  
Received February 17, 2020  
Accepted March 23, 2020  
DOI 10.1111/jphs.12355  
ISSN 1759-8885

## Pharmacists' readiness to adopt prescribing authority in Jordan

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### Abstract

**Objectives** The overall objective of this study is to assess the views and attitudes of Jordanian pharmacists on expanded pharmacist prescribing role.

**Methods** A cross-sectional, questionnaire-based study was conducted using a web-based questionnaire. Pharmacists were invited to take part in this study through pharmacists' Facebook groups for pharmacists in Jordan. Descriptive statistics were used to analyze the data in addition to the *t*-test to compare the mean difference of support levels toward supplementary and independent prescribing.

**Key findings** A total of 521 pharmacists took part in this study. The majority of respondents ( $n = 482$ ; 92.5%) believe that pharmacists in Jordan should have an expanded prescribing role. Respondents were significantly in favour of supplementary prescribing ( $P < 0.05$ ) than independent prescribing for various medical condition (e.g. diabetes and asthma). Respondents identified securing more roles in healthcare ( $n = 464$ ; 89%) and increasing pharmacy profits ( $n = 420$ ; 80.7%) as key facilitators to adopt this new role. Whereas inadequate training in the diagnosis of disease ( $n = 457$ ; 87.7%), and inadequate training in patient assessment and monitoring ( $n = 453$ ; 86.9%) were reported as the most likely barriers.

**Conclusion** Overall, Jordanian pharmacists strongly supported the expanded prescribing role and favoured supplementary prescribing for chronic conditions (e.g. diabetes). The study highlighted the need for additional training in various areas (e.g. diagnosing and managing some clinical conditions) to prepare Jordanian pharmacists for this new role.

**Keywords** independent prescribing; Jordan; pharmacist prescribing; supplementary prescribing

### Introduction

The role of pharmacists has shifted from traditional dispensing roles and product-focused practice to more patient-focused practice.<sup>[1]</sup> In response to this shift in practice, pharmacists worldwide have accepted new duties and responsibilities (e.g. immunization and prescribing).<sup>[2–6]</sup> Yet, community pharmacists in Jordan still have traditional roles that are more product focused and have shown no clear efforts to expand their scope of practice.<sup>[7]</sup>

One of the expanded roles of pharmacists is prescribing (independent and supplementary).<sup>[6]</sup> Independent prescribing occurs when a prescribing practitioner is exclusively responsible for patient assessment, diagnosis and management.<sup>[8,9]</sup> Meanwhile, supplementary (i.e. dependent) prescribing occurs when an independent prescriber, usually a physician, delegates a pharmacist a prescribing authority.<sup>[6,10]</sup> Evidence from countries that have granted community pharmacists a prescribing authority suggests potential benefits to this in patient care and management, improved accessibility to medication and medication management optimization.<sup>[8,11,12]</sup> Moreover, patients have reported high levels of satisfaction with and confidence in their pharmacists' prescribing.<sup>[13,14]</sup> Despite the positive attitudes towards pharmacist prescribing, pharmacists have reported training needs, time constraints and physicians' responses as barriers to this new role.<sup>[15–19]</sup>

Though pharmacists in Jordan do not have prescribing authority, they dispense medications without prescriptions, with disregard for the laws and regulations.<sup>[7,20]</sup> Nearly, 75% of pharmacists in Jordan dispense antibiotics without a prescription.<sup>[21]</sup> Given the

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evidence that pharmacists prescribing is an existing practice in Jordan despite the laws and regulations that prohibit it, in addition to the clear benefits of this role derived from global evidence, it is time for the pharmacy profession in Jordan to change its laws and regulations to legally accept and regulate this new role. However, there is no evidence that assesses Jordanian pharmacists' readiness, attitudes and perceived barriers to taking on a prescribing authority.

Therefore, the overall objective of this study is to assess pharmacists' views and attitudes towards expanding pharmacist prescribing role in Jordan. The specific objectives of the current study are to assess Jordanian pharmacists' (1) views on supplementary and independent prescribing, (2) perceived drivers and barriers to pharmacist prescribing and (3) perceptions of competence and training needs for the management of selected medical conditions.

