Australian pharmacists' self-perceptions in relation to the 'Advanced Pharmacy Practice Framework'

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*Highlights (for review)

No Highlights needed to be attached.

Abstract

Background: The Australian Pharmacy Practice Framework was developed by the Advanced Pharmacy Practice Steering Committee and endorsed by the Pharmacy Board of Australia in October 2012. The Steering Committee conducted a study that found practice portfolios to be the preferred method to assess and credential Advanced Pharmacy Practitioner which is currently being piloted by the Australian Pharmacy Council. Credentialing is predicted to open to all pharmacists practising in Australia by November 2015.

Objective: To explore how Australian pharmacists self-perceived being advanced in practice and how they related their level of practice to the Australian Advanced Pharmacy Practice Framework.

Method: This was an explorative, cross-sectional study with mixed methods analysis. Advanced Pharmacy Practice Framework, a review of the recent explorative study on Advanced Practice conducted by the Advanced Pharmacy Practice Framework Steering Committee and semi-structured interviews (n=10) were utilised to create, refine and pilot the questionnaire. The questionnaire was advertised across pharmacy-organisational websites via a purposive sampling method. The target population were pharmacists currently registered in Australia.

Results: Seventy-two participants responded to the questionnaire. The participants were mostly female (56.9%) and in the 30 – 40 age group (26.4%). The pharmacists self-perceived their levels of practice as either entry, transition, consolidation or advanced, with the majority selecting the consolidation level (38.9%). Although nearly half (43.1%) of the participants had not seen the Framework beforehand, they defined Advanced Pharmacy Practice similarly to the definition outlined in the Framework, but also added specialisation as a requirement. Pharmacists explained why they were practising at their level of practice, stating that not having more years of practice, lacking experience, or postgraduate/post-registration qualifications, and more involvement and recognition in practice were the main reasons for not considering themselves as an Advanced Pharmacy Practitioner. To be considered advanced by the Framework, pharmacists would need to fulfil at least 70% of the Advanced Practice competency standards at an advanced level. More than half of the pharmacists (64.7%) that self-perceived as being advanced managed to fulfil 70% or more of these Advanced Practice competency standards at the advanced level. However, none of the self-perceived entry level pharmacists managed to match at least 70% of the competencies at the entry level.

Conclusion: Participants' self-perception of the term Advanced Practice was similar to the definition in the Advanced Pharmacy Practice Framework. Pharmacists working at an advanced level were largely able to demonstrate and justify their reasons for being advanced practitioners. However, pharmacists practising at the other levels of practice (entry, transition, consolidation) require further guidance regarding their advancement in practice.

Keywords: Advanced Pharmacy practice; Self-perceptions; Australian pharmacist; Pharmacy profession; Pharmacy practice recognition

Introduction

Pharmacy has evolved from a traditional role of dispensing and compounding to that of a more patient focused approach.¹⁻⁴ There is now increasing acceptance by other health professionals to integrate Pharmacy into multidisciplinary teams in hospitals and general practices.⁵⁻⁸ However, although community pharmacies are ‘one of the most trusted and visited healthcare destination in Australia’, there is still uncertainty within the general public as to the role of Australian pharmacists beyond that of medicine suppliers and advisors’.⁹⁻¹¹

The Advanced Pharmacy Practice Framework (APPF) was developed by the Advanced Pharmacy Practice Steering Committee (APPFSC) and endorsed by the Pharmacy Board of Australia (PBA) in October 2012.¹² The APPFs’ aim was to enable pharmacists working at an advanced level of practice to gain formal recognition and inspire other pharmacists to work towards advancement.¹² The APPF defines Advanced Practice as ‘practice that is so significantly different than that achieved at initial registration that it warrants recognition by professional peers and the public of the expertise of the practitioner and the education, training and experience from which that capability was derived.’^{12,13} It outlines the advanced knowledge, skills and attributes that pharmacists should possess to be recognised as Advanced Pharmacy Practitioners.¹²

Currently pharmacists in Australia do not have a formalised professional development pathway to recognise them beyond their entry-level competencies which are defined by the National Competency Standards Framework for Pharmacists in Australia 2010 (National Framework).^{4,12,14,15} In order to enhance these entry-level competencies, there is a need for Continuing Professional Development (CPD) and a requirement to identify the necessary improvements in one’s own expertise in order to facilitate the transition to advance in practice.^{12,15} CPD can be obtained through an increase in scope of practice which narrows as a pharmacist becomes more focussed on a specific area of practice.^{4,12} The term ‘specialisation’ is usually used when a pharmacist has a defined expert scope of practice.^{4,12} This term is widely used by other health professions, such as Dentistry and Medicine.¹⁵ The increase in CPD through pharmacists performance level consists of an increase in expertise, training and experiences.¹² This increase in performance level eventually leads to a ‘threshold’ and it is here that advanced practice defined.¹²

The APPFSC noted the work that had already been done by the United Kingdom (UK) Competency and Evaluation Group (CoDEG), the Royal Pharmaceutical Society (RPS), and the Pharmacy Council of New Zealand.^{12,16,17} The Advanced – to – Consultant Level Framework (ACLF) developed by CoDEG, and the RPS Advanced Pharmacy Framework had significantly facilitated the concept of Advanced Pharmacy Practice in Australia.^{12,15-18} The APPFSC used the National Framework as well as these frameworks as the backbone to develop the APPF.¹² The APPFSC also conducted an explorative study around the perspectives of the Australian Pharmacy profession in relation to Advanced Practice.¹⁹ The exploration helped ascertain the best method to assess Advanced Practitioners and targeted pharmacists that were either already advanced or were actively working towards advancement.¹⁹

