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# **Pharmacy and Holistic Care:**

## **An exploratory scoping review**

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## PREFACE

### Purpose and Report Focus:

This report is an exploratory scoping literature review regarding pharmacy and holistic care, prepared for Emeritus Professor Colin Chapman, Faculty of Pharmacy and Pharmaceutical Sciences, Monash University, Melbourne, Victoria, Australia. Sponsorship for this work was provided by La Trobe University Palliative Care Unit, Bundoora, Melbourne, Australia. The report forms part of an undergraduate Participatory Field Placement (PHE3PFP) Internship Program for Public Health and Rehabilitation Counselling students within the Bachelor of Health Sciences program at La Trobe University, Melbourne, Victoria, Australia.

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## ABSTRACT

**Purpose:** The purpose of this research was to explore pharmacy and the role of pharmacists with regard to holistic care within clinical settings and pharmacy curriculum. **Method:** A PICO search was used to search for relevant articles. A scoping literature review of interventions was preformed utilising five major databases. Articles were culled for duplicates and relevance. **Results:** Of the 6,708 articles initially found, 86 were identified as relevant. Following a further revision however, only 12 articles were specifically relevant to the topic. Articles were filtered by publication date and thematically coded. **Conclusion:** There exists very little published research with regard to pharmacy/pharmacists and holistic care. The available literature however, indicates that holistic care can play an important role in pharmacy for the care of patients and that including education around holistic care early in the pharmaceutical curriculum could be important for clinical practice.

**Keywords:** Pharmacy, pharmacist, holistic care, spiritual, religion, cultural.

## INTRODUCTION

There is currently little research and literature surrounding pharmacy and holistic care. Of the available research, studies have solely focused on pharmacy and on holistic care as fundamentally two separate entities rather than an interconnected topic. This review focused on both areas in order to consider the importance of incorporating holistic care into a pharmaceutical environment.

Holistic care considers the biological, psychological, social and spiritual dimensions of a person (Sulmasy, 2002). Some pharmacists believe that holistic care is a crucial component to incorporate within pharmacy practice. However, the various available literature and research indicates that there are many gaps in the teaching curriculum and clinical practice regarding the incorporation of holistic care (Awad, Al-Ajmi and Waheedi, 2012).

## PURPOSE

The purpose of this research was to explore pharmacy and the role of pharmacists with regard to holistic care within clinical settings and pharmacy curriculum. If possible, it was hoped that this exploration might lead to considerations with respect to the practice and educational curriculum of future pharmacists.

## METHOD

A PICO method was used to expand terms for population and intervention/exposure (see Table 1). Related synonyms were used to expand the literature shown (see Table 2). A subsequent search strategy was produced (see [Appendix 1](#)). Combining the Australian-English and American English spelling of words helped widen the search. A combined search between the population and the intervention A and B (see Table 1) was conducted on databases: CINAHL, Medline, PsychINFO, Scopus and Google Scholar.

**Table 1- PICO research question**

Population	Intervention/ Exposure A	Intervention/ Exposure B	Comparison	Outcome
Pharm*	“Holis*” OR “Spirit*” OR Pastor* OR “Religio*”	person centred care * OR person centered care * OR Person-centred care * OR Person-centered care * OR “patient centred care *” OR “patient centered care*”	N/A	“Holis*” OR “Religio*” OR cultural* OR “Privac*” OR “Confident*”

The results were screened for any duplicates and removed. Articles were filtered according to the relevant key words “Pharmacy” and “Holistic”. Articles were then filtered by publication date for the last 10 years and filtered by the most relevant to least. The final number of articles totaled 12 (see [Appendix 2](#) for abstracts).

**Table 2** *Database search terms and related synonyms*

Database search terms	Synonyms
Pharm*	<ul style="list-style-type: none"> <li>- Pharmacy</li> <li>- Pharmacist/s</li> <li>- Pharmacology</li> <li>- Pharmaceutic</li> <li>- Pharmacomania</li> <li>- Pharmacopeia</li> <li>- Pharmacies</li> <li>- Pharmacologist</li> <li>- Pharmaceutical</li> <li>- Pharmacotherapy</li> <li>- Pharmacokinetic</li> </ul>
“Holis*” OR “Spirit*” OR Pastor* OR “Religio*”	<ul style="list-style-type: none"> <li>- Pastor</li> <li>- Pastoral care</li> <li>- Spiritual care</li> <li>- Spirituality</li> <li>- Holistic</li> <li>- Holistic care</li> <li>- Holism</li> <li>- Religion</li> <li>- Religious</li> </ul>
cultural* OR “Privac*” OR “Confident*”	<ul style="list-style-type: none"> <li>- Privacy</li> <li>- Confident</li> <li>- Confidentiality</li> <li>- Confidential</li> </ul>

## RESULTS

A total of 6,708 articles were initially identified, 86 articles were subsequently deemed relevant to the topic area, however following a further review, only 12 articles were sufficiently specific. These articles were then filtered by publication date (within the last 10 years) and thematically coded from the most relevant to least.