## Methods

### Study design

A cross-sectional survey was conducted among pharmacists in Jordan using an online self-completion survey adapted from two previously published papers with evidence of validity and reliability.<sup>[18,19]</sup> The study's protocol was approved by the Institutional Review Board (reference number: 30/127/19) at King Abdullah University Hospital.

### Survey development

The survey was developed following a review of the literature.<sup>[18,19]</sup> The first part of the survey consisted of eight questions sought to obtain demographic information on the participants. Meanwhile, the second part consisted of six questions adapted from George *et al.*,<sup>[19]</sup> to investigate the perceived competence of pharmacists in diagnosing and managing nine different medical conditions: acute uncomplicated back pain, neck pain, soft tissue injury, sprain, blepharitis, allergic and infective conjunctivitis, urinary tract infection and acne. We modified some of the medical conditions to fit with common practice in Jordan (e.g. superficial fungal infections, muscle and joint pain). The last part was adapted from Hoti *et al.*,<sup>[18]</sup> to assess pharmacists' views on supplementary and independent prescribing, perceived drivers and barriers to pharmacist prescribing, and additional training needs required for pharmacists to take on expanded prescribing responsibilities. Two external pharmacy practice professors evaluated the final survey to ensure that it answers the proposed research questions and that the modified medical conditions fit with common cases seen in community pharmacies in Jordan. The two external reviewers suggested to add women's health and oral contraception, and merge allergic and infective eye condition together. The survey was modified accordingly.

The survey was administered to a pilot group of 22 pharmacists prior to data collection. Participants in the pilot study were asked to provide feedback regarding the survey's style, length, accessibility and language. The online survey was modified according to the pilot participants' feedback. Pilot data were not included in the final results.

### Data collection

The participating pharmacists were invited to complete an online survey through the official Facebook page of the Jordan Pharmacists Association (JPA), in addition to a social Facebook group for pharmacists in Jordan. Frequent reminders to take part in the study were posted between June and August 2018. In addition to the online invitations, pharmacists were invited to fill the survey in multiple gatherings hosted by the JPA and other stakeholders (i.e. general assembly meetings and conferences). We also offered a paper version for participants who could not access the online version.

### Data analysis

All online responses were exported to the Statistical Package for Social Sciences (IBM SPSS) version 25 (IBM Corporation, Armonk, NY, USA). Incomplete responses were excluded from the analyses. Descriptive statistics were used to analyse the data, and the results are presented as percentages and frequencies. Two-tailed one-sample *t*-test was used to compare the mean difference of support levels towards supplementary and independent prescribing.

## Results

Of the 703 collected surveys, 521 were complete. The remaining 182 attempts were excluded from the analyses as they were either partially complete or not filled in by pharmacists (i.e. pharmacy technicians or pharmacy students). The majority of the respondents were female (68.5%), the mean age was  $31.6 \pm 7.86$  years, and the majority of the respondents held a bachelor's degree in pharmacy (84.5%; Table 1). Moreover, the majority of the participants were working in a community pharmacy setting (61.6%) with a mean experience of  $7.7 \pm 7.22$  years (Table 1).

Over half of the respondents reported competency in diagnosing and managing skin-related conditions (i.e. acne and superficial fungal infections) and pain management (i.e. low back, muscle and joint pain). On the other hand, respondents reported inferior competency in managing ophthalmic conditions and hormonal contraception (Table 2). Moreover, the majority of the participants reported the need for further education and training in relation to the medications needed to treat these conditions (Table 2).

The views and attitudes of the respondents towards pharmacists in Jordan being granted a prescribing role are summarized in Table 3. Respondents identified securing more roles in health care ( $n = 464$ ; 89%) and increasing pharmacy profits ( $n = 420$ ; 80.7%) as being key facilitators to the adoption of this new role (Table 3). Meanwhile, inadequate training in disease diagnosis ( $n = 457$ ; 87.7%) and inadequate training in patient assessment and monitoring ( $n = 453$ ; 86.9%) were reported as being the most perceived barriers (Table 3).