81 The APPF describes the ‘general’ level requirements which related to the competency
82 standards described in the National Framework.⁴ The next part describes the general characteristics
83 of pharmacists that are progressing towards becoming advanced.¹² Fig. 1 displays these general
84 characteristics as a continuum, describing the general characteristics at 3 major practice levels
85 identified as transition, consolidation, and advanced. These characteristics indicate general
86 pharmacists’ practice level and are in no way mandatory.¹² Entry level, the level at which
87 pharmacists begin their career, is not outlined in Fig 1 or the APPF.^{12,20} Any continuum towards
88 advancement through CPD and identifying and addressing gaps in expertise is regarded as
89 transitioning.¹² This further leads to consolidation through an increase in performance level and
90 eventually reaches a threshold of advancement.¹² The next section in the APPF explains the
91 competencies of Advanced Practice through a generic template that can be tailored to different areas
92 of expertise.^{12,21} It outlines the Advanced Practice competency standards required to be at the
93 transition, consolidation, and advanced level.¹² For a pharmacist to be recognised as advanced they
94 would have to fulfil at least 70% of the Advanced Practice competency standards for their scope of
95 practice at the advanced level.¹²

96 The pilot credentialing of these Advanced Pharmacy Practitioners through submission of
97 practice portfolios is currently being conducted by the Australian Pharmacy Council (APC).^{22–24} The
98 APC also released a round of consultation papers in 2014, engaging the profession to communicate
99 about the process and standards that should be used for assessing Advanced Practice.^{21,25–28} The
100 feedback was being considered in June/August 2015, with credentialing to open to all pharmacists
101 by November 2015.²⁹

Advanced Level

- More than 5 years of experience in the defined area of practice.
- Holds relevant postgraduate qualification of at least Graduate Diploma level.
- Working independently and influencing practice at state or national level.
- Guides (directly supervises or mentors) other advanced level pharmacists.
- Acknowledged within a multidisciplinary team as a leader in the defined area of practice.
- Meet all prerequisite competency standards; and at least 70% of advanced practice competency standards at Advanced Level; and balance of advanced practice competency standards at Consolidation Level.

Consolidation Level

- 2-5 years of experience in the defined area of practice.
- Holds relevant postgraduate qualification of at least Graduate Diploma level.
- Previous experience working under supervision but now working independently in the defined area of practice and starting to influence practice locally.
- Responsible for supervising students and less experience pharmacists.
- A team member with acknowledged expertise in the defined area of practice.
- Meet all prerequisite competency standards; and at least 70% of advanced practice competency standards at Consolidation Level; and balance of advanced practice competency standards at Transition Level.

Transition Level

- 2-3 years general pharmacy practice experience.
- Maybe undertaking relevant advanced training/postgraduate study.
- Working under the guidance (direct supervision or mentoring) of more experienced pharmacist.
- A proactive member of the healthcare team in defined area of practice.
- Meet all prerequisite competency standards; and at least 70% of advanced practice competency standards at Transition Level

Fig. 1: General characteristics of pharmacists working with Advanced Practice competency standards adapted from An Advanced Pharmacy Practice Framework for Australia, 2012.

Objective

To explore how Australian pharmacists self-perceived being advanced in practice and how they related their level of practice to the Advanced Pharmacy Practice Framework.

Methods

This was a cross-sectional, explorative study using an electronic questionnaire. The target population were pharmacists registered as practising in Australia. The study utilised a mixed method study design, with triangulation of the methods using qualitative and quantitative analysis in relation to the theoretical propositions enabling better validation of the results.^{30,31} Fig. 2 offers an overview of the process and study timeline used in constructing the questionnaire. This study was granted ethics approval from the Griffith University Human Research Ethics Committee (Ref PHM/15/14/HREC).

Questionnaire construction

The tools used in constructing the questionnaire included a thorough review of the APPF and an in-depth analysis of the recent explorative APPFSC study. This helped construct the first draft of the questionnaire which incorporated the findings of the documents reviewed and the objective of the study. The study objective was highlighted by 5 parts of the questionnaire; the definition of Advanced Pharmacy Practice, the different levels of practice in the Pharmacy profession, the qualities and characteristics needed to be recognised as an Advanced Pharmacy Practitioner, and the demonstration of Advanced Practice competencies in comparison to the different levels of practice.

The questionnaire was constructed electronically using Adobe® FormsCentral and Twist of Lime®, but the latter was not preferred by the pilot participants. The questionnaire contained 14 questions/comment sections and took 10 minutes to complete. A link to the APPF was included in the questionnaire. The first question was the inclusion criteria asking pharmacists if they were registered in Australia. The questionnaire contained 6 demographic questions, with the remainder focusing on the study objective. The final question covered examples from the Advanced Practice competency standards, as described in the APPF. It contained 10 multiple choice questions relating to the competencies that were simplified to optimise comprehension. Entry level examples were also included in this section so that pharmacists beginning their career could also answer the questionnaire.^{4,12} The APPFSC explorative study questions were also compared and contrasted against the questionnaire. This helped shape questions that could further explore Advance Practice in the profession and assisted in validation.

Semi-structured interviews with pharmacists

The semi-structured interviews contributed to the triangulation process. Ten pharmacists that were from different areas and levels of practice in the South East Queensland region were contacted. The aim of these interviews was to provide real-life examples of pharmacists practising at different levels of practice that would help them understand entry, transition, consolidation, and advanced levels of practice in the questionnaire. The information received from the interviews was also analysed to form common themes to supplement the findings from the questionnaire. These participants also piloted the questionnaire to ensure reliability and validity (Fig. 2).