## Key themes

It is important to acknowledge that holistic care has many spectrums, however based on the literature review findings four key themes could be identified: (1) Pharmacist attitudes; (2) Contraception; (3) Religion/Spirituality; (4) Complementary and alternative medicines. Table 3 presents each of the key themes (1- 4) and the corresponding number of articles coding according to the particular themes (see Table 3). The abstracts for each article and the relevant coded themes are presented at [Appendix 2](#).

**Table 3** *Thematic codes*

Thematic code	Theme	Total no. of articles
1	Pharmacist attitudes to holistic care	12
2	Contraception	3
3	Religion/spirituality/cultural	10
4	Complementary and alternative medicine	6

## DISCUSSION

### *Pharmacist attitudes*

The available literature indicated a thematic correlation between holistic care and pharmacy. This can be depicted throughout the results of articles incorporating aspects of holistic care in pharmacy practice. For example, Jacob, White and Shogbon (2017) evaluated student pharmacist perceptions with respect to spirituality through the pharmacy curriculum and within professional practice. Utilising an evaluation scale, Jacob et al. (2017) found that overall students recognised the importance of including spirituality within their curriculum. Of these students the results also indicated that students who noted a higher self-report of spirituality, had a greater appreciation and understanding of spirituality and diverse cultures.

An article by Weir, Bonner, McCaffery, Naganathan, Carter, Rigby, Jansen (2018) aimed to explore how the use of home medication reviews, known as HMR's in pharmacy practice, helped develop a future understanding of patient's preferences of medications and goals. To fully understand and comprehend a patient's needs, any teaching curriculum should incorporate the use of training

guides on how to verbally communicate with patients about their CAM preferences and goals – including religious and or cultural influences. Strategies for overcoming common barriers include role-play activities, guidance for prioritising questions and suggestions with prompts or questions to be able to converse with patients about their medicines and choices. Weir et al.(2018) encouraged pharmacists to have a deeper understanding of the holistic needs of patients.

Awad, Al-Ajmi, and Waheedi (2012) undertook research on pharmacists' attitudes to complementary and alternative medicine's and concluded that pharmacy students who reported high levels of understanding about CAM, came from diverse backgrounds which utilised complementary and alternative medicines. Awad et al. (2012) stated that pharmacy students should be confident to recognise and offer CAM related medicines or therapies with their patients where appropriate.

### *Contraception*

Contraception and the emergency contraceptive pill (ECP) are commonly used among women to prevent pregnancy. Akers et al. (2010) explain how a preferred method of contraception is determined by the individual themselves with a medical practitioner. Women are encouraged to make their own choice and reasoning for use of contraception. Akers, et al. (2010) explored how dispensing a contraceptive method and providing counselling can be influenced by the pharmacist opinions and beliefs. Akers et al. (2010) found that pharmacist attitudes and beliefs had an impact on the contraception options whether it was from a religious stance or the biological factors that can happen when using a contraceptive pill.

Similarly, Davidson et al. (2010) explored how the impact of religion can influence and shape their objection to providing women a contraception or the ECP. Davidson et al's (2010) results showed that a pharmacist's own religion and belief's play a significant role in shaping the pharmacists' judgment of ethical practice and predicted whether they willingly dispensed the ECP. However, over many years, it has now become very rare for a pharmacist particularly in rural areas to refuse medication such as the ECP. Del Bò (2012) explored how pharmacists who refuse to sell the ECP can violate a women's moral autonomy. In the article he looked at empowering women by making crucial and critical choices of their biological, psychological, social and spiritual well being. Del Bò, (2012) concludes that women should have the rightful choice whether to take the ECP or not, rather than their decision be shaped by the opinion of the dispenser.



### *Complementary and alternative medicine*

Behrman and Tebb (2009) explores the use and benefits of Complementary and Alternatives Medicine (CAM) incorporated in older adults. Behrman et al. (2009) explore introducing CAM alternatives and training to various to health practitioners to see whether or not these will promote better quality of care in older patients. Behrman et al. (2009) explore their research through the use of Yoga classes in older adults. Behrman et al. (2009) conclude that the integration CAM and western medicines together can be an expansive approach to providing a better quality of life for the patient. A holistic approach by combing CAM and modern medicines takes into account the person's unique healing needs, environment, preferences and lifestyle.

Awad, Al-Ajmi and Waheedi (2012) explored the knowledge and perceptions of CAM in medical and pharmacy students. Awad et al. (2012) highlighted that there is an increase of public request for CAM and pharmacists seem to have little knowledge about CAM. Awad et al. (2012) used a cross sectional study questionnaire to determine health practitioner's knowledge and attitudes to alternative complementary medicines. Awad et al's (2012) results indicated that more than half the students knew about CAM. However, pharmacy students from diverse backgrounds such as Hong Kong (38.4%) and the United Kingdom (43%) had a higher rate of knowledge about CAM found in the self report compared to students from other countries. Awad et al. (2012) results also showed that students acknowledged the need for further education and the potential benefits through various forms of CAM.