Moreover, 92.5% of the respondents ( $n = 482$ ) believed that pharmacists should have an expanded prescribing role, and 98.8% of them ( $n = 476$ ) wished to take on an expanded role in prescribing. Respondents were

**Table 1** Demographic characteristics of the respondents ( $n = 521$ )

Demographic	N (%)
Gender	
Female	357 (68.5%)
Male	164 (31.5%)
Highest degree of education	
BSc	466 (89.4%)
MSc	49 (9.4%)
PhD	6 (1.2%)
Practice setting	
Community pharmacy	321 (61.6%)
Hospital pharmacy	68 (13.1%)
Academic	24 (4.6%)
Others (e.g. industry, government)	108 (20.7%)
Governate of practice	
Amman	212 (40.7%)
Irbid	190 (36.5%)
Zarqa	35 (6.7%)
Others	84 (16.1%)
Pharmacy degree	
BSc Pharmacy	440 (84.5%)
PharmD	81 (15.5%)
Age (mean $\pm$ STD)	31.6 $\pm$ 7.86
Years of experience (mean $\pm$ STD)	7.7 $\pm$ 7.22

STD, standard deviation.

significantly more in favour of supplementary prescribing ( $P < 0.05$ ) than independent prescribing for various medical conditions, except for pain management (Table 4).

Furthermore, 91.2% of the respondents ( $n = 475$ ) reported the need for additional training in order to assume additional prescribing responsibilities. These perceived training needs are presented in Figure 1. The training areas with the most reported needs were adverse drug reactions and drug interactions ( $n = 428$ ; 90.2%), clinical pharmacology

( $n = 427$ ; 89.9%) and principles of diagnosis ( $n = 405$ ; 85.3%).

## Discussion

This study is the first to assess Jordanian pharmacists' views and attitudes towards expanding the scope of pharmacy practice to include prescribing. This study assessed pharmacists' views on supplementary and independent prescribing, in addition to perceived drivers and barriers to pharmacist prescribing. The majority of participants supported pharmacists' role expansion to include prescribing. While participants reported competency in diagnosing and managing some clinical conditions, the majority reported the need for additional training to become prescribers. Moreover, participants were in favour of supplementary prescribing for chronic conditions and expressed promising confidence in independent prescribing for acute conditions.

Almost all pharmacists in this study (92.5%) believed that pharmacists should have an expanded prescribing role, with an evident preference for supplementary prescribing. Studies from other countries have shown that 83.9%-97.7% of pharmacists hold positive attitudes towards expanding pharmacist prescribing roles.<sup>[18,19,22]</sup> In this study, pharmacists perceived that prescribing in community pharmacies would make medications more accessible to patients. This would ultimately result in better patient outcomes. Over 50% of patients in Jordan prefer to receive advice regarding medication from pharmacists. Moreover, the low socioeconomic status in Jordan has increasingly pushed patients to practice self-medication and to purchase medications, particularly antibiotics, from pharmacies without prescriptions.<sup>[21,23]</sup> Therefore, it is expected that patients in Jordan will have high levels of support and satisfaction towards pharmacist prescribing, as is the case with patients in other countries.<sup>[13,24-26]</sup> Pharmacist prescribing has strong