Recruitment process

The ‘deconstruction’ and explanation of the APPF, the explorative APPFSC study, the semi-structured interview, and the piloting of the questionnaire formed a triangulation of the tools used which ensured reliability and validity of the final questionnaire.^{31,32} This questionnaire contained the informed consent, multiple choices, open and closed-ended questions that addressed the study objectives. The target population of currently practising pharmacists in Australia were purposively sampled. As of December 2014, there were 27,836 pharmacists currently registered as practising in Australia either under a general, provisional or limited registration type with Australian Health Practitioner Regulation Agency (AHPRA).³³

The final questionnaire was open for a total of 5 weeks starting from the 23rd of March to the 24th of April, 2015. The questionnaire was advertised on pharmacy-organisational websites that were most likely to be seen by the Pharmacy profession. Auspharmacist.net.au e-newsletter

(AusPharm), the Pharmaceutical Society of Australia (PSA) Facebook® page and the Society of Hospital Pharmacists of Australia (SHPA) e-newsletter advertised the questionnaire. A 16GB Apple® iPad mini 3 was the incentive offered through a prize draw. Participants' personal details were only used for the draw and were in no way linked to the questionnaire responses.

Data analysis

The qualitative data from the open-ended questions was collected using Microsoft® Excel and analysed in an iterative manner using thematic analysis.^{34,35} Open coding was used as each open-ended question was analysed and codes were developed. This method allowed for grouping of similar ideas and emergence of common themes.³⁵ The themes from the semi-structured interview were also compared against the themes that emerged from the questionnaire.

The quantitative data obtained from the demographics and the multiple choice questions were analysed via IBM® SPSS® Statistics Version 22.0.³⁶ Descriptive statistics was used to describe this data. The data was then used to replicate the general characteristics of pharmacists working with Advanced Practice competency standards, as shown in Fig. 1.

See attached JPEG file titled: Fig. 2

Fig. 2: Overview of the method and recruitment process

Results

Seventy-two pharmacists currently registered as practising in Australia completed the electronic questionnaire. Table 1 shows that there were more female participants (56.9%) and the highest percentage of participants (26.4%) were in the 31 – 40 age groups. Nearly half of the participants (43.1%) had not seen the APPF document beforehand. Most of the pharmacists were currently working in the community sector (47.9%). About one third (33.8%, n=24/71) of the pharmacists were currently working in at least two or more areas of practice and about twenty percent (22.9%, n=16/70) of the participants held 2 or more qualifications.

Table 1: Demographics of the study respondents

Demographics	Percentage in sample population (N = 72)
Female	56.9%
Age Brackets	
21 – 30 years	22.2%
31 – 40 years	26.4%
41 – 50 years	19.4%
51 – 60 years	22.2%
≥ 61 + years	9.7%

Have not seen the Advanced Pharmacy Practice Framework beforehand	43.1%
Current practice location	
Community	47.9%*
Hospital	43.7%*
Academia	22.5%*
Government or private sector organisation	9.9%*
Medications reviews	8.4%*
Clinical or private consultancy	4.2%*
Industry	2.8%*
Currently working in at least two or more practice areas	33.8%*
Practised in only one particular area	26.8%*
Post-registration or postgraduate qualifications	
Holds two or more qualifications	22.9% ¹
No other qualification	29.6%*

*N = 71 due to missing data

¹N = 70 due to missing data

Definition of Advanced Pharmacy Practice

One of the questions helped understand how Advanced Pharmacy Practice was perceived by the profession through the definition of the term by Australian pharmacists. Most of the pharmacists identified that Advanced Practice had to be at a level that was significantly different from that achieved at initial registration.

“Fulfilling a work role substantially different to that undertaken by the 'average' professional and utilising a skill set different to that acquired during the professional qualification.”

The participants also deemed that an increase in skills and knowledge more easily seen in a clinical setting demonstrated an increase in expertise and specialisation, and this implied Advanced Practice.

“Where you can demonstrate "expertise" in Pharmacy practice that is recognised by peers and the profession.”

Involvement and recognition through the greater Pharmacy profession was also considered important. This involved increasing pharmacist responsibilities through contribution to research, mentoring others, becoming leaders in the profession and influencing the profession at a state, national or international level. Pharmacists had to be recognised by their peers, the community, and other health professionals in order to be called ‘advanced’ in practice.

Different levels of practice in the Pharmacy profession

Pharmacists were asked to self-perceive their level of practice and explain why they were working at this particular level. All 72 participants reflected on their current level of practice. A large proportion of participants (38.9%) believed that they were practising at a consolidation level.

Pharmacists that self-perceived to be practising at the lower levels of entry (15.3%) and transition (12.5%) stated that they lacked experience. Not having different areas to practice in, more years of practice and more qualifications were the primary reasons given to justify practising at this level. Those choosing to self-perceive as practising at the transition level stated that they had more qualifications or involvement than that described at entry level.

“Only have been practising as a registered pharmacist for 4 years. Practising in a specialised role for less than a year. Nil publications yet but contemplating research.”

Most consolidation level pharmacists believed that their years of practice, experience, adaptability and involvement at a level higher than at registration justified their level of practice. Not having specific training or qualifications was the primary reason they did not think they could be practising at an advanced level.

“I have not had my skills/knowledge in my specialist areas of practice assessed in any way. I have lots of experience but little formal training. I can identify significant knowledge gaps in my own areas of specialty...”

The participants that self-perceived to be at an advanced level stated a range of reasons to justify why they were at this level and not another. Years of practice and experience working in a specialised area or in a lot of different areas and being involved not only nationally, but at an international level, were the primary reasons for self-perceiving oneself to be at an advanced level of practice.

“Graduated in 1958 and have worked in most branches of Pharmacy, especially as a missionary pharmacist in Ethiopia and Liberia. Includes Hospital Director, clinical ward rounds, time learning about TB with WHO...”

