

Pharmacy Practice

ISSN: 1885-642X

journal@pharmacypractice.org

Centro de investigaciones y Publicaciones Farmacéuticas

España

CHAN, Vincent; TRAN, Hung

Purchasing Over-the-counter medicines from Australian pharmacy: What do the pharmacy
customers value and expect?

Pharmacy Practice, vol. 14, núm. 3, julio-septiembre, 2016, pp. 1-8

Centro de investigaciones y Publicaciones Farmacéuticas

Granada, España

Available in: http://www.redalyc.org/articulo.oa?id=69048289007



Complete issue

More information about this article

Journal's homepage in redalyc.org

relalyc.

Original Research

Purchasing Over-the-counter medicines from Australian pharmacy: What do the pharmacy customers value and expect?

Vincent CHAND, Hung TRAND.

Received (first version): 18-Apr-2016 Accepted: 9-Jul-2016

ABSTRACT*

Background: Over-the-counter medicines (OTC) are widely available and can be purchased without a prescription. Their availability means that a customer may choose to purchase them without the involvement of a pharmacy/pharmacist. It is important to understand customer OTC purchasing perceptions and behaviour from a pharmacy to better understand the needs and opportunities in this space.

Objective: This study aimed to examine customers' key expectations and what they value when purchasing OTC and how the effect of health status/stress and perceived risks/benefits of purchasing OTCs from a pharmacy may influence their OTC shopping behaviour.

Methods: Customers from two metropolitan pharmacies across two different suburbs in Brisbane, Queensland, Australia completed a self-administered questionnaire. Data collection was conducted over a six-week period. The questionnaire examined demographics, current level of health and stress, as well as a range of questions (seven-point Likert-scale) examining perceived benefits and risks, what they value, trust and expect when purchasing OTC.

Results: A total of 86 customers from a broad range of demographics were captured in this study. When asked about their current health state, 41% and 23% respectively indicated that they were stressed and tense when they arrived at the pharmacy but many were feeling well (38%). Most customers strongly agreed/agreed that trust in the advice from a pharmacy (96%), trust in the products (73%), and the altruistic approach of a pharmacy (95%) were critical to them. Further, 82% and 78% respectively disagreed that time pressures or costs were concerns, despite many feeling tense and stressed when they came in. When asked where they intend to buy their future OTC, 89% indicated pharmacy instead of a supermarket. Conclusions: High levels of trust, confidence and sense of altruism and care were key factors for customers buying OTC from a pharmacy, regardless of time pressures, costs or existing levels of stress and health.

Keywords: Nonprescription Drugs: Attitude to Health; Patient Medication Knowledge; Health Knowledge, Attitudes, Practice; Pharmacies; Community Pharmacy Services; Surveys and Questionnaires; Australia

INTRODUCTION

Over-the-counter medicines (OTC) are widely available and can be purchased without a prescription from a range of different settings in addition to the traditional pharmacy, for example supermarkets, health-food stores or the internet. OTCs are an important component of primary health care and include many non-prescription medicines such as basic analgesics, cough and cold medicines and anti-fungal treatments. If used appropriately, it is commonly accepted that the availability of OTCs can save customers time and money by providing them access to safe and effective treatments for many commonly occurring conditions.

The use of OTC is extremely common. In Australia in 2013, it was estimated that over 80% of adults and 40% of children used an OTC in any given month.¹ A national survey of consumers and health professionals in USA conducted by the National Council on Patient Information and Education (NCPIE) also reported high OTC use with more Americans using OTCs than ever before, with more OTCs used on average than prescription medicines.2 The economic impact of OTCs use is enormous. The current value of OTCs provided to the health system is high as it is estimated that consumer self-care through OTC use currently saves the Australian and American economy AUD10.4 billion and USD102 billion overall, respectively.^{1,3} Further, the Australian legislative framework for OTCs is different to many other countries, with legal classification of nonprescription medicines being: unscheduled, Pharmacy Medicines (Schedule 2) or Pharmacist Only Medicines (Schedule 3).4,5 It has been suggested that sales and purchasing behaviour of OTCs may be influenced by such classifications.

