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Title: Review of community pharmacy staff educational needs for supporting mental health consumers and carers

Amary Mey<sup>2</sup>

Jane L. Fowler<sup>1</sup>

Kathy Knox<sup>1</sup>

David Shum

Jasmina Fejzic<sup>1,2</sup>

Laetitia Hattingh<sup>2,3</sup>

Denise McConnell<sup>2</sup>

Amanda Wheeler<sup>1,4</sup>

<sup>1</sup>Griffith Health Institute, Griffith University, Brisbane, Australia

<sup>2</sup>School of Pharmacy, Griffith University, Gold Coast, Australia

<sup>3</sup>School of Pharmacy, Curtin University, Perth, Australia

<sup>4</sup>Faculty of Medical and Health Sciences, University of Auckland, Auckland, New Zealand

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## Abstract

Development of a mental health education package for community pharmacy staff should be informed by mental health consumers/carers' needs, expectations and experiences, and staff knowledge, skills and attitudes. This review 1) explored research on community pharmacy practice and service provision for mental health consumers/carers, and 2) identified validated methods for assessing staff knowledge, skills and attitudes about mental illness to inform the development of a training questionnaire. A literature scan using key words knowledge, skills, attitudes and beliefs combined with community pharmacy, pharmacist, and pharmacy support staff, and mental illness, depression, anxiety was conducted. A small number of studies were found that used reliable methods to assess pharmacists' training needs regarding mental illness and treatment options. There was little published specifically in relation to depression and anxiety in community pharmacy practice. No studies assessed the training needs of pharmacy support staff. A systematic analysis of pharmacy staff learning needs is warranted.

## Introduction

Globally, mental illness is common affecting one person in four at some stage of their lifetime (World Health Organization, 2001). Depression is a major contributor to the global burden of disease; in third place worldwide and first place in middle to high-income countries (World Health Organization, 2008a). In Australia, mental illness is the largest single cause of disability, accounting for nearly 30% of the burden of non-fatal disease (Mental Health Branch Queensland Health, 2008). Nearly half (45.5%) of all Australians aged between 16-85 years will experience a mental illness over their lifetime (Slade, Johnston, Oakley Browne, Andrews, & Whiteford, 2009). A national survey of mental health and wellbeing conducted in 2007 revealed one in five Australians aged between 16-85 years had been affected by mental illness at some time during the previous 12 months. Anxiety-related disorders were the most common (14.4% 12 month prevalence) followed by mood disorders (such as depression) with 6.2% 12 month prevalence (Slade, et al., 2009).

A number of studies have sought to gain a better understanding of public perceptions of mental illness, by assessing community knowledge, beliefs and attitudes towards people who experience mental illness (Angermeyer & Dietrich, 2006; Angermeyer & Matschinger, 2003; Corrigan & Watson, 2002; Crisp & Gelder, 2000; Jorm, Korten, Jacomb, Christensen, & Henderson, 1999; Kai & Crosland, 2001; Kobau, Dilorio, Chapman, Delvecchio, & Members, 2010; Link, Cullen, Frank, & Wozniak, 1987; Scheerder et al., 2011; Wahl, 1999). These studies highlight that although the public's ability to recognise mental illness in general is good, stigmatising opinions about people experiencing mental illness are common. These stigmatising views include the belief that some mental disorders are self-inflicted, stress is commonly endorsed as the cause, people with a mental illness are perceived as being hard to talk to, and are likely to display violent behaviour (Angermeyer & Dietrich, 2006; Angermeyer & Matschinger, 2003; Corrigan & Watson, 2002; Crisp & Gelder, 2000; Jorm,

et al., 1999; Kai & Crosland, 2001; Kobau, et al., 2010; Link, et al., 1987; Scheerder, et al., 2011; Wahl, 1999). Furthermore, members of the public have expressed a desire to maintain social distance from those with mental health problems (Angermeyer & Dietrich, 2006; Angermeyer & Matschinger, 2003; Corrigan & Watson, 2002; Crisp & Gelder, 2000; Jorm, et al., 1999; Link, et al., 1987; Wahl, 1999). In addition to social isolation, distress and workplace problems, several researchers conclude that the public's lack of accurate knowledge and negative attitudes and beliefs contribute to the difficulties faced by people who live with mental illness (Angermeyer & Dietrich, 2006; Corrigan & Watson, 2002; Crisp & Gelder, 2000; Jorm, et al., 1999; Kai & Crosland, 2001; Wahl, 1999; World Health Organization, 2001). Stigmatising attitudes and beliefs are also held by health professionals and can affect the way they provide care and services to consumers (Jorm, et al., 1999; Nordt, Rossler, & Lauber, 2006; Phokeo, Sproule, & Raman-Wilms, 2004; Scheerder, De Coster, & Van Audenhove, 2008; Scheerder, De Coster, & Van Audenhove, 2009; Scheerder, et al., 2011; Volmer, Maesalu, & Bell, 2008; Wahl, 1999).