### *Religion/Spirituality*

During the fast of Ramadan, practicing Muslims abstain from all foods and drink between the hours of sunrise and sunset due to their religious beliefs. This includes sustaining from taking any medicines orally or intravenously (Almansour, Chaar and Saini, 2017). Almansour et al. (2017) aimed to investigate whether or not health care practitioners (HCP's) such as pharmacist had enough knowledge surrounding management and modification of medication regimes during Ramadan. One of the predominant concerns around abstaining from medication during Ramadan was the impact of disrupting homeostasis. Almansour et al. (2017) concluded that there is limited literature or evidence surrounding pharmacist's knowledge and attitudes regarding the education of Muslims about the specialised care through various programs. Medication adjustment regimes however, highlight cultural competency and awareness to spiritual beliefs as well as adhering to biological health.

Amin and Chewning (2015) conducted a cross sectional study descriptive survey that aimed to observe community pharmacists in Egypt and their attitudes towards initiating conversations regarding medication regime adjustment (MRA). Amin et al (2015) indicate that of the 363 pharmacist who part took in their survey, only 16% took the initiative to discuss with their patients about MRA during Ramadan. Amin et al. (2015) concluded that there needs to be more initiative regarding educating patients who fast during Ramadan about their medication intake and their spiritual and religious opinions.

Badanta-Romero, de Diego-Cordero and Rivilla-Garcia (2018) conducted extensive research around the influence of religion and spirituality in adhering to a medicine intake plan. A literature review was conducted on databases such as CINAHL, PubMed, Psych-INFO. The results of the literature research showed a positive correlation between religion, spirituality and adherence to medication. Badanta-Romero et al. (2018) conclude however, that there needs to be more promotion around holistic patient centered choice and empowering self-care decisions.

## **CONCLUSIONS AND RECOMMENDATIONS**

Jacob, White, and Shogbon (2017) focused on pharmacist attitudes towards spirituality through curriculum and clinical practices. Weir, Bonner, McCaffery, Naganathan, Carter, Rigby, Jansen. (2018) concluded that a pharmacist who has a better understanding of a holistic bio-psycho-social approach, have greater awareness of holistic care and cultural sensitivity. Davidson, Pettis, Joiner, Cook, and Klugman (2010) explain how pharmacists' own beliefs and attitudes can influence how they provide counsel and dispense medication (e.g., contraception; see also Akers et al., 2010). Religious beliefs and spirituality is highlighted through the work of Almansour, Chaar, and Saini (2017) surrounding Islamic Ramadan fasting. Badanta-Romero, de Diego-Cordero and Rivilla-Garcia (2018) conclude that there needs to be more promotion around holistic patient centered care. Awad, Al-Ajmi and Waheedi (2012) results show that students acknowledge that there needs to be more education regarding the potential benefits and various forms of CAM.

The review has shown that holistic care can be an important consideration in pharmacy practice. Nevertheless, while a number of other professions have considered their curriculum and clinical practice with regard to improving their holistic care (e.g., audiology, speech pathology, occupational therapy, etc.) and particularly with respect to 'spiritual care' (Carey & Mathisen, 2018), this is barely the case with regard to the profession of pharmacy — yet all the available literature

gathered for this review affirmed a correlation (in one way or another) regarding pharmacy and holistic care. All the articles were positive about a pharmacist's potential holistic approach that could have a positive impact on patients. Secondly, the majority of articles indicated that pharmacists who have a holistic view tend to be more understanding and knowledgeable about cultural diversity and spiritual/religious factors. These pharmacists had a positive perspective with regard to understanding a bio-psycho-social-spiritual approach and were more likely to initiate conversations about a patient's goals and choices. Thirdly, the majority of articles showed that pharmacists who had holistic views, tended to be more understanding of a patient's religiosity/spirituality, however, there was a clear indication that not every pharmacist was aware of religious or spiritual factors affecting their patients decision-making, such as whether they would or would not adhere to recommended medications.

Overall all the articles within this review had a generally positive outlook towards incorporating holistic care within the pharmacy practice and curriculum. Given the limited articles on the topic however, there is clearly a need for increased professional leadership, research and publications regarding pharmacy and holistic care.