**Table 2** Perceived competence of respondents in diagnosing and managing selected conditions ( $n = 521$ )

	Acute low back pain	Superficial fungal infections	Muscle and joint pain	Hormonal contraceptives	Acne	Eye allergies and infections
I feel competent to diagnose this condition						
Agree	301 (57.8%)	371 (71.2%)	403 (77.4%)	258 (49.5%)	372 (71.4%)	273 (52.4%)
Disagree	220 (42.2%)	150 (28.8%)	118 (22.6%)	263 (50.5%)	149 (28.6%)	248 (47.6%)
I have no need for further education and training in relation to the diagnosis of this condition						
Agree	199 (38.2%)	195 (37.4%)	273 (52.4%)	139 (26.7%)	252 (48.4%)	157 (30.1%)
Disagree	322 (61.8%)	326 (62.6%)	248 (47.6%)	382 (73.3%)	269 (51.6%)	364 (69.9%)
I feel competent to select an appropriate drug to treat this condition						
Agree	280 (53.7%)	309 (59.3%)	360 (69.1%)	197 (37.8%)	337 (64.7%)	237 (45.5%)
Disagree	241 (46.3%)	212 (40.7%)	161 (30.9%)	324 (62.2%)	184 (35.3%)	284 (54.5%)
I am completely up to date with evidence-based treatment for this condition						
Agree	268 (51.4%)	259 (49.7%)	335 (64.3%)	216 (41.5%)	343 (65.8%)	212 (40.7%)
Disagree	253 (48.6%)	262 (50.3%)	186 (35.7%)	305 (58.5%)	178 (34.2%)	309 (59.3%)
I am completely up to date with treatment guidelines and recommendations for this condition						
Agree	259 (49.7%)	238 (45.7%)	319 (61.2%)	221 (42.4%)	343 (65.8%)	224 (43%)
Disagree	262 (50.3%)	283 (54.3%)	202 (38.8%)	300 (57.6%)	178 (34.2%)	297 (57%)
I have no need for further education and training in relation to the drugs needed to treat this condition						
Agree	189 (36.3%)	164 (31.5%)	237 (45.5%)	133 (25.5%)	252 (48.4%)	146 (28%)
Disagree	332 (63.7%)	357 (68.5%)	284 (54.5%)	388 (74.5%)	269 (51.6%)	375 (72%)

**Table 3** Respondents' attitudes towards pharmacists having an expanded role in prescribing (*n* = 521)

	Strongly agree/agree	Neutral	Strongly disagree/disagree
Perceived facilitators			
Patients would have better access to their medications if pharmacists were prescribers	380 (72.9%)	99 (19.1%)	42 (8%)
Expanded pharmacist prescribing would ease the burden from overloaded physicians and hence improve the functioning of our health system	329 (63.2%)	115 (22.1%)	77 (14.7%)
Expanded prescribing responsibilities is a direction that the pharmacy profession should be headed in order to secure more role in health care	464 (89%)	27 (5.2%)	30 (5.8%)
Pharmacists are highly regarded by the community and therefore they should assume more prescribing responsibilities	398 (76.4%)	59 (11.3%)	64 (12.3%)
Pharmacists have the necessary drug knowledge to assume more prescribing responsibilities.	397 (76.2%)	70 (13.4%)	54 (10.4%)
Pharmacist prescribing enables better use of pharmacist's professional skills	254 (48.8%)	143 (27.4%)	124 (23.8%)
Expanded prescribing will contribute to increased pharmacy profits	420 (80.7%)	71 (13.6%)	30 (5.7%)
Perceived barriers			
Inadequate training in diagnosis of disease	457 (87.7%)	39 (7.5%)	25 (4.8%)
Inadequate training in patient assessment and patient monitoring	453 (86.9%)	41 (7.9%)	27 (5.2%)
Potential for reduction in the quality of patient care	244 (46.8%)	148 (28.4%)	129 (24.8%)
Potential for increased patient costs	167 (32.1%)	118 (22.6%)	236 (45.3%)
Potential for increased hospital admissions	175 (33.6%)	163 (31.3%)	183 (35.1%)
Potential for increased government costs	182 (34.9%)	171 (32.8%)	168 (32.3%)
Conflict of interest with pharmacists acting both as a prescribers and dispensers	167 (32.1%)	156 (29.9%)	198 (38%)
Pharmacist's lack of time	195 (37.4%)	112 (21.5%)	214 (41.1%)
Increased confusion amongst the public as to the role of physicians and pharmacists	263 (50.5%)	134 (25.7%)	124 (23.8%)
Potential decrease in quality of current services offered by pharmacists	189 (36.3%)	122 (23.4%)	210 (40.3%)
Pharmacist having commercial interest in prescribing	287 (55.1%)	102 (19.6%)	132 (25.3%)
Inadequate facilities within pharmacies to allow pharmacists prescribing	321 (61.6%)	114 (21.9%)	86 (16.5%)
Increased likelihood of litigation	383 (73.5%)	95 (18.2%)	43 (8.3%)