Despite the financial and health benefits, the accessibility and abundance of choices of available OTCs will inherently possess risks. Potential for missed drug interactions, incorrect dosing and incomplete knowledge with self-medication are common with consumers when self-selecting and using OTC products. ^{2,3} Furthermore, although most consumers feel confident about their own OTC skills (i.e. using it appropriately and knowing how to get the right information), it has been suggested that most consumers do not treat OTCs with the same level of care as prescription medicines and often overestimate their own OTC skills, which may entail health risks. ^{6,7} Additionally, there is conflicting



^{*}Vincent CHAN. BPharm PhD. Senior Lecturer. School of Health and Biomedical Sciences, RMIT University. Bundoora, VIC (Australia). vincent.chan@rmit.edu.au Hung TRAN. BPharm(Hons). Lecturer. School of Clinical Sciences, Queensland University of Technology. Brisbane, QLD (Australia). hung.tran@qut.edu.au

evidence over whether consumers can even appropriately self-diagnose and self-treat symptoms of minor illnesses through OTC use. 8-10

A community pharmacy is considered as one of the most frequently accessed primary health care services and is the first point-of-contact for most customers due to convenience factors such as accessibility, location, opening hours, and no costs for visiting. Although pharmacists are often considered one of the most trusted health professionals 3,12, the availability of these OTCs mean that a customer may choose to purchase OTCs without the involvement of a pharmacist or a pharmacy, thus losing this valuable checkpoint whereby the appropriateness of OTCs can be checked, the customer's queries addressed and an intervention made if required. Indeed, studies have indicated that self-directed medication use without professional advice is common. 13

It is important to understand the key perceptions and expectations of pharmacy customers and what may drive them, or otherwise, to purchase their OTCs from a pharmacy in order to better understand the needs and opportunities in this space. Compared to countries such as USA, research on consumers' OTC shopping behaviour and perceptions in Australia is much more limited and variable. Furthermore, individuals' patterns of OTC use are not well understood as many studies on medicines use often do not include OTCs. Thus, the objective of this exploratory study was to examine what matters to customers when they purchase OTCs and to determine whether their health status, levels of stress, perceived risks and benefits of purchasing OTCs from a pharmacy may influence their OTC shopping behaviour.

METHODS

Study Participants

The study was conducted using pharmacy customers from two metropolitan pharmacies two different suburbs in Brisbane, Queensland, Australia. Data collection was conducted over a six-week period. The two pharmacies covered a wide geographic crosssection of suburbs (one bayside and one major centre closer to the CBD) and potential demographics of customer types. Potential participants who were over 18 years of age and understood English were asked to participate. They were informed of the study and those that agreed to participate proceeded to complete the questionnaire whilst they were in the pharmacy. Customers that were captured consisted of those coming to the pharmacy for various purposes, for example to purchase OTCs, to get their prescription(s) dispensed, for general advice or those just shopping around in the pharmacy. Approval was gained from the two pharmacies involved and the Queensland University of Technology Human Ethics Committee to conduct this study (1300000855).

Questionnaire

An anonymous, self-administered questionnaire was developed to collect a broad range of data from the pharmacy customers. Data were collected either on an Apple iPad® device or paper survey depending on customer choice and device availability.

Questions were developed under four core sections. To ensure that a broad range of shoppers and opinions were captured, demographic data such as gender, age, household income, employment, relationship and children status were collected. Using a sliding scale, the second section consisted of questions asking the participant to self-rate how they are feeling now by selecting a point along the scale for these five parameters: (i) well to unwell; (ii) rushed to calm; (iii) stressed to relaxed; (iv) tense to serene; and (v) panicky to restful. The remainder of the questionnaire consisted of the remaining two themes which comprised of a range of questions to measure the participant's (Likert-scale; seven-point ranging from strongly disagree to strongly agree) perceptions to statements about benefits, trust, confidence and expectations of pharmacy, as well as responses to statements regarding perceived risks and barriers in the context of purchasing OTC from a pharmacy. The items used to measure customers' perceptions of the pharmacy's trustworthiness comprised of the following constructs: provision of information, competence, ability and benevolence. 14,15 The items used to measure customers' perceptions of risks comprised of the following constructs: psychological risk, time risk, physical risk and social risk. generalizability, validity and reliability of the scales, the four trust dimensions and four perceived risk dimensions has been previously developed, assessed and confirmed using Confirmatory Factor Analysis (CFA) with confirmatory measurement models and confirmatory structural models. 17-1

Finally, to further assess purchase intention, participants were also specifically asked whether their next OTC purchase would likely be from a pharmacy or a supermarket. All scales used are validated published scales and internal validity/consistency of the questionnaire responses was further tested and ensured by asking the same thematic question several times in multiple ways.

Data analysis

Data were collated onto an electronic master spreadsheet and analysed using Excel® 2010. Percentages were calculated based on the total number of respondents. Two-tailed Fisher exact test (GraphPad® Software) was used to statistically analyse associations between participants' health, level of stress and rushed/calm status to their perceptions on trust, care by pharmacy, and concerns about cost, product effectiveness and time pressures. A p-value of <0.05 was considered as statistically significant. A measure of the internal consistency/reliability for the Likert-scales was determined using the Cronbach alpha on Excel® 2010. A score of 0.7 is considered to be acceptable.