Over the past three decades the global promotion of deinstitutionalisation has shifted the emphasis on mental health care and management from hospitals/institutions to the community, with the goal of avoiding hospitalisation whenever possible (World Health Organization, 2008a, 2008b). The past few decades have also seen an increase in the availability of pharmacological agents to treat mental illness, particularly newer classes of antidepressants with better safety and tolerability profiles (Mant et al., 2004). Between 2008 and 2009, 21.4 million prescriptions for mental health-related medicines were subsidised by the Australian government at an estimated cost of \$743 million for the one year period (Australian Institute of Health and Welfare, 2010b). Australian pharmaceutical industry data show that between 1990 and 2002, antidepressant prescribing increased by 352%, with an average annual sales growth of 13.4% (Mant, et al., 2004). More recent figures revealed that

between 2008 and 2009, 12.3 million prescriptions were written for antidepressants (Australian Institute of Health and Welfare, 2010a). This represents a significant investment made by the Australian Government to improve health outcomes and quality of life for people with mental illness.

Optimal treatment of mental illness focuses on both symptom and functional recovery with a range of pharmacological, psychosocial and psychological interventions (Mental Health Commission, 2004; World Health Organization, 2008c). Although the appropriate use of medication is an integral part of effective management, medicines are often used sub-optimally (Healthcare Management Advisors, 2010; Lingam & Scott, 2002; Meagher & Moran, 2003). Factors contributing to suboptimal medication use relate to psychosocial difficulties, side effects of the medication and/or delayed onset of action, and such factors may further complicate treatment adherence for these enduring conditions (Lingam & Scott, 2002; World Health Organization, 2001, 2008a, 2008b). As medication experts, pharmacists are well positioned to support consumers, carers and other health professionals with the medication management of mental illness.

## Methods

As part of a large scale longitudinal intervention study, a systematic assessment of the needs, expectations and experiences of mental health consumers/carers along with the knowledge, skills and attitudes of pharmacy staff is warranted. Therefore, to inform the development of education and training materials for community pharmacy staff, this review aimed to: 1) explore existing work on community pharmacy practice and service provision for mental health consumers/carers, and 2) identify validated methods for assessing staff knowledge, skills and attitudes about mental illness, treatment, and interactions with

consumers/carers. A literature scan using the key words knowledge, skills, and attitudes, beliefs combined with community pharmacy, pharmacist, and pharmacy support staff, and mental illness, depression, anxiety was conducted in the beginning of 2012. A small number of studies were found that used a combination of well established, reliable methods to assess knowledge, skills, attitudes and beliefs of pharmacists about mental disorders and treatment options. These studies are reviewed here in more detail. The Human Research Ethics Committee of Griffith University approved this study (approval reference: PHM/13/11/HREC). There are no known conflicts of interest. All authors certify their responsibility for this manuscript.

## Results

### *The Role of Community Pharmacy*

Australia has a network of over 5000 community pharmacies, staffed by trained professionals to deliver health care services to the public (Pharmacy Guild of Australia, 2010). As primary care providers, community pharmacy staff are involved in health promotion, early intervention, prevention, assessment and general management of consumers' health and are often the first point of contact between consumers and the health care system (Pharmacy Guild of Australia, 2010). Typically, the Australian community pharmacy workforce consists of pharmacists, pharmacy (dispensary) assistants and other staff involved in retail aspects of the business. Internationally these support staff may be referred to as pharmacy or dispensary technicians, or other terminology may be used, but for the purposes of this review we have referred to these personnel as *pharmacy support staff*. Members of pharmacy support staff are involved in working with consumers and their role is to professionally and confidently provide advice and support on a variety of health, personal care, and beauty issues (Pharmacy Guild of Australia, 2012). They deal with all aspects of

community pharmacy business which include everything from accepting prescriptions, providing health advice and assistance with the selection of non-prescription medicines under a pharmacist's supervision.