Qualities and characteristics of an Advanced Pharmacy Practitioner

The qualities and characteristics Australian pharmacists self-perceived that they needed to possess in order to be recognised as an Advanced Pharmacy Practitioner was also explored. Pharmacists that self-perceived as advanced (29.2%, n= 21/72) did not need to answer this question and a further 8 did not respond. Hence, only 43 participants' responses could be analysed. The participants believed that an increase in numerous qualities and characteristics were important. Fig. 3 summarises these findings which are not weighted, therefore, may have been mentioned by a few or by many participants.

See attached JPEG file titled: Fig. 3

Fig. 3: Qualities and characteristics of an Advanced Pharmacy Practitioner identified by the participating pharmacists

Demonstration of Advanced Practice competency standards

The quantitative aspect of this research asked pharmacists to self-perceive their level of practice for each of the Advanced Practice competency standard examples chosen from the APPF. Participants were excluded if they had given blank responses (n=3), chosen the “not applicable” option in one of the questions (n=20), or self-perceived as practising in the “other level” category (n=3). A total of 46 valid responses were used for this analysis. Table 2 outlines the two questions from each of the 5 domains that were asked and the received responses. Most of the self-perceived advanced level pharmacists answered the questions using the advanced answer. Rarely any of the self-perceived entry level pharmacists answered a question using the entry answer. The consolidated level pharmacists also rarely selected the entry level answers. Both the consolidated pharmacists and the transition pharmacists had very scattered responses, selecting answers in different levels of practice..

251 Table 2: Pharmacists’ self-perceptions and their response to each question at the different levels of practice

Multiple Choice Questions	Entry level pharmacists (n=7)				Transition level pharmacists (n=5)				Consolidation level pharmacists (n=17)				Advanced level pharmacists (n=17)			
	E (%)	T (%)	C (%)	A (%)	E (%)	T (%)	C (%)	A (%)	E (%)	T (%)	C (%)	A (%)	E (%)	T (%)	C (%)	A (%)
Domain 1: Expert professional practice																
Q1: I am able to plan, manage, monitor, advise and review professional programs	28.6	14.3	57.1	0.0	20.0	40.0	40.0	0.0	0.0	11.8	52.9	35.3	5.9	17.6	0.0	76.5
Q2: I make decisions in relation to my field of Pharmacy practice	14.3	42.9	42.9	0.0	0.0	40.0	20.0	40.0	0.0	47.1	23.5	29.4	0.0	23.5	35.3	41.2
Domain 2: Communication, collaboration and teamwork																
Q3: My professional communication skills demonstrate that I am able to	0.0	28.6	57.1	14.3	40.0	0.0	20.0	40.0	0.0	5.9	52.9	41.2	0.0	5.9	35.3	58.8
Q4: When I work as a member of the Pharmacy team I am able to	0.0	28.6	57.1	14.3	0.0	40.0	40.0	20.0	0.0	0.0	23.5	76.5	0.0	0.0	5.9	94.1
Domain 3: Leadership and management																
Q5: I am able to understand strategic context and contribute to strategic plans.	28.6	42.9	14.3	14.3	20.0	60.0	20.0	0.0	17.6	23.5	35.3	23.5	0.0	5.9	5.9	88.2
Q6: In regards to mentoring	14.3	28.6	42.9	14.3	20.0	0.0	80.0	0.0	0.0	0.0	23.5	76.5	0.0	0.0	29.4	70.6

252 E – entry level option, T – transition level option, C – consolidation level option, A – advanced level option

253 The highlighted sections are the particular level option that should have been chosen by the different self-perceived level pharmacists

254 Table 2: (continued)

Multiple Choice Questions	Entry level pharmacists (n=7)				Transition level pharmacists (n=5)				Consolidation level pharmacists (n=17)				Advanced level pharmacists (n=17)			
	E (%)	T (%)	C (%)	A (%)	E (%)	T (%)	C (%)	A (%)	E (%)	T (%)	C (%)	A (%)	E (%)	T (%)	C (%)	A (%)
Domain 4: Professional and ethical practice																
Q7: In regards to applying and monitoring standards of Pharmacy practice	14.3	42.9	42.9	0.0	0.0	60.0	40.0	0.0	0.0	29.4	52.9	17.6	0.0	17.6	29.4	52.9
Q8: I contribute to Continuing Professional Development (CPD)	0.0	71.4	28.6	0.0	0.0	80.0	20.0	0.0	0.0	17.6	52.9	29.4	0.0	17.6	23.5	58.8
Domain 5: Critical analysis, research and education																
Q9: With regards to education and training	14.3	42.9	42.9	0.0	0.0	20.0	80.0	0.0	0.0	5.9	64.7	29.4	0.0	0.0	47.1	52.9
Q10: My research skills allow me to generate	28.6	57.1	0.0	14.3	40.0	40.0	0.0	20.0	0.0	52.9	47.1	0.0	5.9	11.8	23.5	58.8

255 E – entry level option, T – transition level option, C – consolidation level option, A – advanced level option

256 The highlighted sections are the particular level option that should have been chosen by the different self-perceived level pharmacists

258   The participants’ characteristics were compared against the APPF general characteristics, as
259 shown in Fig. 1. Table 3 describes most of the general characteristics of the study participants. The
260 average years of practice for pharmacists increased as the levels of practice increased. Most of the
261 pharmacists in the advanced level (95%) had obtained postgraduate and/or post-registration
262 qualifications and practised/were practising in different areas. In regards to Advanced Practice
263 competency standards, it was observed that none of the pharmacists at the entry level fulfilled the
264 required competencies at this level and more than half of the advanced level pharmacists (64.7%)
265 managed to fulfil competencies within their advanced level.