Table 1. Demographics of pharmacy customers (n=86).				
Characteristic	N (%)			
Gender				
Female	40 (46.5)			
Male	46 (53.5)			
Age				
18-24	19 (22.1)			
25-35	21 (24.4)			
36-45	16 (18.6)			
46-55	11 (12.8)			
56-65	6 (7.0)			
65+	13 (15.1)			
Household income				
Less than AUD20,000	10 (11.6)			
AUD20,001 - AUD50,000	22 (25.6)			
AUD50,001 - AUD70,000	17 (19.8)			
AUD70,001 - AUD110,000	24 (27.9)			
Over AUD110,000	13 (15.1)			
Employment status				
Fulltime	45 (52.3)			
Part-time	20 (23.3)			
Casual	21 (24.4)			
Relationship status				
Single/Living alone	22 (25.6)			
Married/Living Together	55 (64.0)			
Separated/Divorced	9 (10.5)			
Widowed	0 (0)			
Children living at home				
Yes, all the time	21 (24.4)			
Yes, some of the time	5 (5.8)			
No children	46 (53.5)			
Yes, not at home	14 (16.3)			

RESULTS

Participants and demographics

A total of 86 customers participated in this survey. Both the Apple iPad® device and paper survey were utilised and no noticeable differences or issues were identified. A broad range of participants across a range of different demographics were captured in this study across both genders (54% males), various age groups between 18 to 65+ (65.1% aged between 18-45 and 34.9% aged between 46-65+), employment (52% fulltime), income between <AUD20,000 to >AUD110,000,

and family statuses (64% married; 54% no children) (Table 1).

Self-reported health and levels of stress/anxiety

In a sliding scale, approximately 38% of the participants reported their health as "well", with only 17% reporting it as "unwell" and approximately 45% somewhere in between when they came to the pharmacy (Figure 1). Additionally, 41%, 23% and 26% indicated that they were "stressed", "tense" and "panicky" respectively when they arrived at the pharmacy (Figure 1). However, only approximately 8% felt "rushed", with majority feeling somewhere between "rushed" and "calm" (Figure 1).

Customer's expectations, perceived benefits and risks from buying OTC from pharmacy

Most customers strongly agreed or agreed that when buying OTC from a pharmacy, the pharmacy/pharmacist provides trusted (95.4%) and factual (95.3%) information (Table 2). Furthermore, 94.2% and 93.1% strongly agreed or agreed respectively that the pharmacy is a knowledgeable resource in providing safe products and that they feel confident in their abilities (Table 2). Additionally, trust in the OTC product was important as most customers strongly disagreed (29.1%) or disagreed (44.2%) that they worry about the performance of their purchased OTC products (Table 3).

The results also indicated that the pharmacy keeping promises and providing the support they are obligated to were also important factors, with 87.2% and 89.6% respectively strongly agreed or agreed (Table 2). The altruistic approach of a pharmacy and care provided is also considered important, with almost all customers strongly agreeing or agreeing that the pharmacy cares for the customers, their needs and their welfare, as well as is willing to go out of their way to help (Table 2).

When asked about perceived risks and barriers, approximately 82% and 78% strongly disagreed or

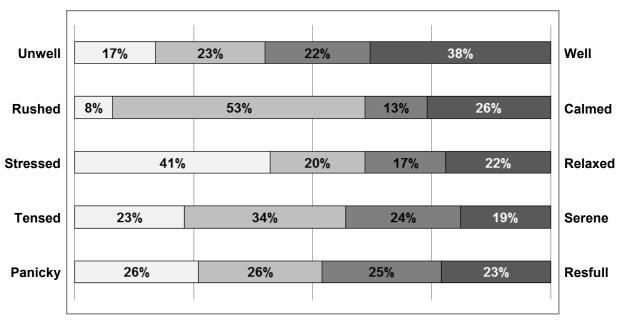


Figure 1. Pharmacy customers' self-evaluated levels of health and stress on a sliding scale (n=86).

Table 2. Pharmacy customers and buying OTC: Responses to statements about perceived benefits, trust, confidence and altruistic