An overview of community pharmacy practice in Australia showed that people perceived pharmacists as “highly reliable advisers on many personal health matters, trustworthy independent purveyors of health care products”, and “steadfast partners of the medical profession” (Benrimoj & Frommer, 2004, p 238). Accessibility to health care is enhanced not only by the extensive distribution of community pharmacies across the country, but also because people can visit a pharmacy without an appointment, speak with a health professional almost immediately, and retain a high level of control over the extent of their engagement with the staff (Benrimoj & Frommer).

A recent large Australian study of consumer needs, experiences and expectations of community pharmacy found that consumers described community pharmacy as a more relaxed place than their doctor's surgery, and this provided an opportunity to obtain information about their treatment, condition and other services (University of South Australia, 2005). The study also identified that consumers perceived pharmacists as medicine experts and that pharmacists used more consumer-friendly language than doctors when providing treatment information. Although these findings provide valuable insight into consumer views, the authors also identified that mental health consumers may have different needs, expectations and experiences.

To optimise treatment outcomes for people affected by mental illness, health professionals need to provide collaborative and integrated care which supports the recovery process (Bell, Rosen, Aslani, Whitehead, & Chen, 2007; Gilbert, Roughead, Beilby, Mott, & Barratt, 2002; Gilbody, Bower, Fletcher, Richards, & Sutton, 2006; Hammond et al., 2003;



Healthcare Management Advisors, 2010; World Health Organization, 2008b). Several conditions facilitate the effective participation of pharmacists as part of a collaborative care team namely: a collaborative practice environment, a defined level of education, training, knowledge, skills and abilities, documentation of clinical activities, and financial compensation (Hammond, et al., 2003). However, only a small number of studies have explored the role of community pharmacists within the collaborative care model (e.g., Bell, et al., 2007; Gilbert, et al., 2002; Gilbody, et al., 2006; Hammond, et al., 2003; Tanskanen, Airaksinen, Tanskanen, & Enlund, 2000). An early Australian intervention involving community pharmacist-general practitioner collaborative practice found that home medicines review (HMR) resulted in improved management of medication-related problems and improved health outcomes for consumers (Gilbert, et al., 2002). The authors argued that collaborative HMR services could particularly benefit at-risk groups such as people with chronic conditions, for example mental illness. This collaborative care model is now well developed in Australia (Pharmacy Guild of Australia, 2010). Pilot studies in the United Kingdom and Australia indicate that pharmacists' medication reviews for consumers receiving care from community mental health services provide clinically appropriate recommendations that were likely to improve outcomes (Ewan & Greene, 2001; Gisev, Bell, O'Reilly, Rosen, & Chen, 2010; Harris & Anderson, 2003). However, no published empirical work was found evaluating the impact of such a collaborative practice model for the routine management of mental illness.

### *Impact of Community Pharmacy on Health Outcomes*

There is a large body of evidence to support the overall positive impact that pharmacist interventions can have on consumer and health care outcomes (Adler et al., 2004; Bell, McLachlan, Aslani, Whitehead, & Chen, 2005; Brook, Stalman, Nieuwenhuyse, Bakker, & de Haan, 2005; Brook, Van Hout, Nieuwenhuyse, & De Haan, 2003; Chong,

Aslani, & Chen, 2011; Ewan & Greene, 2001; George, Molina, Cheah, Chan, & Lim, 2010; Gilbert, et al., 2002; Gilbody, et al., 2006; Gisev, et al., 2010; Hammond, et al., 2003; Pharmacy Guild of Australia, 2010; Valenstein et al., 2011; Van Wijk, Klungel, Heerdink, & de Boer, 2005). Specifically within the community pharmacy setting, consumer groups who have been shown to benefit include people with chronic conditions such as cardiovascular disease, asthma, diabetes mellitus, as well as consumers with other physical conditions (Bell, et al., 2005; George, et al., 2010; Gilbert, et al., 2002; Gilbody, et al., 2006; Hammond, et al., 2003; Pharmacy Guild of Australia, 2010; Van Wijk, et al., 2005). Pharmacists have also been involved in the monitoring of anticoagulation therapy, supporting consumers with smoking cessation, and other primary health care issues (Pharmacy Guild of Australia, 2010).

