

Original Research

Community pharmacists' recommendations for natural products for stress in Melbourne, Australia: a simulated patient study

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Abstract

Background: Community pharmacists are often the first health professional approached to provide treatment for health issues, including the important mental health challenge, stress. Over-the-counter products for stress almost always are complementary and alternative medicines (CAM) and in Australia no protocol exists for their recommendation and sale in community pharmacies.

Objective: To assess the quality and relevance of community pharmacists' information gathering (questioning), counselling and product selection when interacting with customers requesting a CAM product for stress and consequently determine whether Australian pharmacy practice indicates the need for guidelines similar to those provided for 'pharmacy only' (S2) and 'pharmacist only' (S3) medicines.

Methods: A covert simulated patient was used to investigate the response of pharmacists to a request for a natural product for stress. The SPs documented the details of the pharmacist-simulated patient interaction immediately on leaving the pharmacy and then re-entered the pharmacy to debrief the pharmacist. The quality of the interaction was scored as a Total CARE (check, assess, respond, explain) Score, based on anticipated questions and counselling advice. The appropriateness of the product was scored as a Product Efficacy Score, based on evidence-based literature.

Results: Data from 100 pharmacies was provided. Information gathering illustrated by the questioning components Check and Assess (C and A) of the total CARE score by pharmacists was poor. The number of questions asked ranged from zero (13 pharmacists) to 7 (four pharmacists), the average being 3.1 (SD 1.9). Provision of advice was generally better (a description of the suggested product was offered by 87 pharmacists) but was lacking in other areas (duration of use and side effects were explained by only 41 and 16 pharmacists respectively). The most common product suggested was B-group vitamins (57 pharmacists) followed by a proprietary flower essence product (19 pharmacists). A two-step cluster analysis revealed two sub-groups of pharmacists: one cluster (74 pharmacists) with a high Total CARE score provided an appropriate product. The other cluster (20 pharmacists) had a low total CARE score and provided an inappropriate product.

Conclusions: The pharmacy visits revealed major shortcomings in questioning, counselling and product recommendation. There is a need to develop guidelines for pharmacists to make evidence-based decisions in recommending complementary and alternative medicine.

Keywords

Complementary Therapies; Nonprescription Drugs; Counseling; Mental Health; Pharmacies; Pharmacists; Patient Simulation; Cluster Analysis; Australia

INTRODUCTION

Stress is a major issue for the global population. Stress has been described by the American Psychological Society as any uncomfortable 'emotional experience accompanied by predictable biochemical, physiological and behavioural

changes'.¹ Whilst a moderate amount of stress is an assistance in challenging situations excessive or prolonged stress can contribute to a wide range of adverse health conditions including depression and heart disease.²⁻⁴ The International Classification of Diseases, 11th edition, (ICD-11), includes 'disorders specifically associated with stress', noting that 'stressful events for some disorders in this grouping are within the normal range of life experiences'.⁵ Recently the National Institute of Mental Health (NIMH) published the Research Domain Criteria (RDoC) which provides a 'complementary' classification to the Diagnostic and Statistical Manual of Mental Disorders, 5th edition (DSM-5) and includes 'behavioral dimensions and neurobiological measures'.^{6,7} This expanded view has led to better understanding of the role of stress in the fields of post-traumatic stress disorder (PTSD), panic and anxiety disorders.^{6,8-10} The RDoC approach also calls for the inclusion of 'sub-threshold levels of pathology' a practice described as using a 'rich and robust' approach to 'mental health and stress' adding to 'the continuum of data'.¹¹

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These ongoing advances highlight the importance of the appropriate treatment of stress.

Pharmacy customers often choose to self-treat stress using over-the-counter (OTC) products and are likely to rely on the advice of the pharmacist. Pharmacists are considered trustworthy in Australia as illustrated in a recent Roy Morgan Research (2017) survey which ranked pharmacy as the third most trustworthy profession with 84% of respondents reporting pharmacists as both trustworthy and ethical.¹² Consequently, the consumer is likely to expect an appropriate level of questioning and the provision of evidence-based advice during interactions with the pharmacist.

Currently, OTC products for stress are usually complementary and alternative medicines (CAMs), a modality shown to be used by almost 70% of Australians in various forms.¹³ CAM use may involve considerable risks including those posed by the product itself or via an interaction with other medicines, particularly during self-treatment.¹⁴ This crucial aspect of patient safety highlights the importance of pharmacist-customer communication during the process of selection and purchase of complementary products. Currently no specific guidelines exist to assist the pharmacist in this area of practice.

Australia's peak pharmaceutical body, the Pharmaceutical Society of Australia (PSA), requires that 'a pharmacist must always promote the appropriate, safe and effective use of medicines' and 'provide current, relevant and evidence-based information'.¹⁵ To assist the pharmacist in the appropriate supply of medication in other areas termed 'Pharmacy Only' (S2) and 'Pharmacist Only' (S3) medicines, the PSA has published protocols such as CARER (check, assess, respond, explain, record) however no similar protocols exist for complementary and alternative medicines (CAM).