penaviour (n=66).	1	1	1			1	
N (%)	Strongly disagree	Disagree	Somewhat disagree	Neither agree or disagree	Somewhat agree	Agree	Strongly agree
This pharmacy provides trusted information.	0 (0)	0 (0)	0 (0)	1 (1.2)	3 (3.5)	36 (41.9)	46 (53.5)
This pharmacy provides factual information.	0 (0)	0 (0)	1 (1.2)	1 (1.2)	2 (2.3)	32 (37.2)	50 (58.1)
This pharmacy provides unbiased information.	0 (0)	1 (1.2)	0 (0)	0 (0)	8 (9.3)	38 (44.2)	39 (45.4)
The staff in this pharmacy are knowledgeable in providing safe products.	0 (0)	0 (0)	0 (0)	0 (0)	5 (5.8)	36 (41.9)	45 (52.3)
This pharmacy follows government regulations.	0 (0)	0 (0)	0 (0)	8 (9.3)	3 (3.5)	31 (36.1)	44 (51.2)
I feel very confident about this pharmacy's ability to complete my transactions.	0 (0)	0 (0)	0 (0)	1 (1.2)	5 (5.8)	31 (36.1)	49 (57.0)
This pharmacy keeps promises.	0 (0)	0 (0)	0 (0)	7 (8.1)	4 (4.7)	30 (34.9)	45 (52.3)
This pharmacy provides the support they are obligated to.	0 (0)	0 (0)	0 (0)	4 (4.7)	5 (5.8)	31 (36.1)	46 (53.5)
This pharmacy cares for their customers.	0 (0)	0 (0)	0 (0)	0 (0)	4 (4.7)	32 (37.2)	50 (58.1)
This pharmacy is concerned about the welfare of their customers.	0 (0)	0 (0)	0 (0)	0 (0)	4 (4.7)	30 (34.9)	52 (60.5)
My needs and desires appear to be important to this pharmacy.	0 (0)	0 (0)	0 (0)	2 (2.3)	5 (5.8)	39 (45.4)	40 (46.5)
This pharmacy appears to go out of its way to help me.	0 (0)	0 (0)	0 (0)	7 (8.1)	3 (3.5)	29 (33.7)	47 (54.7)
This pharmacy appears very concerned about my welfare.	0 (0)	0 (0)	0 (0)	2 (2.3)	3 (3.5)	34 (39.5)	47 (54.7)

disagreed that time pressures or costs respectively were concerns (Table 3). Furthermore, perceived effectiveness of the OTC was not considered a risk/barrier as there was a high level of trust in the OTC (Table 3). Lastly, the majority of the participants indicated that they do not feel concerned, uncomfortable or embarrassed purchasing OTCs from a pharmacy (Table 3).

Fisher exact test analyses showed no association/correlation (all comparisons p>0.05) between how the participants are feeling (i.e. health status, levels of stress, and feeling rushed or calm) and their perceptions on trust, care provided by

pharmacy, and their concerns about cost, product effectiveness and time pressures. The Cronbach alpha values demonstrated strong internal consistencies with the survey items and responses. Items relating to the domains of perceived trust and care/altruism showed a coefficient alpha value of 0.8 and 0.9 respectively, and perceived risks and barriers such as cost, product effectiveness, psychological discomfort and time pressures showing a coefficient alpha value of 0.8, 0.9, 0.9 and 0.7 respectively.

Finally, 42% and 47% of customers respectively agreed or strongly agreed that the next time they

N (%)	Strongly disagree	Disagree	Somewhat disagree	Neither agree or disagree	Somewhat agree	Agree	Strongly agree
I am concerned that buying OTC medicines in this pharmacy would not be financially wise.	45 (52.3)	23 (26.7)	4 (4.7)	12 (14.0)	1 (1.2)	1 (1.2)	0 (0)
I am concerned that I would not get my money's worth from the OTC medicines I purchase in this pharmacy.	20 (23.3)	50 (58.1)	4 (4.7)	11 (12.8)	1 (1.2)	0 (0)	0 (0)
The thought of purchasing OTC medicines in this pharmacy makes me feel psychologically uncomfortable.	30 (34.9)	37 (43.0)	7 (8.1)	7 (8.1)	1 (1.2)	3 (3.5)	1 (1.2)
The thought of purchasing OTC medicines in this pharmacy makes me feel worried.	34 (39.5)	34 (39.5)	6 (7.0)	7 (8.1)	1 (1.2)	3 (3.5)	1 (1.2)
I worry whether or not the OTC medicines I purchase in this pharmacy will really perform as well as they are supposed to.	25 (29.1)	38 (44.2)	8 (9.3)	9 (10.5)	0 (0)	4 (4.7)	2 (2.3)
I am concerned purchasing OTC medicines in this pharmacy will endanger my health.	41 (47.7)	28 (32.6)	6 (7.0)	6 (7.0)	1 (1.2)	3 (3.5)	1 (1.2)
I have concerns in the case of consuming OTC medicines I purchase in this pharmacy.	40 (46.5)	34 (39.5)	1 (1.2)	2 (2.3)	3 (3.5)	5 (5.8)	1 (1.2)
Purchasing OTC medicines in this pharmacy would create even more time pressure on me that I don't need.	32 (37.2)	39 (45.4)	5 (5.8)	4 (4.7)	2 (2.3)	3 (3.5)	1 (1.2)
would be embarrassed if my friends or family found out I purchased OTC medicines in this pharmacy.	43 (50.0)	34 (39.5)	1 (1.2)	5 (5.8)	0 (0)	3 (3.5)	0 (0)

buy OTC, they intend to purchase them from a pharmacy. This is further confirmed in a subsequent question indicating that 6% and 86% of customers respectively strongly disagreed or disagreed that they intend to purchase their next OTC from a supermarket.