One systematic review of pharmacists' role in mental health (Finley, Crismon, & Rush, 2003) identified that pharmacists were involved in several aspects of mental health medication management including making treatment recommendations, providing education to consumers and prescribers, and as providers with prescriptive authority. These interventions were delivered by clinical pharmacists rather than community pharmacists. Bell, McLachlan, Aslani, Whitehead and Chen (2005) conducted a systematic review of the impact of community-based services delivered by pharmacists and identified four studies showing that pharmacist medication reviews may reduce the number of potentially inappropriate mental health medications prescribed to older persons. The review also identified three studies showing that adherence to treatment in those commencing antidepressants, could be improved by pharmacists providing medication counselling and treatment monitoring (Bell, et al., 2005). Both of these reviews identified a small number of studies which were limited by sample size and study design issues.

A recent New Zealand study investigating the community pharmacist's role in meeting medicine-related needs for people with mental illness found that pharmacists need to increase consumer focused services, such as medication management (e.g. compliance packaging, home delivery) and medicine counselling services that are provided in a proactive and individualised manner (Crump et al., 2011). These services need to be extended to include the consumer's family whenever appropriate. Participants in this study identified as very important (1) the building of effective relationships through adopting a nonjudgmental and culturally sensitive manner, (2) respecting consumer privacy, (3) spending more time with consumers, and (4) using varied communication techniques.

Australian studies have also shown community pharmacist interventions to have a positive impact on mental health consumer outcomes (Bell, et al., 2007; Crockett, Taylor, Grabham, & Stanford, 2006; Healthcare Management Advisors, 2010). An investigation of the potential role of community pharmacists as members of community mental health teams (CMHTs), identified many valuable areas of pharmacist contributions, including advising both CMHTs and consumers about the quality use of prescription and non-prescription medications (including complementary and alternative medicines), conducting drug information presentations, and providing consumers with individualised medication regimen review services, reviewing CMHT medication charts, obtaining community pharmacy dispensing records and contacting other health care providers (Bell, et al., 2007). Results indicated that the inclusion of community pharmacists in the clinical team was welcomed by mental health professionals and consumers. However, it is important to note that most multidisciplinary CMHTs in Australia currently do not include a pharmacist (Bell, et al., 2007).

For community pharmacy staff to meet the needs of mental health consumers/carers, it is important that they have a sound knowledge base and adequate skills and confidence to

apply these in practice. To provide an evidenced based assessment of health professionals' educational needs, the following sections will review the literature regarding methods of assessing these areas of knowledge, skills, attitudes and beliefs. Furthermore, these studies focused on the role of the pharmacist. Pharmacy support staff outnumber pharmacists in many community pharmacy settings in Australia and throughout the world and therefore are an integral yet under-researched group (Human Capital Alliance, 2008).

### *Mental Health Knowledge*

Studies seeking to assess knowledge about mental illness have typically used case vignettes requiring participants to recognise problems and identify a plan of action (Caldwell & Jorm, 2000; Jorm, et al., 1999; Jorm, Korten, Jacomb, Rodgers, & Pollitt, 1997; O'Reilly, Bell, & Chen, 2010; Scheerder, et al., 2008; Scheerder, et al., 2009). Vignettes based on symptoms and diagnostic criteria for mental illness such as schizophrenia and depression have been used most often. These vignettes have been used to assess public (Jorm, et al., 1999) and health professional knowledge (Caldwell & Jorm, 2000; Jorm, et al., 1997; O'Reilly, et al., 2010; Scheerder, et al., 2008; Scheerder, et al., 2009).

Only one study (O'Reilly, et al., 2010) was identified that investigated the mental health literacy of Australian community pharmacists. In that study, O'Reilly, Bell and Chen (2010) explored community pharmacists' ( $n = 391$ ) knowledge and beliefs about mental health treatment and outcomes. The measure of mental health literacy used was previously developed by Jorm and colleagues (1997). The survey contained a descriptive vignette of a person with depression or schizophrenia, for which participants were asked "what, if anything is wrong with..." and then asked to rate a series of items as being helpful, harmful or neither. O'Reilly and colleagues found that community pharmacists' had a high level of mental health literacy with more pharmacists being able to recognise depression than schizophrenia and that general practitioners and clinical psychologists were rated as the most helpful professionals.

However, this study had a low response rate (19.5%) and used a survey instrument developed for the general population rather than health professionals.