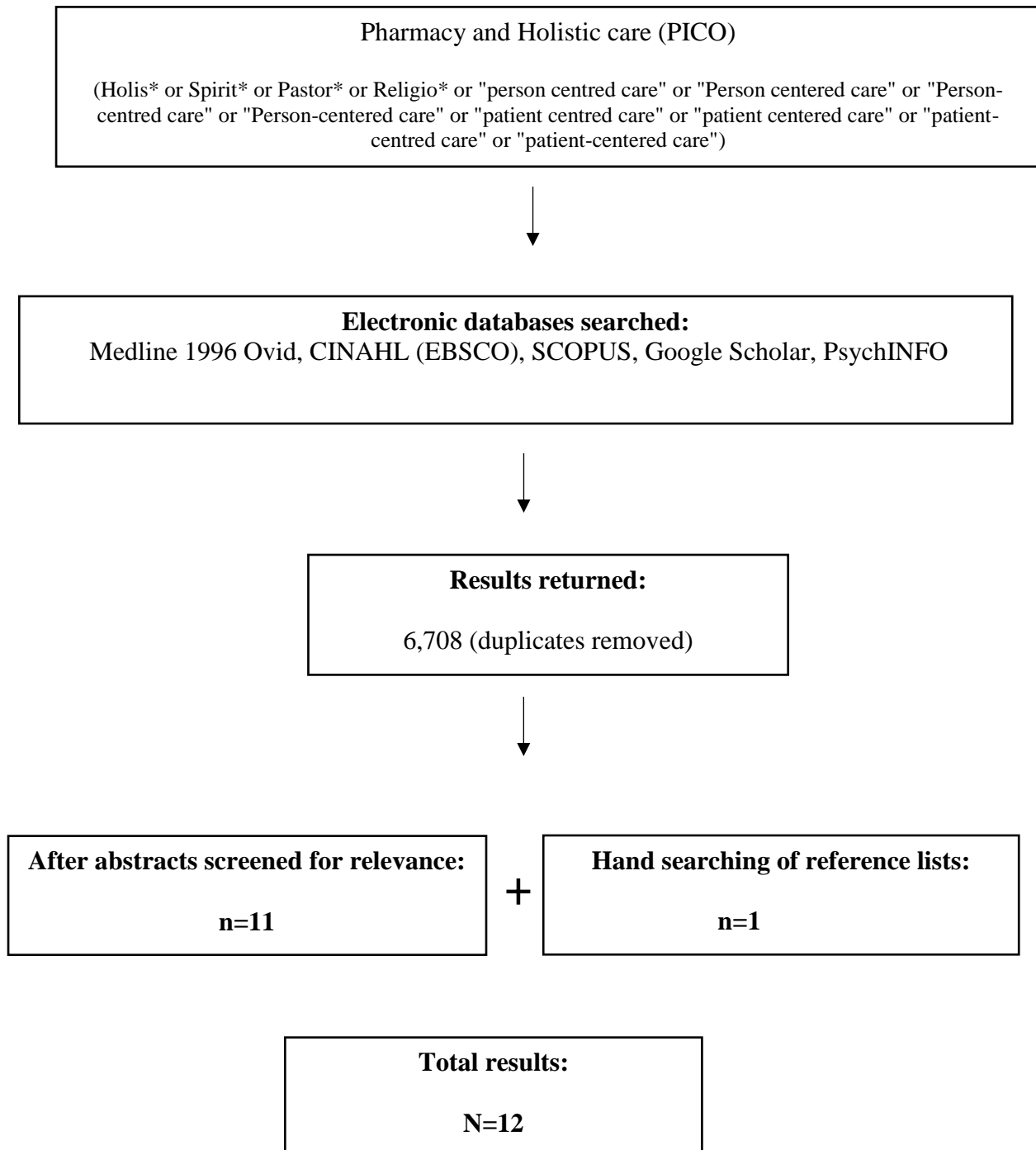
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## REFERENCES

- Akers, A. Y., et al. (2010). Providers' perspectives on challenges to contraceptive counseling in primary care settings. *Journal of Women's Health* 19 (6): 1163-1170.
- Almansour, H. A., Chaar, B., and Saini, B. (2017). Pharmacists' perspectives about their role in care of patients with diabetes observing Ramadan. *Research in Social and Administrative Pharmacy*, 13(1), 109-122. doi:http://dx.doi.org/10.1016/j.sapharm.2016.02.006
- Almansour, H. A., Chaar, B., & Saini, B. (2017). Fasting, diabetes, and optimizing health outcomes for Ramadan observers: a literature review. *Diabetes Therapy*, 8(2), 227-249.
- Amin, M. E., and Chewning, B. (2015). Predicting pharmacists' adjustment of medication regimens in Ramadan using the theory of planned behavior. *Research in Social and Administrative Pharmacy*, 11(1), e1-e15. doi:http://dx.doi.org/10.1016/j.sapharm.2014.04.004
- Awad, A. I., Al-Ajmi, S., and Waheedi, M. A. (2012). Knowledge, perceptions and attitudes toward complementary and alternative therapies among Kuwaiti medical and pharmacy students. *Medical Principles and Practice*, 21(4), 350-354. doi:10.1159/000336216
- Badanta-Romero, B., de Diego-Cordero, R., and Rivilla-Garcia, E. (2018). Influence of religious and spiritual elements on adherence to pharmacological treatment. *Journal of Religion and Health*. doi:http://dx.doi.org/10.1007/s10943-018-0606-2
- Behrman, G., and Tebb, S. (2009). The use of complementary and alternative interventions as a holistic Approach with older adults. *Journal of Religion and Spirituality in Social Work*, 28(1/2), 127-140.
- Carey, L. B., Mathisen, B.A. (Ed.). (2018). *Spiritual Care and Allied Health Practice*. London, UK: Jessica Kingsley Publishers.
- Daher, M., Chaar, B., & Saini, B. (2015). Impact of patients' religious and spiritual beliefs in pharmacy: from the perspective of the pharmacist. *Research in Social and Administrative Pharmacy*, 11(1), e31-e41.
- Davidson, L. A., Pettis, C. T., Joiner, A. J., Cook, D. M., and Klugman, C. M. (2010). Religion and conscientious objection: A survey of pharmacists' willingness to dispense medications. *Social Science and Medicine*, 71(1), 161-165. doi:10.1016/j.socscimed.2010.03.027
- Del Bò, C. (2012). Conscientious objection and the morning-after pill. *Journal of Applied Philosophy*, 29(2), 133-145. doi:10.1111/j.1468-5930.2012.00559.x
- Jacob, B., White, A., and Shogbon, A. (2017). First-year Student Pharmacists' Spirituality and Perceptions Regarding the Role of Spirituality in Pharmacy Education. *American Journal of Pharmaceutical Education*, 81(6), 108ff.
- Sulmasy, D. P. (2002). A biopsychosocial-spiritual model for the care of patients at the end of life. *The gerontologist*, 42, 24-33.
- Weir, K. R., Bonner, C., McCaffery, K., Naganathan, V., Carter, S. M., Rigby, D., ... and Jansen, J. (2018). Pharmacists and patients sharing decisions about medicines: Development and feasibility of a conversation guide. *Research in Social and Administrative Pharmacy*. doi:https://dx.doi.org/10.1016/j.sapharm.2018.08.009