DISCUSSION

Many factors influence how and why a customer may choose (or not) to visit a pharmacy to purchase their OTCs and what they value in their pharmacy encounters. The objectives of this study was to examine what matters to customers when they purchase their OTCs, as well as to determine health status and their whether stress/anxiety influences their OTC shopping behaviour. The results from this study indicated that high levels of trust and confidence in the pharmacy, as well as a pharmacy/pharmacist's sense of altruism and care were critical considerations for a customer when choosing to buy OTCs from a

Studies report a high level of OTC self-use in Australia with no direct associations between OTC use and factors such as age, gender or education levels. ^{5,20} This was similarly seen in this study with OTC participants captured across a wide range of demographics. It has been shown that a majority of OTC customers purchase OTCs for self-use. ⁵ Interestingly, in this study many of the customers were "feeling well" when they visited the pharmacy. This is also consistent with the study by Goh *et al.* ²⁰ However, the participants in this study reported some degree of stress and feeling tense.

The aspect of "trust" is a crucial factor in healthcare. From a customer's perspective, this includes trust in the healthcare professional as well as trust in the treatment product. Findings from two large recent Australian pharmacy customer surveys conducted by Consumer Needs Project¹¹ and Canstar Blue¹², as well as others^{3,21-24}, have all indicated in general a high level of customer satisfaction, trust and reliance on community pharmacy for product, advice and services. However these customer studies were not specifically looking at OTCs directly. A trusting relationship between customers and carers with their community pharmacy, together with patient-centred care are important as it may influence a customer's view of pharmacy as a safe and useful healthcare resource that they prefer. 25-27 Results from this study and others 12 also suggest that this "trust" also leads to more customers preferring to buy their pharmaceutical products from a pharmacy rather than a supermarket. However, the majority of the public generally report greater trust in their doctors 11,14, with some perceiving pharmacists as more specifically drug experts only or just as a source for medicine supply. 21,25 Further, Direct-to-Consumer advertising also has a strong public impact on trust and OTC use as there is evidence to suggest that some consumers trusted advertising Direct-to-Consumer more pharmacists.28 However, together this study provides further insights that trust and confidence are important considerations for customers when

choosing to purchase OTCs from a pharmacy. Additionally, in this study there were no associations to suggest that this positive perception of pharmacists is altered depending on the customer's health or stress statuses.

The high levels of trust and satisfaction in purchasing from pharmacies can also be strongly attributed to the perceived caring and altruistic nature of a pharmacy setting and its staff, as indicated by a majority of the participants in this study. This was the case regardless of their health status or existing levels of stress/anxiety. Understandably, a pharmacy user's expectations of their encounter with a pharmacy can vary depending the individual on circumstance.²⁹ However, it is clear that when visiting a pharmacy, the key expectations by the customers are to be treated with respect, consideration, and for their views to be heard. 11,25 It has been shown that pharmacy customers consider customer service as a greater driver for satisfaction than perceived value for money when they shop. However, the level of service provided to pharmacy customers can be directly limited by internal management and organisational factors such as processes.30 control communication and Additionally, it has been shown that the attributes of the pharmacists and their staff are major drivers for pharmacy patronage by customers.31 specifically. personnel variables such professionalism, friendliness and a caring nature will influence a customer's decision-making process of where to shop.³¹ In addition to this, a pharmacist's attire is also critical in instilling confidence, trust and professionalism to patients.³² Many customers value and desire the personal and focused interaction with pharmacy staff during their visits. 25,29 Further. developing a personal relationship with their healthcare professional was shown to have the strongest impact on patient satisfaction.³³ Patientfocused (and indeed customer-focused) care is an opportunity where pharmacies and pharmacists can provide a great differentiation compared with other settings such as supermarkets for OTC customers. It is crucial for pharmacists to provide care beyond simply supplying a product. However, there is evidence to suggest that sometimes pharmacists do not provide sufficient patient care beyond the dispensing of a product, particularly due to time pressures.

Other factors to consider in understanding customer OTC shopping behaviour are the concepts of consumerism and patient's need for autonomy. Indeed, there is a growing understanding on the "modern day customer", who are described as being more demanding, more information strong, more information seeking, and wanting to self-manage. These factors can all influence their views and expectations on their OTC use and impact the many reasons why they may or may not choose to visit a pharmacy for their OTC purchase.