Despite the effectiveness of the use of case vignettes for knowledge assessment, there were no studies identified in the literature that reported using this methodology for anxiety disorders in the context of community pharmacy. Similarly, no studies were located exploring the knowledge of pharmacy support staff in regards to mental illness.

### *Communication Skills*

Research assessing the communication skills of community pharmacy staff working with mental health consumers/carers is sparse. Studies exploring the mental health consumer perspective have identified a wish for greater autonomy in the management of their mental illness, including greater involvement in the decision making process (Hamann, Cohen, Leucht, Busch, & Kissling, 2005), and increased disclosure about their medication (Crockett, et al., 2006; Desplenter, Simoens, & Laekeman, 2006), particularly regarding risks and alternative therapies (Tanskanen, et al., 2000). However, other studies have identified consumer dissatisfaction with several aspects of communication, including lack of information, and lack of follow-up counselling (Black, Murphy, & Gardner, 2009; Happell, Manias, & Roper, 2004; Koo, Krass, & Aslani, 2002). In their systematic review exploring the impact of health professionals providing medicine information to mental health consumers, Desplenter, Simoens and Laekeman (2006) report that seven of thirteen studies showed an improvement in adherence in the intervention groups. A combination of written and verbal information appeared to have better outcomes than either oral or written communication alone. Knowledge was also found to improve in most studies. Another review assessing the impact of adherence interventions for long-term medication use (not specifically mental health) provided by community pharmacists was unable to identify a

successful strategy to improve adherence: eight studies showed adherence improvement and eight showed no effect (Van Wijk, et al., 2005).

An Australian study (Healthcare Management Advisors, 2010) demonstrated the value of pharmacist communication with mental health consumers ( $n = 92$  pharmacists; 58 in intervention, 34 in control group). The intervention included seeking information about the consumers' experience with their medication, assessment of adherence issues, reinforcing the need to take the medication as directed, identifying any potential side effects and possible referrals to a general practitioner and face-to-face follow-up. Consumers reported that they found the additional support helpful. The authors recommended that studies to develop techniques for community pharmacists to promote and improve medication adherence were needed.

The effectiveness of communication is difficult to measure, particularly in a community pharmacy practice setting. Scales developed to assess the effectiveness of communication include self-reporting inventories of participants' perceived competence (Yeap, Beevi, & Lukman, 2008). However, these scales may not be reflective of effectiveness in real-world practice; for example, self-report can be affected by memory and the tendency to give socially desirable responses (Yeap, et al., 2008). In a study to evaluate the effectiveness and barriers to communication between community pharmacists and people taking antidepressants, pharmacists rated their communication as more effective than did consumers (Gardner, Murphy, Woodman, & Connelly, 2001). This study highlighted an important issue of variation between pharmacist and consumer perceptions of communication skills and the effectiveness of pharmacist counselling. Strategies to improve communication should be explored, together with valid and reliable methods for measuring the effectiveness of communication.

### *Attitudes and Beliefs*

Public beliefs about, and attitudes towards people with mental illness, have been well documented (Angermeyer & Dietrich, 2006; Angermeyer & Matschinger, 2003; Corrigan & Watson, 2002; Crisp & Gelder, 2000; Fan, 1999; Jorm, et al., 1999; Kai & Crosland, 2001; Kobau, et al., 2010; Link, et al., 1987; Scheerder, et al., 2011; Wahl, 1999, 2011). Although most publications are descriptive in nature, at least one review of population studies (Angermeyer & Dietrich, 2006) also included theory-based models of the stigmatisation of people with mental illness, analyses of time trends and cross-cultural comparisons, and evaluation of anti-stigma campaigns. In general, the available literature identified that the public hold stigmatising, prejudicial, and stereotypical views of mental illness (e.g., Wahl, 1999; Wahl, 2011). For example, a report by SANE Australia identified that 73% of people surveyed (more than 400 adults) had experienced stigma or discrimination in the previous 12 months because of their mental illness (SANE Media Centre, 2011). This is a significant finding considering the massive public media campaign over the last five years to address this issue. However, the figure was no different to the 2006 survey that found 74% of people experienced stigma or discrimination (SANE Media Centre, 2011).