266   Table 3: General characteristics of pharmacists at different self-perceived levels of practice

Characteristics	Entry level (n=11)	Transition level (n=9)	Consolidation level (n=28)	Advanced level (n=21)
Percentage of participants	15.3%	12.5%	38.9%	29.2%
Average years of experience (SD)	4.4 ± 2.7yrs	7.3 ± 2.9yrs	22.9 ± 10.1yrs	30.9 ± 14.6yrs
Percentage that had practised/were practising in more than one area	54.5%	22.2%	71.4%	95.0%*
Percentage that held postgraduate/ post-registration qualification	45.4%	33.3%	57.1%	95.0%*
Percentage that fulfilled competency requirements at the particular level ¹	0.0% (0/7)	20.0% (1/5)	11.8% (2/17)	64.7% (11/17)

267   *n=20 due to missing data

268   ¹participants had to answer 7 or more of the 10 multiple choice questions at their particular practice level (This is similar
269 to the 70% Advanced Practice competency standard requirements that is mentioned in the APPF)

270
271   **Discussion**

272   To the best of the researchers’ knowledge this study is the first of its kind, examining
273 Australian pharmacists’ self-perception in relation to the APPF in a small sample of registered
274 pharmacists. The participant’s age and gender distribution was fairly similar to the distribution seen
275 in the PBA 2014 annual report.³³ The exception was that there were twice as many pharmacists in
276 the 50 to 60 age bracket. Advanced Pharmacy Practice is seen to be attained with experience,
277 therefore, this study could have attracted the slightly older pharmacist population.¹²

278 *Areas of practice and qualifications in relation to Advanced Practice*

279 Specialisation was perceived to be one of the key factors in the definition of Advanced
280 Pharmacy Practice in this study and it was also found to be an incidental finding of the explorative
281 APPFSC study.^{19,37,38} The participants (26.8%) that had only ever practised in one particular area
282 could have been working towards specialisation. Pharmacists working in two or more areas would
283 obtain different experiences showing their versatility. However, it could be argued that this could
284 lead to a decrease in specialisation and expertise knowledge as there would not be enough
285 concentration in a particular scope of practice. Hence there needs to be some level of specialisation
286 to be considered advanced in practice.

287 To be recognised as an Advanced Pharmacy Practitioner according to the APPF, one had to
288 also be expanding their performance level by education, training and experience.¹² Fig. 1 outlines
289 postgraduate and or post-registration qualification as a general characteristic likely to be achieved by
290 pharmacists working with Advanced Practice competency standards. The majority of the
291 participants (70.4%) held a post-registration or postgraduate qualification or were in the process of
292 obtaining such qualifications. These pharmacists also felt that qualification beyond that required to
293 be registered as a pharmacist was necessary to be seen as practising at a higher level. Obtaining
294 more training and education such as postgraduate and post-registration qualifications is perceived as
295 necessary in becoming more advanced in practice.^{2,12,15}

296 There were twice as many hospital pharmacists that took part in this questionnaire in
297 comparison to the statistics obtained from the Health Workforce of Australia, 2014 (43.7% vs
298 17.6%).³⁹ Therefore, the idea of Advanced Practice being seen as something that is easier to gain in
299 clinical settings may have been predisposition. However, Advanced Practice has been more
300 developed in clinical settings and there is a need to develop validated competencies for Australian
301 pharmacists in general practice settings.^{8,40,41}

302 *Pharmacists definition of Advanced Practice*

303 The present study also aimed to understand how Advanced Pharmacy Practice was perceived
304 by the profession through the definition of the term by Australian pharmacists. The participants
305 mentioned the key elements of higher level of practice, increased expertise, extensive involvement
306 and recognition from the wider community. This is very similar to the APPF's definition of
307 Advanced Pharmacy Practice.¹² Therefore, this cohort of Australian pharmacists were well aware of
308 what Advanced Practice means in their profession.

309 However, pharmacists also included specialisation in their definition, which is not a part of
310 the APPF definition. Even though increased expertise would mean having knowledge and skills in a
311 particular field which may require a level of specialisation.

312   *Pharmacist self-perceived levels of practice*

313   Pharmacists that self-perceived to be at the consolidation level (38.9%) met most of the
314   criteria for an advanced level pharmacist, as outlined in Fig. 1 but felt that there was something
315   missing, such as formal qualifications that prevented them from being advanced in practice. While
316   pharmacists that self-perceived to be advanced had journeys that they felt depicted Advanced
317   Practice. They fulfilled most of the key elements in the APPF definition. Similarly, pharmacists
318   practising at the lower levels of practice; entry and transitional levels, felt that an increase in
319   expertise, education and training was needed to be considered advanced.

320   It was beyond the scope of this study to ascertain if these pharmacists were actually at the
321   level they stated. The need for evaluation of these journeys towards advancement for pharmacists
322   practising at all the levels has been noted in the feedback of the Advanced Pharmacy Practice
323   evidence guides prepared by the APC.^{26,28} However, it could be observed that pharmacists were
324   aware of their limitations. Self-perception allowed pharmacists to identify gaps in one's level of
325   practice, the first step in enabling them to seek further goals towards advancement.

326   *An Advanced Pharmacy Practitioners' qualities and characteristics*

327   The qualities and characteristics Australian pharmacists had identified they needed to
328   possess in order to be recognised as an Advanced Pharmacy Practitioner have been summarised in
329   Fig. 3. Most of these qualities and characteristics are described in the APPF and are essential in
330   establishing competency and advancement in health professionals.^{12,15} Lack of key aspects, such as
331   confidence, recognition for being advanced, and opportunities to progress in the workforce are also
332   regarded as being barriers to progress.^{2,10,12,42}

333   *Pharmacists self-perceived levels of practice against the competencies*

334   Table 2 showed that pharmacists practising at an advanced level could largely identify their
335   correct corresponding level of competency. The APPF outlines the requirements to be an Advanced
336   Pharmacy Practitioner, but lacks more clear interpretation regarding pharmacists that are practising
337   at the other levels. This could make it challenging for pharmacists to identify their true level of
338   practice.