Patients are increasingly wanting to be more responsible for their own health. However, it has been suggested that this consumerism and patient's need for autonomy represents a significant

challenge to medicine surveillance and professional work in the community pharmacy.36 Customers buying OTCs often believe they have sufficient knowledge about self-managing their disease with medicines.³⁶ However, this can be influenced, leading to a misplaced sense of confidence impacting self-diagnosis and self-medication.²⁸ This increasing trend of assertive customers confident in their own ability and preferring to self-medicate with non-prescription drugs prior to seeking advice may also be due to consumerist behaviour whereby customers preferred to control the provision of advice and how to assess it.25 However, a specific exploration of the ability of the individual customer to safely self-diagnose and self-manage minor health conditions was beyond the scope of this study.

Interestingly, studies also demonstrated that although most customers appreciated pharmacist's approachability, most actually did not want unsolicited advice from the pharmacist.25 Furthermore, while most patients preferred shared decision and are in favour of pharmacy OTC counselling and advice, other studies have also identified that many often under-value or simply lack interest in it because they do not find it relevant, even when it is offered by the pharmacist. 33 However, it is important to also recognise that a subset of patients exists who wants to delegate decisions and simply let the pharmacist decide. Consultation with a pharmacy staff member can result in a change of customers' OTC purchasing behaviours and this may lead to improved choices and cost-efficiency.3 Regardless of a customer's preference, these considerations could all influence a customer's OTC shopping behaviour.

Finally, other factors to consider that may influence OTC shopping behaviour are a customer's perceived risks/barriers for visiting a pharmacy. These may include considerations such as time pressures, costs, and perceived OTC effectiveness, as well as whether they feel uncomfortable visiting a pharmacy and how that may be perceived by others. However, majority of participants in this study did not appear to consider these significant, regardless of existing levels of stress and health. Taken together, this and other studies 11,12,24 confirms that OTC shoppers are less concerned with these perceived risks/barriers but highly value factors such as trust, pharmacist's altruism and knowledge together with good customer service.

Limitations and directions for future research

Although a broad range of demographics were captured in this exploratory study, it is likely that the customers participating in this study do not fully represent all types of shoppers. A larger sample size across more pharmacies will increase generalizability to the population. Additionally, it would also be of interest to examine whether the participants were regular or non-regular customers and how this may influence the results. Furthermore, although the participants in this study were in the pharmacy for various reasons (not just to purchase OTCs), the proportion of participants

that was actually purchasing OTCs during their visit, as well as the proportion that was purchasing for self or others (such as family members) were not specifically recorded as part of this study. Also, the numbers of and potential reasons why some customers chose not to participate in the study were also not specifically recorded. Additionally, it would be of interest to conduct a study to directly compare with shoppers in different settings where OTCs are also available (for example supermarket OTC shoppers).

Finally, this study also did not look at specific reasons for a customer's self-evaluated stress/anxiety as that was beyond the scope of this study. It is possible that the reported levels of stress/anxiety in this study may just be the participants' general daily underlying levels. However, it would be interesting to investigate possible causes for their stress/anxiety to better understand how to potentially better cater for their needs in this space.

CONCLUSIONS

It is commonly accepted that pharmacists are an important health resource that contributes to patient care. Results from this study support much of the general findings and perceptions of existing literature identifying a high level of satisfaction, confidence, sense of altruism, and trust by the public in pharmacist/pharmacies. These important factors for customers buying OTCs from a pharmacy, regardless of time pressures and costs implications. Furthermore, a customer's existing levels of stress and health did not appear to influence these perceptions. However, customers self-medicating OTCs inappropriately without some level of pharmacist surveillance and vigilance remains a legitimate concern. Thus, better understanding customer needs, expectations and experiences are crucial as it provides insights that can drive changes to optimise provision and the use of this important class of medicines.

Although pharmacies can play a significant role in helping the public better manage their health conditions in the community, the following considerations are important: (i) the need to provide greater differentiation with supermarkets; (ii) the need to continue exploring opportunities to value-add and provide care beyond simply supplying a product; (iii) and the need to better integrate with other health services. ¹¹ Good communication skills and appropriate education of customers are critical in a pharmacist's ability to build rapport and dissuade customers from purchasing inappropriate products. ²⁸ Optimal staff training and selection, as well as development of pharmacy personnel are critical to pharmacy patronage and for ensuring success of the pharmacy profession. ³⁰

This study highlighted insights about what is important to shoppers when they purchase OTC medicines from pharmacies. Ultimately, it is hoped that if the opportunities, risks and benefits were identified, and perceived barriers minimised or removed, for example the themes identified in this

study, pharmacy shoppers may gain from higher levels of convenience as well as enhancing positive outcomes for customers, retailers and pharmacists. from the pharmacies; as well as Gary Mortimer from QUT Business School for advice on the questionnaire and manuscript.