The purpose of this study was twofold. First, the study aimed to assess the pharmacist-customer interaction in relation to the quality of the information gathering (questioning) and to determine whether advice (counselling) given to patients intending to purchase CAM for stress was 'current, relevant and evidence based'. Second, the study aimed to assess the appropriateness of the product supplied. Consequently, the study may be used to inform decisions regarding current Australian pharmacy practice and the need for CAM guidelines similar to those provided for S2 and S3 medicines.

METHODS

The simulated patient scenario

The study was conducted using a 'simulated patient' (SP) research model, a well-established tool in pharmacy research. Watson et al. found it to be a 'rigorous and robust method of measuring practice if used appropriately' and useful in the assessment of 'counselling and advice provision'.¹⁶ The method was chosen to assess pharmacists' responses when faced with a request for a CAM product for stress. Two analyses of the data are presented: a descriptive analysis of the statistics and the results of a

cluster analysis in which the relationship between the pharmacist-SP interaction and the efficacy of the suggested product is examined.

A simulated patient study was designed to assess the pharmacist-SP interaction in terms of the extent of information gathering (questioning), counselling and subsequent recommendations when presented with a patient requesting a natural product for stress. The research was carried out by five pharmacy students in their honour's year at RMIT University, Melbourne, with two male students tasked with obtaining consent and three female students acting as SPs. This was done to aid consistency and to accommodate the scenario which required the SP to be a female taking the oral contraceptive pill (OCP). Consent and data collection occurred between July and September, 2018. The pharmacist was supplied with an information sheet describing the simulated patient research and subsequently offered a consent form to sign. A suitable script was devised creating details such as the reason for the stress, the SP's social history and the brand of the OCP. Training and practice sessions were undertaken by the female SPs in a dedicated one hour session with one of the authors, senior teaching staff. The research was approved by the Human Research Ethics Committees of the two study institutions involved prior to commencement (Approval Numbers: HE18-103 and SEHAPP 30 -18).

Pharmacy selection

The number of participating pharmacies in this study was decided upon on the basis of a systematic review of fifty-six SP studies in pharmacies conducted between 1976 and 2005. The number of SP visits across these studies varied between 10 to over 5000 (median 112).¹⁶ A closer examination of these reviewed studies revealed that a target sample size approaching the median (112 pharmacies) would provide enough data for meaningful analysis. After gaining consent from 100 pharmacies of 217 visited, data collection was considered adequate and collection ceased in consideration of practical aspects of collection. This number of pharmacies (100) represents approximately 10% of pharmacies in the Melbourne metropolitan area across four pharmacy locations: street locations (74), shopping centres (17) and medical centres (9). Some pharmacies were deemed unsuitable because of potential conflicts of interest with the SP, defined as the SP or their research colleagues having current or past employment in a pharmacy, thus avoiding recognition of the SP. A spreadsheet was used to list pharmacies contacted and a colour coding system notated those pharmacies contacted, those offering consent or declining, and those successfully visited.

Data collection, recording and analysis

Prior to entering a pharmacy, the SP recorded the interaction number, the pharmacy location and their own name on a standardized data collection sheet. On entry to a pharmacy, the SP ensured that they were speaking to a pharmacist, and, if not, requested to do so. A request for a 'natural product for stress' was made, and on completion of the transaction, and after exiting the pharmacy, the SP completed the data sheet by notating aspects of the interaction. The data collected recorded key aspects of the

Protocol Category	Questions asked or counselling provided
Check (C)	How long have you had the symptoms for?
	Do you take any other medication?
	Do you have any other medical conditions?
	Are you pregnant or breastfeeding?
	Other questions asked by the pharmacist (e.g. the cause of the stress)
Assess (A)	What are the actual symptoms?
	How severe are the symptoms?
	Are you receiving treatment for this or any other condition?
Respond (R)	Efficacy of product(s) supplied
	Counselling points provided
	Referral
	Suggestion to use CBT
Explain (E)	Product description provided
	Mode of action explained
	Treatment expectations provided
	Duration of use suggested
	Dose suggested
	Side effects or lack of explained

pharmacist-SP communication such as questions about symptoms and other medications, product information and other counselling provided. On completion of this phase, the SP re-entered the pharmacy to reveal their identity and conduct a debriefing conversation with the pharmacist. The pharmacist was advised that the purpose of the research was to better understand the types of product recommendation by pharmacists and the information supplied. Each participant was offered an example of an appropriate pharmacist-patient interaction in hard copy form to be used for personal reflection and education (Online appendix).

Data from pharmacy visits were entered by the researchers into IBM SPSS vs. 24. A scoring system was devised to rate the outcomes of the pharmacist-SP interaction. The outcomes were specific to the pharmacist's questioning and counselling for the SP, and to the appropriateness of any products suggested. A designated score was then assigned to each of the outcomes.