339   In addition, it raises the question if the APPF is robust enough to accommodate all the other
340   levels of practice that exists in the profession and guide them towards advancement. Literature lacks
341   such comparison of pharmacists being compared against all the competencies to evaluate if it is a
342   true representation of their profession at certain levels of practice. Australian Pharmacy seems to be
343   a confused profession at this point in terms of pharmacists not being sure of their levels of practice
344   or their competencies.

345   Table 3 takes this comparison further by finding the general characteristics of the sample
346   population. The inconsistent results in the lower practice levels reiterated the need for clearer
347   guidelines for pharmacists practising at the levels of entry, transition, and consolidation.

348 *Awareness and opinions on Advanced Pharmacy Practice*

349   The lack of awareness and use of the APPF has also been reported in the explorative
350 APPFSC study.¹⁹ Some of the participants also felt that there was no purpose to Advanced Practice
351 as there has been no mention of remuneration or prescribing rights in relation to being recognised as
352 an Advanced Pharmacy Practitioner. Although there is overall positivity to drive the profession
353 forward, there is still uncertainty in the direction the profession is taking to achieve this.^{10,42} Similar
354 uncertainty has also been observed in the Australian Nursing profession during the development and
355 implementation of their Advanced Nursing Practice.⁴³ Awareness of recognition for Advanced
356 Practice in the Pharmacy profession may help in guiding Australian pharmacists' towards
357 advancement.¹²

358 *Limitations*

359   It is unknown if the APPF and the other frameworks used for this study were validated
360 before being implemented. The terminology in the Advanced Practice competency standard
361 questions were also found to be difficult to understand by some participants. However, these could
362 not be simplified further without changing their meaning. The small sample size influenced the
363 generalisability of the results. It also prevented the researchers from doing any inferential statistics.
364 This limited the interpretation and strength of the results observed. However, there was still a good
365 cross-sectional representation of the variety of Pharmacy practice environments, enabling external
366 validity.

367 **Conclusion**

368   As mentioned in the APPF, pharmacists also self-perceived that their years of practice,
369 different areas of practice, specialisation, qualifications, contribution towards the profession through
370 involvement, and recognition through peers and the wider community were the key elements in
371 defining Advanced Practice. These elements were also mentioned when pharmacy professionals
372 were asked to explain why they were at a particular level of practice and the qualities and
373 characteristics they needed to be an Advanced Pharmacy Practitioner. Pharmacists that self-
374 perceived to be advanced in practice seemed to largely fulfil most of the requirements needed to be
375 considered advanced. This indicates that there are pharmacists in the community who are working at
376 the advanced level in relation to the Advanced Practice competency standards and these pharmacists
377 need formal recognition. However, pharmacists at the other levels of practice of entry, transition and
378 consolidation need further guidance to follow the Advanced Practice pathway. It is also essential to
379 specify what will be the practical outcomes of being recognised as advanced. Without clear
380 definitions of advancement and guidance throughout the professional pathways, there may be
381 barriers to the adoption of such frameworks not only within the Pharmacy industry but also in other
382 disciplines that have introduced the concept of Advanced Practice.

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385 personnel, and the School of Pharmacy at Griffith University.

386 *Conflict of interest*

387 None declared.

388 **References**

- 389 1. Schulze D. Advancing practice slowly but surely. *Aust. J. Pharm.* 2014;95:28.
- 390 2. Brody R, Byham-Gray L, Touger-Decker R. A review of characteristics of graduating in the
391 allied health and nursing professions: entry-level and advanced practice. *Top. Clin. Nutr.*
392 2009;24(3):181-192.
- 393 3. Swetenham K, Rowett D, Stephenson D. Clinical networks influencing policy and practice:
394 the establishment of advanced practice pharmacist roles for specialist palliative care services
395 in South Australia. *Aust. Heal. Rev.* 2014;38:238-241.
- 396 4. Pharmaceutical Society of Australia. *National Competency Standards Framework for*
397 *Pharmacists in Australia*. Canberra; 2010. Available at:
398 <http://www.psa.org.au/download/standards/competency-standards-complete.pdf>.
- 399 5. Tan ECK, Stewart K, Elliott RA, George J. Integration of pharmacists into general practice
400 clinics in Australia: the views of general practitioners and pharmacists. *Int. J. Pharm. Pract.*
401 2014;22(1):28-37. doi:10.1111/ijpp.12047.
- 402 6. Chisholm-Burns MA, Kim Lee J, Spivey CA, et al. US pharmacists' effect as team members
403 on patient care: systematic review and meta-analyses. *Med. Care* 2010;48:923-933.
404 doi:10.1097/MLR.0b013e3181e57962.
- 405 7. Miller SW, Darsey E, Heard TJ, et al. Outcomes of a multidisciplinary partnership to improve
406 cardiac wellness: An opportunity for pharmacists. *Consult. Pharm.* 2010;25:105-116.
407 doi:10.4140/TCP.n.2010.105.
- 408 8. Freeman C, Cottrell N, Rigby D, Williams ID, Nissen L. The Australian practice pharmacist.
409 *J. Pharm. Pract. Res.* 2014;44(4):240-248. doi:10.1002/jppr.1027.
- 410 9. The Pharmacy Guild of Australia. *Pre-Budget Submission*. Canberra; 2014. Available at:
411 [http://www.guild.org.au/docs/default-source/public-documents/issues-and-](http://www.guild.org.au/docs/default-source/public-documents/issues-and-resources/Pharmacy-Issues/pdf-nbsp-guild-pre-budget---submission.pdf?sfvrsn=0)
412 [resources/Pharmacy-Issues/pdf-nbsp-guild-pre-budget---submission.pdf?sfvrsn=0](http://www.guild.org.au/docs/default-source/public-documents/issues-and-resources/Pharmacy-Issues/pdf-nbsp-guild-pre-budget---submission.pdf?sfvrsn=0).
- 413 10. McMillan SS, Kelly F, Sav A, King MA, Whitty JA, Wheeler AJ. Consumer and carer views
414 of Australian community pharmacy practice: awareness, experiences and expectations. *J.*
415 *Pharm. Heal. Serv. Res.* 2014;5(1):29-36. doi:10.1111/jphs.12043.
- 416 11. Medina MS, Plaza CM, Stowe CD, et al. The expanding role of pharmacists in a transformed
417 health care system. *Am. J. Pharm. Educ.* 2013;77(8):162. doi:10.5688/ajpe778162.