## APPENDIX 1

### Search Strategy



## APPENDIX 2

### Literature and Thematic Coding

Article no.	Author/ Year/ Title	Brief summary	Code
1	Weir, K.R., Bonner, C., McCaffery, K., Naganathan, V., Carter, S.M., Rigby, D., Trevena, L., McLachlan, A. & Jansen, J. (2018)  Pharmacists and patients sharing decisions about medicines: Development and feasibility of a conversation guide	Background: In Australia, the Home Medicines Review (HMR) is a nationally-funded program, led by pharmacists to optimize medication use for older people. A Medicines Conversation Guide was developed for pharmacists to use in the context of a HMR. The Guide aims to increase patient involvement and support discussions about: general health understanding, decision-making and information preferences, health priorities related to medicines, patient goals and fears, views on important activities and trade-offs. Objective: This study describes the development and feasibility testing of a Medicines Conversation Guide in HMRs with pharmacists and older patients. Methods: The Guide was developed using a systematic and iterative process, followed by testing in clinical practice with 11 pharmacists, 17 patients (aged 65+) and their companions. A researcher observed HMRs, surveyed and qualitatively interviewed patients and pharmacists to discuss feasibility. Transcribed recordings of the interviews were thematically coded and a Framework Analysis method used. Results: Pharmacists found the Guide to be an acceptable and useful component to the HMR, especially among patients with limited knowledge of their medicines. The Guide seemed most effective when integrated with the HMR and tailored to suit the individual patient. Some questions were difficult for patients to grasp (e.g. trade-offs) or sounded formal. Most patients found the Guide focused the HMR on their perspective and encouraged a more holistic approach to the HMR. From the quantitative survey, pharmacists found the Guide easy to implement, balanced and understandable. Conclusions: Pharmacists and patients reported the Guide fits with the HMR encounter relatively easily and promoted communication about goals and preferences in relation to medications. This study highlighted some key challenges for communication about medicines and how the Guide may help support the process of involving patients more in the HMR.	1,3
2	Akers, A.Y., Melanie A. Gold, M.A., Borrero, S., Santucci, A & Schwarz, E.B. (2010)  Providers' Perspectives on Challenges to Contraceptive Counseling in Primary Care	Background: Although three quarters of reproductive-age women see a health provider annually, less than half receive recommended contraceptive counseling services. We sought to explore providers' perspectives on the challenges to contraceptive counseling in primary care clinics to develop strategies to improve counseling services. Methods: A qualitative, focus group (n/48) study was conducted in November and December 2007; 48 of 90 providers practicing in four primary care clinics at the University of Pittsburgh Medical Center participated. Providers included physicians, nurses, and pharmacists working in these clinics' multidisciplinary teams. Discussions explored perceived barriers to the provision of counseling services. All groups were audio-recorded, transcribed, and entered into 'Atlas-Ti' a qualitative data management software. The data were analyzed using a	1,2,3