Attitudes and beliefs of health care professionals including nurses, psychiatrists, psychologists, pharmacists and general practitioners have also been explored. Studies have focused on attitudes and beliefs about people with mental illness (Bryant, Guernsey, Pearce, & Hokanson, 1985; Cates, Burton, & Woolley, 2005; Healthcare Management Advisors, 2010; Jorm, et al., 1999; Kassam, Glozier, Leese, Henderson, & Thornicroft, 2010; Nordt, et al., 2006; Phokeo, et al., 2004; Scheerder, et al., 2008; Scheerder, et al., 2009; Scheerder, et al., 2011), the treatment of mental illness (Caldwell & Jorm, 2000; Jorm, et al., 1997; Lauber, Nordt, Braunschweig, & Rössler, 2006; O'Reilly, et al., 2010; Scheerder, et al., 2011), and provision of services to consumers/carers (Black, et al., 2009; Caldwell & Jorm, 2000; Cates,

et al., 2005; Crump, et al., 2011; Gardner, et al., 2001; Phokeo, et al., 2004; Scheerder, et al., 2008). Attitudes and beliefs have typically been assessed using questionnaires such as the Social Distance Scale (SDS, Bell et al., 2010), the Beliefs Towards Mental Illness Scale (Hirai & Clum, 2000) and the Depression Physician Belief Scale (McCall, Clarke, & Rowley, 2002). Despite the education about mental illness that health care professionals receive during their training, in the majority of existing studies, stigmatising attitudes were found, which is likely to have a negative impact on their provision of care to this group of consumers (Jorm, et al., 1999; Nordt, et al., 2006; Phokeo, et al., 2004; Scheerder, et al., 2008; Scheerder, et al., 2009; Scheerder, et al., 2011; Volmer, et al., 2008; Wahl, 1999).

The attitudes and beliefs of community pharmacists have only been specifically explored in a small number of studies (Crump, et al., 2011; Healthcare Management Advisors, 2010; Maslen, Rees, & Redfern, 1996; O'Reilly, et al., 2010; Phokeo, et al., 2004; Scheerder, et al., 2008; Scheerder, et al., 2009). For example, one Canadian study conducted in 2002, explored community pharmacists' ( $n = 283$  participants; 35.4% response rate) interactions with people taking psychiatric medications compared to those taking cardiovascular medications (Phokeo, et al.). Using a 5-point Likert scale ranging from strongly agree to strongly disagree, participants were asked to rate their agreement with a series of statements in a questionnaire. The questionnaire contained domains relevant to professional interaction: attitude, level of comfort when counselling, barriers to providing professional services and counsellor role orientation. Pharmacists generally endorsed a positive attitude towards people using mental health medications, but perceived the lack of private space for counselling and inadequate training in mental health as important factors limiting their consumer interactions. The authors found that community pharmacists felt uncomfortable discussing symptoms of mental illness and indicated reduced monitoring for medication-related problems among mental health consumers when compared with those



taking cardiovascular medications (Phokeo, et al., 2004). In another study, Cates, Burton and Woolley (2005) investigated the attitudes of pharmacists ( $n = 187$  participants; 42% response rate) to mental illness and providing pharmaceutical care to mental health consumers using an adapted questionnaire. Analysis revealed pharmacists generally held positive attitudes to mental illness and provision of pharmaceutical care. However, both Cates et al and Phokeo et al studies utilised questionnaires that were not specific to any particular mental disorder, but rather considered mental illness in general.

In contrast, Scheerder and colleagues (Scheerder, et al., 2008; Scheerder, et al., 2009) specifically explored community pharmacists' attitude towards depression. Scheerder and colleagues (2008) surveyed a sample of 200 Belgium community pharmacists (response rate 34.5%), piloting a modified version of the Depression Attitudes Questionnaire (DAQ, Botega, Mann, Blizard, & Wilkinson, 1992) adapted to the unique context of the pharmacist (Note: the DAQ was previously developed to measure general practitioner attitudes to depression). Scheerder et al (2008; 2009) also included items derived from the Defeat Depression Questionnaire (Priest, Vize, Roberts, Roberts, & Tylee, 1996) in their pilot survey instrument. Statements within this instrument were assessed using a 5-point Likert scale. Pharmacists generally had a positive attitude towards depression and people with depression but several inaccurate opinions about treatment were observed, for example, the belief that *patients with depression need to pull themselves together*, and that *antidepressants change one's personality*. The pharmacist respondents perceived several barriers to fulfilling their role in depression care including: lack of education in mental health issues, lack of time with individual consumers, lack of information about the consumer and about their treatment, lack of privacy in the pharmacy, and difficulties in communicating with people with depression (Scheerder, et al., 2008; Scheerder, et al., 2009).