ACKNOWLEDGEMENTS

The authors want to thank the pharmacy customers who participated and acknowledge Ian Malouf, Ian Fredericks and Michael Inglis from Malouf Pharmacies for facilitating the collection of this data

CONFLICT OF INTEREST

None to declare.

References

- 1. Koslow S. The value of OTC medicines in Australia. Macquarie University Centre for the Health Economy. March 2014.
- National Council on Patient Information and Education (NCPIE)/Harris Interactive. Attitudes and Beliefs about the use of OTCs: A dose of reality. January 2002. Available at: http://www.bemedwise.org/survey/final_survey.pdf (accessed 8 December 2015).
- Consumer Healthcare Products Association (CHPA). Understanding Trust in OTC Medicines: Consumer and Healthcare Provider Perspectives. March 2013. Available at: http://www.yourhealthathand.org/images/uploads/CHPA OTC Trust Survey White Paper.pdf (accessed 24 November 2015).
- 4. Tan AC, Emmerton L. Non-prescription medicines: current issues in Australian community pharmacy. Int J Pharm Pract. 2009;17(4):207-213.
- Emmerton L. The 'third class' of medications: Sales and purchasing behavior are associated with pharmacist only and pharmacy medicine classifications in Australia. J Am Pharm Assoc (2003). 2009;49(1):31-37. doi: 10.1331/JAPhA.2009.07117
- Bower AB, Landreth Grau S, Taylor VA. Over-the-counter vs. prescription medications: are consumer perceptions of the consequences of drug instruction non-compliance different? Int J Consum Stud. 2013;37(2):228-233. doi: 10.1111/j.1470-6431.2011.01093.x
- Brabers AE, Van Dijk L, Bouvy ML, De Jong JD. Where to buy OTC medications? A cross-sectional survey investigating consumers' confidence in over-the-counter (OTC) skills and their attitudes towards the availability of OTC painkillers. BMJ Open. 2013;3(9):e003455. doi: 10.1136/bmjopen-2013-003455
- 8. El-den S, Yee KC. Over-the-counter drugs for pre-menstrual syndrome: is the pharmacist still part of the picture? J Pharm Pract Res. 2014;44(4):224-230. doi: 10.1002/jppr.1025
- 9. Ellis J, Mullan JR, Weston KM, Rich W, Lethbridge A, Worsley A, Pai NB. Prescription and over-the-counter pain medication in arthritis: awareness of active ingredients and attitudes to medication borrowing and sharing. J Pharm Prac Res. 2015;45(1):10-17. doi: 10.1002/jppr.1070
- Kelly FS, Williams KA, Benrimoj SI. Does advice from pharmacy staff vary according to the non-prescription medicine requested? Ann Pharmacother. 2009;43(11):1877-1886. doi: 10.1345/aph.1L121
- 11. Cannings J, Francis C, Jessop R, Brabant M, Lee K, Kent S, Li J, Billot L. Consumer Needs Executive Summary. 5th Community Pharmacy Agreement and Australia Government Department of Health, 2015.
- 12. Pharmaceutical Society of Australia (PSA). Customer service drives satisfaction. Aust Pharm. 2015;34:75.
- 13. Morgan TK, Williamson M, Pirotta M, Stewart K, Myers SP, Barnes J. A national census of medicines use: a 24-hour snapshot of Australians aged 50 years and older. Med J Aust. 2012;196(1):50-53.
- 14. Yee WMS, Yeung RMW, Morris J. Food safety: building consumer trust in livestock farmers for potential purchase behaviour. Br Food J. 2005;107(11):841-854. doi: 10.1108/00070700510629788
- Mayer RC, Davis JH, Schoorman FD. An integrative model of organizational trust. Acad Manage Rev. 1995;20(3):709-734
- Abzakh AA, Ling KC, Alkilani K. The impact of perceived risks on the consumer resistance towards generic drugs in the malaysia pharmaceutical industry. Int J Bus Manag. 2013;8(3):42-50. doi: 10.5539/ijbm.v8n3p42
- 17. Gerbing DW, Anderson JC. An updated paradigm for scale development incorporating unidimensionality and its assessment. J Mark Res. 1988;25/82):186-192. doi: 10.2307/3172650
- 18. Nunnally JC, Bernstein IH. Psychometric Theory, 3rd edn, New York: McGraw-Hill. 1994.
- Fornell C, Larcker DF. Evaluating structural equation models with unobservable variables and measurement error. J Mark Res. 1981;18(1):39-50. doi: 10.2307/3151312
- Goh LY, Vitry AI, Semple SJ, Esterman A, Luszcz MA. Self-medication with over-the-counter drugs and complementary medications in South Australia's elderly population. BMC Complement Altern Med. 2009;9:42. doi: 10.1186/1472-6882-9-42
- 21. Anderson C, Blenkinsopp A, Armstrong M. Feedback from community pharmacy users on the contribution of community pharmacy to improving the public's health: a systematic review of the peer reviewed and non-peer reviewed literature 1990-2002. Health Expect. 2004;7(3):191-202.
- 22. Gidman W, Ward P, McGregor L. Understanding public trust in services provided by community pharmacists relative to those provided by general practitioners: a qualitative study. BMJ Open. 2012;2(3). doi: 10.1136/bmjopen-2012-000939
- 23. Naik Panvelkar P, Saini B, Armour C. Measurement of patient satisfaction with community pharmacy services: a review. Pharm World Sci. 2009;31(5):525-537. doi: 10.1007/s11096-009-9311-2