Settings	<p>grounded theory approach to content analysis. Results: Perceived patient, provider, and health system barriers to contraceptive counseling were identified. Perceived patient barriers included infrequent sexual activity, familiarity with a limited number of methods, desire for pregnancy despite medical contraindications, and religious beliefs. Provider barriers included lack of knowledge, training, and comfort; assumptions about patient pregnancy risk; negative beliefs about contraceptive methods; reliance on patients to initiate discussions; and limited communication between primary care providers (PCPs) and subspecialists. Health system barriers included limited time and competing medical priorities. Conclusions: PCPs vary widely in their knowledge, perceived competence, and comfort in providing contraceptive counseling. General efforts to improve integration of contraceptive counseling into primary care services in addition to electronic reminders and efficient delivery of contraceptive information are needed.</p>	
<p>3 Almansour, H.A., Chaar, B., Saini, B (2017)</p> <p>Fasting, Diabetes, and Optimizing Health Outcomes for Ramadan Observers: A Literature Review</p>	<p>Introduction: Globally, and in Australia, diabetes has become a common chronic health condition. Diabetes is also quite prevalent in culturally and linguistically diverse pockets of the Australian population, including Muslims. There are over 90 million Muslims with diabetes worldwide. Diabetes management and medication use can be affected by religious practices such as fasting during Ramadan. During Ramadan, Muslims refrain from oral or intravenous substances from sunrise to sunset. This may lead to many potential health or medication-related risks for patients with diabetes who observe this religious practice. This literature review aimed to explore (1) health care-related interventions and (2) intentions, perspectives, or needs of health care professionals (HCPs) to provide clinical services to patients with diabetes while fasting during Ramadan with a view to improve health outcomes for those patients. Methods: Using a scoping review approach, a comprehensive search was conducted. Data- bases searched systematically included PubMed, Medline, Embase, and International Pharmaceutical Abstracts. Studies published in English that described interventions or intentions to provide interventions regarding diabetes and Ramadan fasting were included. Results: Fourteen published articles that met the inclusion criteria were retrieved and content analyzed. Of those, nine intervention studies regarded diabetes management education. Five studies described professional service intention, four of which were related to the role of pharmacists in diabetes management in Qatar, Australia, and Egypt, and one French study examined the general practitioners' (GPs) experiences in diabetes management for Ramadan observers. The intervention studies had promising outcomes for diabetes management during Ramadan. Effect sizes for improvement in HbA1c post intervention ranged widely from -1.14 to 1.7. Pharmacists appeared to be willing to participate in programs to help fasting patients with diabetes achieve a safe therapeutic outcome. Service intention studies highlighted pharmacists' and GPs' need for training prior to providing services from a clinical as well as cultural competence perspective. Conclusion: Interventions research in this area requires robustly designed and structured interventions that can be tested in different contexts. This literature review revealed many gaps regarding diabetes management in Ramadan.</p>	1,3,4

4	<p>Awad A.I., Al-Ajmi, S., &amp; Waheedi, M.A. (2012)</p> <p>Knowledge, Perceptions and Attitudes toward Complementary and Alternative Therapies among Kuwaiti Medical and Pharmacy Students</p>	<p><b>Objective:</b> To determine the knowledge, perceived effectiveness and harmfulness of complementary and alternative medicine (CAM) modalities, general attitude and the need for education in the use of CAM therapies among medical and pharmacy students. <b>Methods:</b> A descriptive and cross-sectional study was performed using a pre-tested questionnaire on a randomly selected sample of 250 students in Faculties of Medicine and Pharmacy, Kuwait University. Descriptive and logistic regression analyses were used in data analysis. <b>Results:</b> The response rate was 88.4%. CAM usage was reported by 122 (55.2%) of students, and mostly associated with females (OR 4.4, 95% CI 1.7–11.3). Herbal products were the most commonly used (83, 37.6%). Knowledge about 11 CAM modalities was generally poor, even among the respondents who claimed to know them most. The knowledge about herbal products was significantly better among 58 pharmacy students (49.2%) than 32 medical students (31.4%) (OR 2.0, 95% CI 1.1–3.6). Massage, herbal products and prayer/ Qur'an reciting were perceived as being the most effective, while cauterization as the most harmful. Attitude toward CAM was positive, with 176 (79.7%) believing that CAM includes ideas and methods from which conventional medicine could benefit. Lack of trained professionals and lack of scientific evidence were the most perceived barriers for CAM implementation. 198 (89.6%) admitted the importance of knowledge about CAM for them as future healthcare practitioners. <b>Conclusion:</b> The students acknowledged the need to be well educated about CAM to better advise their patients. Complementary and alternative medicine (CAM) has been defined as a 'group of diverse medical and health-care systems, practices and products that are not presently considered to be part of conventional medicine' [1]. In the last decade, there has been a global upsurge in the use of CAM in both developed and developing countries [1–6]. The exact prevalence rate of CAM usage among the general population in Kuwait is not well known as there is no published study.</p>	1,3,4
5	<p>Davidson, L.A., Pettis, C.T., Joiner, A.J., Cook, D.M. &amp; Klugman, C.M. (2010)</p> <p>Religion and conscientious objection: A survey of pharmacists' willingness to dispense medications</p>	<p>Some US states allow pharmacists to refuse to dispense medications to which they have moral objections, and federal rules for all health care providers are in development. This study examines whether demographics such as age, Nevada pharmacists' willingness to dispense or transfer five potentially controversial medications to patients 18 years and older: emergency contraception, medical abortifacients, erectile dysfunction medications, oral contraceptives, and infertility medications. Almost 6% of pharmacists indicated that they would refuse to dispense and refuse to transfer at least one of these medications. Religious affiliation significantly predicted pharmacists' willingness to dispense emergency contraception and medical abortifacients, while age significantly predicted pharmacists' willingness to distribute infertility medications. Evangelical Protestants, Catholics and other-religious pharmacists were significantly more likely to refuse to dispense at least one medication in comparison to non-religious pharmacists in multinomial logistic regression analyses. Awareness of the influence of religion in the provision of pharmacy services should inform health care policies that appropriately balance the rights of patients, physicians, and pharmacists alike. The results from Nevada pharmacists may suggest similar tendencies among other health care workers, who may be given latitude to consider morality and value</p>	1, 2,4