**Table 4** Respondents' level of support for supplementary and independent prescribing for selected conditions

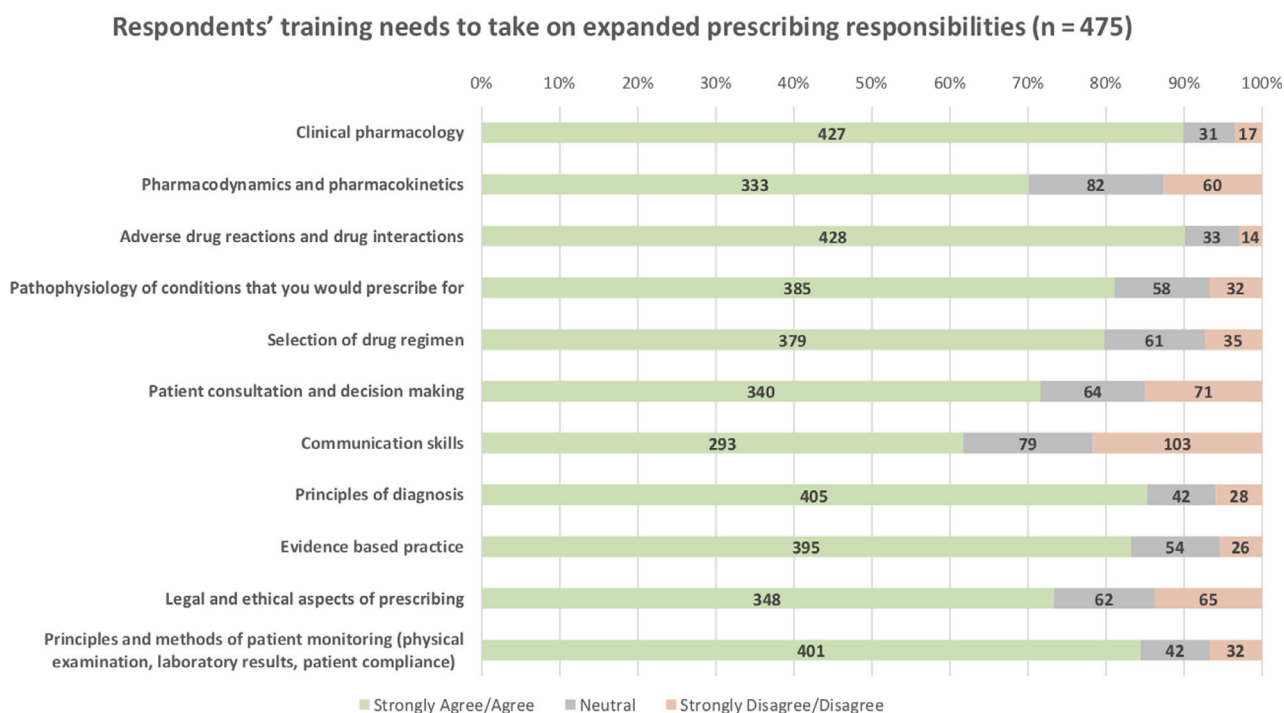
	Level of support for supplementary prescribing			Level of support for independent prescribing			<i>P</i> value
	Strongly agree/agree	Neutral	Strongly disagree/disagree	Strongly agree/agree	Neutral	Strongly disagree/disagree	
Antibiotics	316 (65.6%)	57 (11.8%)	109 (22.6%)	282 (58.5%)	69 (14.3%)	131 (27.2%)	0.05
Diabetes	339 (70.3%)	70 (14.5%)	73 (15.2%)	123 (25.5%)	119 (24.7%)	240 (49.8%)	<0.001
Hypertension	331 (68.7%)	70 (14.5%)	81 (16.8%)	100 (20.8%)	97 (20.1%)	285 (59.1%)	<0.001
Heart failure	311 (64.5%)	61 (12.7%)	110 (22.8%)	59 (12.2%)	63 (13.1%)	360 (74.7%)	<0.001
Asthma	339 (70.4%)	70 (14.5%)	73 (15.1%)	186 (38.6%)	96 (19.9%)	200 (41.5%)	<0.001
Anticoagulation	311 (64.5%)	74 (15.4%)	97 (20.1%)	67 (13.9%)	89 (18.5%)	326 (67.6%)	<0.001
Pain management	277 (57.5%)	57 (11.8%)	148 (30.7%)	380 (78.8%)	48 (10%)	54 (11.2%)	<0.001

evidence of effectiveness and safety.<sup>[27]</sup> This evidence, along with feedback from key health stakeholders (e.g. patients, clinicians and advocacy groups), has resulted in the global support of pharmacist prescribing.<sup>[28]</sup>