- 418 12. Advanced Pharmacy Practice Framework Steering Committee. *An Advanced Pharmacy*
419 *Practice Framework for Australia*. Canberra; 2012. Available at:
420 <http://advancedpharmacypractice.com.au/download/framework/advanced-pharmacy-practice->
421 [framework.pdf](http://advancedpharmacypractice.com.au/download/framework/advanced-pharmacy-practice-framework.pdf).
- 422 13. Low J. Credentialing of advanced pharmacy practice. *J. Pharm. Pract. Res.* 2014;44(1):11-
423 12. Available at: http://jppr.shpa.org.au/lib/pdf/2014_03/JLow_ED.pdf. Accessed July 23,
424 2014.
- 425 14. Coombes I, Kirsa SW, Dowling H V, Galbraith K. Advancing pharmacy practice in Australia:
426 The importance of national and global partnerships. *J. Pharm. Pract. Res.* 2012;42(4):261 -
427 263. Available at: http://jppr.shpa.org.au/lib/pdf/2012_12/I_Coombes_ED.pdf. Accessed July
428 23, 2014.
- 429 15. Australian Pharmacy Council Advanced and Extended Practice Steering Committee.
430 *Advanced and Extended Pharmacy Practice An Environmental Snapshot September 2013*.
431 Canberra; 2013. Available at:
432 [http://pharmacycouncil.org.au/content/assets/files/Publications/An Environmental snapshot](http://pharmacycouncil.org.au/content/assets/files/Publications/An%20Environmental%20snapshot%20on%20Advanced%20and%20Extended%20Pharmacy%20Practice%20September%202013.pdf)
433 [on Advanced and Extended Pharmacy Practice September 2013.pdf](http://pharmacycouncil.org.au/content/assets/files/Publications/An Environmental snapshot on Advanced and Extended Pharmacy Practice September 2013.pdf).
- 434 16. Royal Pharmaceutical Society. *The RPS Advanced Pharmacy Framework (APF)*. London;
435 2013. Available at: [https://www.rpharms.com/development-files/foundation-pharmacy-](https://www.rpharms.com/development-files/foundation-pharmacy-framework---final.pdf)
436 [framework---final.pdf](https://www.rpharms.com/development-files/foundation-pharmacy-framework---final.pdf).
- 437 17. Competency Development and Evaluation Group. Competency Development and Evaluation
438 Group. 2005. Available at: <http://www.codeg.org/>.
- 439 18. Competency Development and Evaluation Group. *Advanced to Consultant Level*
440 *Framework*.; 2009. Available at: <http://www.codeg.org/fileadmin/codeg/pdf/ACLF.pdf>.
- 441 19. Jackson S, Martin G, Bergin J, et al. Advanced practice: a survey of current perspectives of
442 Australian pharmacists. *J. Pharm. Pract. Res.* 2015;45:186-192. doi:10.1002/jppr.1097.
- 443 20. Advanced Pharmacy Practice Framework Steering Committee. *Professional Practice Profile*
444 *for Initial Registration as a Pharmacist: A Customised Tool of Entry-Level Competencies*
445 *Incorporating Guidance on Pharmacy School and Intern Training Provider Contributions*.
446 Canberra; 2011. Available at: [http://www.psa.org.au/download/standards/customised-entry-](http://www.psa.org.au/download/standards/customised-entry-level-competency-tool.doc)
447 [level-competency-tool.doc](http://www.psa.org.au/download/standards/customised-entry-level-competency-tool.doc).
- 448 21. Australian Pharmacy Council. *Advanced Practice Credentialing: First Round Consultation*
449 *Themes and Outcomes August 2014*. Canberra; 2014. Available at:
450 [http://pharmacycouncil.org.au/content/assets/files/Consultations/Consultation Themes and](http://pharmacycouncil.org.au/content/assets/files/Consultations/Consultation%20Themes%20and%20Outcomes%20August%202014.pdf)
451 [Outcomes August 2014.pdf](http://pharmacycouncil.org.au/content/assets/files/Consultations/Consultation Themes and Outcomes August 2014.pdf).
- 452 22. Australian Pharmacy Council. *APC Media Releases: APC to Become Credentialing Entity for*
453 *Advanced Pharmacy Practitioners in Australia*.; 2014. Available at:
454 [http://pharmacycouncil.org.au/content/assets/files/Media Releases/APC to become Advanced](http://pharmacycouncil.org.au/content/assets/files/Media%20Releases/APC%20to%20become%20Advanced%20Practice%20Credentialing%20Entity%20Media%20Release.pdf)
455 [Practice Credentialing Entity Media Release .pdf](http://pharmacycouncil.org.au/content/assets/files/Media Releases/APC to become Advanced Practice Credentialing Entity Media Release .pdf).