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systems when making clinical decisions about care.

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6	Del Bò, C. (2012)  Conscientious Objection and the Morning- After Pill	The so-called ‘morning-after pill’ is a drug that prevents pregnancy if taken no later than 72 hours after presumably fertile sexual intercourse. This article argues against a right of conscientious objection for pharmacists with regard to dispensing this drug. Some arguments that might be advanced in support of this right will be considered and rejected. Section 2 argues that from a philosophical point of view, the most relevant question is not whether the morning-after pill prevents implantation nor is it whether preventing implantation is tantamount to abortion. Section 3 suggests a more general philosophical question as most pertinent, namely whether and to what extent a pharmacist can justifiably be exempted from dispensing the morning-after pill when to do so would entail participating in something that goes against his or her deepest moral or religious convictions. Section 4 explains why, within liberal institutions, pharmacists should not have the right to conscientious objection to dispensing the morning-after pill.	1,2
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7	Jacob, B., White, A & Shogbon, A., (2017)  First-year Student Pharmacists' Spirituality and Perceptions Regarding the Role of Spirituality in Pharmacy Education	<b>Objective:</b> To measure student pharmacists' spirituality utilizing validated survey instruments and to determine perceptions regarding the anticipated role of spirituality in academic course work and professional practice. <b>Methods:</b> This was a cross-sectional, descriptive study. The survey was offered to all first-year student pharmacists during the first week of the fall semester (2012-2015). Descriptive and inferential statistics were used to analyze data. <b>Results:</b> A total of 580 students (98%) participated. The majority of students reported having each of the spiritual experiences on most days of the week or more frequently (58% to 89% based on individual item). Furthermore, 57% of students anticipate that matters of spirituality would be significant components of academic course work and 75% anticipate they would be incorporated into eventual professional practice settings. These perceptions were positively correlated to measures of spirituality and religiosity. <b>Conclusion:</b> These findings suggest that faculty should evaluate current and future incorporation of topics related to spirituality and health in pharmacy curriculum. <b>Keywords:</b> spirituality, religiosity, student pharmacist	1,3,4
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| 8 | <p>Daher, M.,<br/>Chaar, B &amp;<br/>Saini, B.<br/>(2015)</p> <p>Impact of<br/>patients’<br/>religious and<br/>spiritual beliefs<br/>in pharmacy:<br/>From the<br/>perspective of<br/>the pharmacist</p> | <p><b>Background:</b> Socio-cultural perspectives including religious and spiritual beliefs affect medicine use and adherence. Increasingly communities that pharmacists serve are diverse and pharmacists need to counsel medicine use issues with ethical and cultural sensitivity as well as pharmaceutical competence. There is very little research in this social aspect of pharmacy practice, and certainly none conducted in Australia, an increasingly multicultural, diverse population.</p> <p><b>Objectives:</b> The purpose of this study was to explore, from a pharmacy practitioner’s viewpoint, the frequency and nature of cases where patients’ articulated religious/spiritual belief affect medicine use; and pharmacist perspectives on handling these issues. <b>Methods:</b> Qualitative method employing semi-structured interviews with pharmacy practitioners, constructed around an interview guide. Pharmacist participants were recruited purposively from areas of linguistic diversity in Sydney, New South Wales, Australia. Verbatim transcription and thematic analyses were performed on the data. <b>Results:</b> Thematic analyses of 21 semi-structured interviews depicted that scenarios where religious and spiritual belief and medication use intersect were frequently encountered by pharmacists. Patient concerns with excipients of animal origin and medication use while observing religious fasts were the main issues reported. Participants displayed scientific competence; however, aspects of ethical sensitivity in handling such issues could be improved. This novel study highlights the urgent need for more research, training and resource development for practitioners serving patients in multi-faith areas.</p> | 1,3,4 |
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| 9 | <p>Badanta-<br/>Romero, B., de<br/>Diego-Cordero,<br/>R., &amp; Rivilla-<br/>García, E.<br/>(2018)</p> <p>Influence of<br/>Religious and<br/>Spiritual<br/>Elements on<br/>Adherence to<br/>Pharmacological<br/>Treatment</p> | <p><b>Abstract</b> The objective of this study is to know the influence of religious/spiritual elements on the adherence to pharmacological therapy. The descriptors used for this literature review were “medicine, medication, drug, or treatment,” “adherence to treatment,” and “religion or spirituality or faith or prayer” in different databases (CINAHL, PsycINFO, PubMed). Finally, 23 articles were selected. Articles available in full text, published between 2010 and 2017, in English or Spanish were included.</p> <p><b>Results:</b> The results showed that some studies relate positively the R/S and therapeutic adherence, but others determine an opposite or even mixed effect, mainly addressing pathologies such as HIV and other chronic diseases. The influence of religiosity/spirituality on therapeutic adherence requires that health professionals acquire sensitivity and competence to address these issues with their patients.</p> | 1,3,4 |