In a subsequent study, Scheerder and colleagues (2011) sought to explore community professionals' (e.g. teachers, police officers, social workers, pharmacists and clergymen;  $n = 968$ ), mental health professionals' (e.g. doctors, and mental health workers;  $n = 169$ ) and nurses' ( $n = 1533$ ) attitudes towards depression in nine countries belonging to the European Alliance Against Depression. As well as assessing participants' attitudes towards training programmes, the questionnaire included an assessment of the participants' attitudes towards depression, its treatment, perceived causes, preferred treatment options and knowledge of depression symptoms using an adapted form of the DAQ. In summary, the majority of professionals agreed that depression was a real disease that could be treated, the most likely cause of depression was life events, and the preferred treatment options were contacting a doctor and a psychotherapist. Recognition of depression symptoms was high among all participants. Differences in attitude towards depression in professional groups were observed, for example, community professionals and nurses were found to have more negative attitudes towards people with depression and towards antidepressants than the mental health professionals in the study. The authors concluded that these differences may negatively affect professional collaboration, challenge optimal treatment and stigmatise consumers (Scheerder, et al., 2011).

An Australian study conducted in New South Wales found that pharmacists ( $n = 391$ ; response rate 19.5%) believed that people with mental illness were highly likely to be discriminated against by members of the community, and those with schizophrenia more so than those with depression (O'Reilly, et al., 2010). In general, the pharmacist had a negative view about long-term outcomes. We located only one study that explored the attitudes and beliefs of community pharmacy staff (including pharmacy support staff), towards mental illness including depression, anxiety, bipolar disorder, schizophrenia and substance use disorders (Healthcare Management Advisors, 2010). Participants were asked to rate their

alignment with attitudinal statements using a combination of 5-point and 7-point Likert scales. In addition, participants were asked to identify from a list of positive and negative traits those that they believed most represented a) people with mental illness and b) their own personality. Lastly, pharmacists (but not pharmacy support staff) completed questions that assessed their views about their professional roles and interactions with people with mental illness. Overall, the study revealed that community pharmacy staff held a combination of stigmatising and non-stigmatising attitudes and beliefs about mental illness, depending upon the mental illness under consideration. In general, beliefs and attitudes held towards people with depression and anxiety disorders were more favourable whilst those held towards people with schizophrenia and substance use disorders were less favourable. People with mental illness were considered to possess fewer positive traits and more negative traits than the pharmacy participants themselves. Limitations of the study included a low participation rate ( $n = 32$  pharmacists; 22 pharmacy support staff) and the use of the same questions for all mental disorders under investigation.

To summarise, although the Healthcare Management Advisors (2010) and O'Reilly et al (2010) studies have contributed to a better understanding of the current knowledge, skills and attitudes to mental illness in the community pharmacy practice environment, both studies have limited generalizability and used survey questionnaires which had not previously been tested with community pharmacy staff. Furthermore only the Health Care Management study (2010) included pharmacy support staff. A larger and representative study investigating the knowledge, skills, attitudes and beliefs of the Australian community pharmacy workforce is required to inform the development of an educational package which will equip pharmacists and pharmacy support staff to engage confidently with mental health consumers/carers.

### *Conclusion*

Critical evaluation of the existing literature indicates that the development of an educational package for community pharmacy staff to meet the needs of mental health consumers/carers must be informed through a systematic and evidence-based identification of knowledge gaps of community pharmacy staff alongside an exploration of the needs and expectations of mental health consumers/carers. Such a needs assessment should also include other stakeholders such as consumer and carer organisation representatives, and other health professionals involved in the provision of mental health care as a collaborative approach has been shown to optimise consumer outcomes. The assessment of community pharmacy staff knowledge, skills and attitudes should be based on validated tools, and should include both pharmacist and pharmacy support staff; however, reliable instruments must be tailored for this purpose. In the context of the primary care setting these tools should focus on high prevalence disorders such as depression and anxiety. For the purpose of a large-scale longitudinal project focusing on these issues, development of specific measures seems justified.

In particular, this review has revealed that areas of training needs include targeting stigma and discrimination, enhancing knowledge, and developing skills and strategies to improve confidence and communication skills for pharmacy staff. Including pharmacy support staff in this training is imperative as they are often the first point of contact for consumers. These outcomes will be the goal of the next stage in the longitudinal research program.

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