Pharmacists in the current study reported barriers to the implementation of pharmacist prescribing in Jordan, including inadequate training, confusion towards the role of physicians and pharmacists, and inadequate facilities in pharmacies. This could explain why participants were more in favour of supplementary prescribing than independent prescribing. However, these barriers were commonly described in the literature during the pre-implantation phase of pharmacist prescribing in many countries.<sup>[18,28–31]</sup> These barriers did not stop the implementation of pharmacist prescribing in these countries. In fact, many of these barriers were overcome in the post-implementation phase.<sup>[28]</sup>

Granting pharmacists in Jordan a supplementary prescribing role would be taking a big step forward to transform pharmacy practice in Jordan and the Middle East region. However, this will require collaborative efforts between regulatory bodies (e.g. Ministry of Health), and the Jordan Pharmacists Association. We encourage the Jordan Pharmacists Association to provide adequate training for pharmacists to prepare them for a supplementary prescribing role. We also recommend the Jordan Pharmacists Association to meet with the Jordan Medical Association to regulate the supplementary prescribing process as we need physicians to be on board with this change. Moreover, the majority of participants reported that need for additional training in drug regimen selection, adverse drug reactions and drug interactions, communication skills, and evidence-based practice. These findings suggest that pharmacy schools in Jordan





**Figure 1** Respondents' training needs to take on expanded prescribing responsibilities (n = 475).

need to make changes to curricula to incorporate extensive training in these areas to train pharmacy students to become more competent and to have the self-efficacy to become prescribers in the future.

### Strengths and limitations

This is the first study to assess pharmacists' readiness to become prescribers in Jordan. To our knowledge, pharmacists' role as a prescriber was never described in the literature in the Middle East region. The study used two validated questionnaires and had an adequate sample size to describe Jordanian pharmacists' views on this matter. However, the majority of the data was primarily collected through online survey which could potentially affect the generalizability of the results drawn from this study.

### Conclusion

Overall, Jordanian pharmacists strongly supported the expanded prescribing role and favoured supplementary prescribing for chronic conditions (e.g. diabetes). The study highlighted the need for additional training in various areas (e.g. diagnosing and managing some clinical conditions) to prepare Jordanian pharmacists for this new role. Furthermore, the study recommends that stakeholders and decision-makers need to take action in supporting pharmacists to take a key role in health care and make changes in pharmacy curricula to provide future pharmacists with sufficient training to become prescribers.

### Declarations

#### Conflict of interest

The Author(s) declare(s) that they have no conflicts of interest to disclose.

#### Funding

This research received no specific grant from any funding agency in the public, commercial or not-for-profit sectors.

#### Authors' contributions

All authors state that they had complete access to the study data that support the publication.

### References

1. American College of Clinical Pharmacy. A vision of pharmacy's future roles, responsibilities, and manpower needs in the United States. *Pharmaco-therapy* 2000; 20: 991–1047.
2. Traynor K. With Maine on board, pharmacists in all 50 states can vaccinate: H1N1 prompts emergency vaccination rules for pharmacists. *Am J Health Syst Pharm* 2009; 66: 1892–1894.
3. Evans AM et al. National community pharmacy NHS influenza vaccination service in wales: a primary care mixed methods study. *Br J Gen Pract* 2016; 66: e248–e257.
4. McMichael I. Part 1: in-pharmacy flu immunisations are happening. *Australian Pharmacist* 2012; 31: 277.
5. Tannenbaum C, Tsuyuki RT. The expanding scope of pharmacists' practice: implications for physicians. *CMAJ* 2013; 185: 1228–1232.
6. Tonna AP et al. An international overview of some pharmacist prescribing models. *J Malta Coll Pharm Pract* 2008; 14: 20–26.