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10	<p>Almansour, H.A., Chaar,B., &amp; Saini, B. (2017)</p> <p>Pharmacists' perspectives about their role in care of patients with diabetes observing Ramadan</p>	<p><b>Background:</b> Diabetes is a common chronic condition amongst Australians. Ongoing management requires adherence to medication and diet regimens. Religious practices such as fasting, such as the Ramadan fast observed by Muslims can impact medication use and diabetes control. Pharmacists as medication experts have a key role in helping people observing religious practices, to maintain optimal control over their medication regimen. <b>Objective:</b> This study aimed to explore the perspective of Australian community pharmacists about professional services for patients with Type 2 diabetes (T2D) who may opt for observing the Ramadan fast. <b>Methods:</b> Qualitative, semi-structured interviews with a purposive convenient sample of pharmacists practicing in areas of ethnic diversity in Sydney were undertaken. Interview data were thematically analyzed using a constructivist paradigm. <b>Results:</b> Twenty-one semi-structured interviews (57% male participants) were conducted during June– August 2015, and the analysis of verbatim transcripts established several themes. Although most participants encountered fasting patients, and were willing to engage in diabetes services for them, our analyses indicated reactive counseling, lack of perceived need for counseling patients or delegation of patient care in a few instances as well as organizational issues as a practice barrier. Some participants highlighted the need for training and skills development in this area and cited other organizational barriers such as time, infrastructure and patient expectations/attitudes that might impede service provision. Key themes related to patients included: experiencing adverse outcomes of fasting on diabetes, varying levels of self-efficacy, help seeking behaviors and negative attitudes to pharmacist involvement. <b>Conclusion:</b> Pharmacists encounter patients with chronic conditions who observe religious fasts that may interrupt established medication regimens. Proactive counseling about medication use in these instances is offered only by some pharmacists. Professional awareness of the effect of religious practices is important and protocols to assist patients in these situations should be developed and disseminated. Standardized service provision is likely to facilitate positive patient expectations so that pharmacies and pharmacists are viewed as a normal channel for seeking help by fasting patients.</p> <p>-</p>	1,3
11	<p>Amin, M. E-K., and Chewning, B. (2015)</p> <p>Pharmacist–patient communication about medication regimen adjustment during Ramadan</p>	<p><b>Objectives</b> During Ramadan, Muslims fast from dawn to sunset while abstaining from food and drink. Although Muslim patients may be aware of their religious exemption from fasting, many patients still choose not to take that exemption and fast. This study examines pharmacists' initiation and timing of communication about medication regimen adjustment (MRA) with patients related to Ramadan. Predictors for initiating this communication with patients were also explored. <b>Methods</b> A probability sample of community pharmacists in Alexandria, Egypt was surveyed. The self-administered instrument covered timing and likelihood of initiating discussion about MRA. Using ordered logistic regression, a model was estimated to predict pharmacists' initiation of the conversation on MRA during Ramadan. <b>Results</b> Ninety-three percent of the 298 approached pharmacists completed surveys. Only 16% of the pharmacists reported that they themselves usually initiated</p>	1,3

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the conversation on MRA. Pharmacists' initiation of these conversations was associated with pharmacists' perceived importance of MRA on pharmacy revenue odds ratio ((OR) = 1.24, CI = 1.03–1.48). Eighty percent of the responding pharmacists reported the MRA conversation for chronic conditions started either 1–3 days before, or during the first week of Ramadan. **Conclusion** These results suggest considerable pharmacist-patient communication gaps regarding medication use during Ramadan. It is especially important for pharmacists and other health professionals to initiate communication with Muslim patients early enough to identify how best to help patients transition safely into and out of Ramadan as they fast.

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| 12 | Behrman, G & Tebb, S. (2009) | The Use of Complementary and Alternative Interventions as a Holistic Approach with Older Adults | The use of complementary and alternative interventions by health care clinicians, in particular social workers, as a method to relieve chronic conditions, such as depressive symptoms in older adults, is addressed in this paper. Psychotherapy, pharmaceuticals, and other medical interventions are often enhanced when accompanied by alternative practices like yoga. Practitioners can learn to use these methods and/or work with a clinician who has a particular alternative skill set. Bringing complementary interventions into one's practice assures that older adults are receiving "best practices." | 1,3 |
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