- 24. Woźniak-Holecka J, Grajek M, Siwozad K, Mazgaj K, Czech E. Consumer behavior in OTC medicines market. Przegl Epidemiol. 2012;66(1):157-160.
- 25. Abu-Omar SM, Weiss MC, Hassell K. Pharmacists and their customers: a personal or anonymous service? Int J Pharm Prac. 2000;8(2):135-143. doi: 10.1111/j.2042-7174.2000.tb00998.x
- McMillan SS, Sav A, Kelly F, King MA, Whitty JA, Wheeler AJ. How to attract them and keep them: the pharmacy attributes that matter to Australian residents with chronic conditions. Int J Pharm Pract. 2014;22(4):238-245. doi: 10.1111/ijpp.12075
- 27. Mey A, Knox K, Kelly F, Davey AK, Fowler J, Hattingh L, Fejzic J, McConnell D, Wheeler AJ. Trust and safe spaces: Mental health consumers' and carers' relationships with community pharmacy staff. Patient. 2013;6(4):281-289. doi: 10.1007/s40271-013-0032-1
- 28. Chaar B, Kwong K. Direct-to-consumer advertising: Australian pharmacists' experience with non-prescription medicines. Int J Pharm Pract. 2010;18(1):43-50. doi: 10.1211/ijpp.18.01.0008
- Renberg T, Wichman Törnqvist K, Kälvemark Sporrong S, Kettis Lindblad A, Tully MP. Pharmacy users' expectations of pharmacy encounters: a Q-methodological study. Health Expect. 2011;14(4):361-373. doi: 10.1111/j.1369-7625.2010.00643.x
- 30. White L, Klinner C. Service quality in community pharmacy: an exploration of determinants. Res Social Adm Pharm. 2012;8(2):122-132. doi: 10.1016/j.sapharm.2011.01.002
- Franic DM, Haddock SM, Tootle Tucker L, Wooten N. Pharmacy patronage: Identifying key factors in the decision making process using the determinant attribute approach. J Am Pharm Assoc (2003). 2008;48(1):71-85. doi: 10.1331/JAPhA.2008.07014
- 32. Khanfar NM, Zapantis A, Alkhateeb FM, Clauson KA, Beckey C. Patient attitudes toward community pharmacist attire. J Pharm Pract. 2013;26(4):442-447. doi: 10.1177/0897190012465956
- Senić V, Marinković V. Patient care, satisfaction and service quality in health care. Int J Consum Stud. 2013;37(3):228-233. doi: 10.1111/j.1470-6431.2012.01132.x
- 34. Schommer JC, Gaither CA. A segmentation analysis for pharmacists' and patients' views of pharmacists' roles. Res Social Adm Pharm. 2014;10(3):508-528. doi: 10.1016/j.sapharm.2013.10.004
- 35. Traulsen JM, Noerreslet M. The new consumer of medicine the pharmacy technicians' perspective. Pharm World Sci. 2004;26(4):203-207.
- 36. Hibbert D, Bissell P, Ward PR. Consumerism and professional work in the community pharmacy. Sociol Health Illn. 2002;24(1):46-65. doi: 10.1111/1467-9566.00003
- 37. Chewning B, Bylund CL, Shah B, Arora NK, Gueguen JA, Makoul G. Patient preferences for shared decisions: a systematic review. Patient Educ Couns. 2012;86(1):9-18. doi: 10.1016/j.pec.2011.02.004
- 38. Sclar DA, Robison LM, Skaer TL. Pharmacy consultation and over-the-counter medication purchasing outcomes. J Clin Pharm Ther. 1996;21(3):177-184.