7. Nazer LH, Tuffaha H. Health care and pharmacy practice in Jordan. *Can J Hosp Pharm* 2017; 70: 150–155.
8. Emmerton L *et al.* Pharmacists and prescribing rights: review of international developments. *J Pharm Pharm Sci*. 2005; 8: 217–225.
9. Galt KA. The key to pharmacist prescribing: collaboration. *Am J Health Syst Pharm* 1995; 52: 1696–1699.
10. Pearson G *et al.* An information paper on pharmacist prescribing within a health care facility. *Can J Hosp Pharm* 2002; 55: 56–62.
11. Tonna A *et al.* Pharmacist prescribing in the UK—a literature review of current practice and research. *J Clin Pharm Ther* 2007; 32: 545–556.
12. Cooper RJ *et al.* Nurse and pharmacist supplementary prescribing in the UK—a thematic review of the literature. *Health Policy* 2008; 85: 277–292.
13. Hale A *et al.* Patient satisfaction from two studies of collaborative doctor–pharmacist prescribing in Australia. *Health Expect* 2016; 19: 49–61.
14. Tinelli M *et al.* Patient evaluation of a community pharmacy medications management service. *Ann Pharmacother* 2007; 41: 1962–1970.
15. Faruquee CF, Guirguis LM. A scoping review of research on the prescribing practice of canadian pharmacists. *Can Pharm J* 2015; 148: 325–348.
16. Hutchison M *et al.* Survey of Alberta hospital pharmacists' perspectives on additional prescribing authorization. *Am J Health Syst Pharm* 2012; 69: 1983–1992.
17. Tsuyuki RT *et al.* A randomized trial of a community-based approach to dyslipidemia management: pharmacist prescribing to achieve cholesterol targets (RxACT study). *Can Pharm J* 2016; 149: 283–292.
18. Hoti K *et al.* An evaluation of Australian pharmacist's attitudes on expanding their prescribing role. *Pharm World Sci* 2010; 32: 610–621.
19. George J *et al.* Independent prescribing by pharmacists: a study of the awareness, views and attitudes of Scottish community pharmacists. *Pharm World Sci* 2006; 28: 45–53.
20. Al-Wazaify M, Albsoul-Younes A. Pharmacy in Jordan. *Am J Health Syst Pharm* 2005; 62: 2548–2551.
21. Almaaytah A *et al.* Dispensing of non-prescribed antibiotics in Jordan. *Patient Prefer Adherence* 2015; 9: 1389–1395.
22. Auta A *et al.* Pharmacist prescribing: a cross-sectional survey of the views of pharmacists in Nigeria. *Int J of Pharm Pract* 2018; 26: 111–119.
23. Mukattash TL *et al.* Parental self-treatment of their children in Jordan, a qualitative study. *J Pharm Health Serv Res* 2019; 10: 317–323.
24. Stewart DC *et al.* Cross sectional survey of the Scottish general public's awareness of, views on, and attitudes toward nonmedical prescribing. *Ann Pharmacother* 2009; 43: 1115–1121.
25. Khan MU *et al.* A cross-sectional survey on the attitudes and interests of rural population towards expanded pharmacist prescribing in India. *Int J of Clin Pharm* 2017; 39: 473–477.
26. Auta A *et al.* Patients' views on their consultation experience in community pharmacies and the potential prescribing role for pharmacists in Nigeria. *J Pharm Health Serv Res* 2014; 5: 233–236.
27. Weeks G *et al.* Non-medical prescribing versus medical prescribing for acute and chronic disease management in primary and secondary care. *Cochrane Database of Syst Rev* 2016; 11: CD011227.
28. Jebara T *et al.* Stakeholders' views and experiences of pharmacist prescribing: a systematic review. *Br J Clin Pharmacol* 2018; 84: 1883–1905.
29. Hanes CA, Bajorek BV. Pharmacist prescribing: views of Australian hospital pharmacists. *J Pharm Pract Res* 2005; 35: 178–180.
30. Erhun WO *et al.* Study of pharmacists' and physicians' views on pharmacists prescribing in Nigeria. *West Afr Pharm* 2013; 24: 76–82.
31. Pojskic N *et al.* Initial perceptions of key stakeholders in Ontario regarding independent prescriptive authority for pharmacists. *Res Social Adm Pharm* 2014; 10: 341–354.