- 456 23. Pharmacy DAILY. Pharmacists rush CAPP.<https://s3-ap-southeast-2.amazonaws.com/traveldaily/PD/2014/Dec14/pd051214.pdf>. Published December 5, 2014.
- 457
- 458 24. Auspharm.net.au Pty Ltd. 48 pharmacists enter next phase of Advanced Practice Pharmacists
459 pilot credentialling program.<http://www.auspharmacist.net.au>. Published January 22, 2015.
- 460 25. Australian Pharmacy Council. *Australian Pharmacy Council Annual Report July 2013 - June*
461 *2014*. Canberra; 2014. Available at: <http://pharmacycouncil.org.au/content/assets/files/APC>
462 *2012-13 Annual Report_Web.pdf*.
- 463 26. Australian Pharmacy Council. *Evaluation and Credentialing of Advanced Practice*
464 *Pharmacists. First Round Consolidation: Consolidated Feedback July 2014.*; 2014. Available
465 at: <http://pharmacycouncil.org.au/content/assets/files/Consultations/APCC> Consultation
466 *Consolidated Feedback July 2014.pdf*.
- 467 27. Australian Pharmacy Council. *Evaluation and Credentialing of Advanced Practice*
468 *Pharmacists: First Round Consultation DRAFT v 1.0.*; 2014. Available at:
469 [http://pharmacycouncil.org.au/content/assets/files/Consultations/AP-Consultation-Paper-](http://pharmacycouncil.org.au/content/assets/files/Consultations/AP-Consultation-Paper-May14.pdf)
470 *May14.pdf*.
- 471 28. Australian Pharmacy Council. *Evaluation and Credentialing of Advanced Practice*
472 *Pharmacists Second Round Consultation Feedback.*; 2014. Available at:
473 [http://pharmacycouncil.org.au/content/assets/files/Credentialing/20150227-2nd-round-](http://pharmacycouncil.org.au/content/assets/files/Credentialing/20150227-2nd-round-consultation--consolidated-feedback.pdf)
474 *consultation--consolidated-feedback.pdf*.
- 475 29. Australian Pharmacy Council. *Background to and Future for Advanced Practice*
476 *Credentialing.*; 2014. Available at:
477 <http://pharmacycouncil.org.au/content/assets/files/Consultations/1> ATTACHMENT 1
478 *Background to and future for credentialing.pdf*.
- 479 30. Östlund U, Kidd L, Wengström Y, Rowa-Dewar N. Combining qualitative and quantitative
480 research within mixed method research designs: a methodological review. *Int. J. Nurs. Stud.*
481 *2011;48(3):369-83. doi:10.1016/j.ijnurstu.2010.10.005.*
- 482 31. Farmer T, Robinson K, Elliott SJ, Eyles J. Developing and implementing a triangulation
483 protocol for qualitative health research. *Qual. Health Res.* 2006;16(3):377-94.
484 *doi:10.1177/1049732305285708.*
- 485 32. Liamputtong P, Ezzy D. *Qualitative Research Methods: A Health Focus*. Oxford University
486 Press; 1999.
- 487 33. Pharmacy Board of Australia. Pharmacy registrant data: December 2014. 2015. Available at:
488 <http://www.pharmacyboard.gov.au/Registration.aspx>. Accessed March 20, 2015.
- 489 34. Potter WJ. *An Analysis of Thinking and Research About Qualitative Methods*. New Jersey:
490 Lawrence Erlbaum Associates; 1996. Available at:
491 <http://books.google.com/books?hl=en&lr=&id=uWX-AQAAQBAJ&pgis=1>. Accessed
492 October 16, 2014.

- 493 35. Teddlie C, Tashakkori A. *Foundations of Mixed Methods Research: Integrating Quantitative*
494 *and Qualitative Approaches in the Social and Behavioral Sciences*. SAGE; 2009. Available
495 at:
496 [http://books.google.com.au/books?id=c3uojOS7pK0C&printsec=frontcover&source=gbs_ge](http://books.google.com.au/books?id=c3uojOS7pK0C&printsec=frontcover&source=gbs_ge_summary_r&cad=0#v=onepage&q&f=false)
497 [_summary_r&cad=0#v=onepage&q&f=false](http://books.google.com.au/books?id=c3uojOS7pK0C&printsec=frontcover&source=gbs_ge_summary_r&cad=0#v=onepage&q&f=false). Accessed October 16, 2014.
- 498 36. Norusis M. *SPSS 16.0 Statistical Procedures Companion*. 2nd ed. New Jersey: Prentice Hall
499 Press; 2008. Available at: <http://dl.acm.org/citation.cfm?id=1628756>. Accessed October 16,
500 2014.
- 501 37. Australian Pharmacy Council. About Accreditation | Australian Pharmacy Council. 2014.
502 Available at: <http://pharmacycouncil.org.au/content/index.php?id=7>. Accessed September 12,
503 2014.
- 504 38. Australian Association of Consultant Pharmacy. Australian Association of Consultant
505 Pharmacy (AACP). 2014. Available at: <https://www.aacp.com.au/about/welcome.html>.
506 Accessed September 12, 2014.
- 507 39. Health Workforce Australia. *Australia's Health Workforce Series – Pharmacists in Focus.*;
508 2014.
- 509 40. The Society of Hospital Pharmacists of Australia. Committees of Specialty Practice (COSPs).
510 2014. Available at: <http://www.shpa.org.au/About/Specialty-Practice>. Accessed October 8,
511 2014.
- 512 41. The Society of Hospital Pharmacists of Australia. SHPA annual report 2014. 2014:1-42.
513 Available at: www.shpa.org.au.
- 514 42. Rosenthal M, Austin Z, Tsuyuki RT. Are pharmacists the ultimate barrier to pharmacy
515 practice change? *Can. Pharm. J.* 2010;143(1):37-42. doi:10.3821/1913-701X-143.1.37.
- 516 43. Pearson A, FitzGerald M, Walsh K. Nurses' views on competency indicators for Australian
517 Nursing. *Collegian* 2002;9(1):36-40. doi:10.1016/S1322-7696(08)60043-8.

Fig.2

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Fig.3

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