Appropriate questions or counselling points offered by the pharmacist to the simulated patient during their encounter need to reflect the professional requirements. As no protocol exists for the provision of CAMs in pharmacy, a scoring system was devised based on the CARER (check,

Product	Major active ingredient(s)	Evidence cited in APF 24	Evidence cited in <i>Herbs & Natural Supplements</i>	Score
Adrenoplex®	Withania somnifera	Nil	Positive human studies	2
Anxiolift®	Withania somnifera	Nil	Positive human studies	2
Ashwagandha Root®	Withania somnifera	Nil	Positive human studies	2
Caruso's Anxiety Aid®	Passiflora incarnata	Nil	Positive human studies	2
Kava *	Piper methysticum	Positive human studies	Positive human studies	2
Magnesium*	Magnesium (salt unknown)	Nil	Nil	0
Melatonin*	Homeopathic	Nil	Nil	0
Multivitamin*	Vitamins / minerals	Nil	Nil	0
Neurofolin®	L-methylfolate calcium & Vitamin B12	Nil	Nil	0
No Doz®	Caffeine	Nil	Nil	0
ReDormin Forte®***	Valeriana off. (root) & Humulus lupulus (flower)	Nil	Nil & limited	0
Rescue Remedy®	Flower 'essences' ('energy')	Nil	Nil	0
RestoraCalm®	Passiflora incarnata	Nil	Positive human studies	2
Restavit®	Doxylamine succinate	Nil	Nil	0
Revitalix®	Lepidium meyenii	Nil	Nil	0
Rhodiola*	Rhodiola rosea	Nil	Positive human studies	2
Sedacalm®	Passiflora incarnata	Nil	Positive human studies	2
Seremind®	Silexan® (patented product from oil of <i>Lavendula angustifolia</i>)	Nil	Positive human studies	2
St. John's wort*	<i>Hypericum perforatum</i>	Nil	Nil	0
Thompson's Stress Manager®	Rhodiola rosea	Nil	Positive human studies	2
Valerian*	Valeriana officinalis	Nil	Limited human studies	1
Vitamin B Group***	B-Group Vitamins	Nil	Nil	2
Vitamin D*	Cholecalciferol	Nil	Nil	0
Vitascience Stress & Anxiety Release®	Rhodiola rosea Withania somnifera	Nil Nil	Positive human studies Positive human studies	2

*Brand not specified; **This formulation has positive human studies for insomnia therefore considered inappropriate in this context; *** Brand not specified, refer this text for evidence

Questions	Asked	Not Asked
How long have you had the symptoms for?	55	45
Actual symptoms? What are they?	77	23
How severe are the symptoms?	44	56
Are you receiving treatment for this or any other condition?	48	52
Are you on any other medication?	55	45
Do you have any other medical conditions?	22	78
Are you pregnant or breastfeeding?	8	92

assess, respond, explain, record) protocol provided by the Pharmaceutical Society of Australia and the Pharmacy Guild of Australia for the provision of 'Pharmacy Only' (S2) and 'Pharmacist Only' (S3) medicines. No requirement exists for recording of CAM sales, consequently each pharmacist's questions and comments were grouped into four categories, CARE (Table 1). One point was allocated for each question asked or advisory comment provided thereby providing a score for each category (check, assess, respond and explain) as well as a final score termed the 'Total CARE score'.

The appropriateness of the recommended products was based on monographs appearing in the Australian Pharmaceutical Formulary and Handbook, 24th Edition (APF 24) a text recommended by the Pharmaceutical Society of Australia.¹⁷ If the CAM product was not included in the APF, the reputable text edited by Braun and Cohen, Herbs & Natural Supplements was consulted.¹⁸ Products with the highest levels of evidence for stress or anxiety, disclosed in human trials, were allocated 2 points. Products with a low level of evidence from limited human data were allocated 1 point. No rating was allocated to products without evidence, such as homeopathic products and flower essences. The resultant score for each product is referred to as the Product Efficacy Score (Table 2). Information regarding products containing B-group vitamins as the predominant active ingredients was not available in the texts. This data was sought in current scientific literature. In consideration of the body of evidence available products containing B-group vitamins as the predominant active components were considered appropriate and scored with 2 points.¹⁹⁻²¹

Data was evaluated to provide descriptive statistics regarding consent, questioning, counselling, and product suggestion. A second analysis was undertaken to assess the relationship between the quality of the pharmacist-SP interaction as determined by the Total CARE Score, and the appropriateness of the product, as measured by the Product Efficacy Score. A two-step cluster analysis was conducted to determine the distribution of pharmacists with product recommendations. This type of analysis is an

Counselling advice provided	Count
Lifestyle advice	23
Discussion of evidence limitations	3
Discussion regarding other medication	3
Mindfulness	12
Cognitive Behavioural Therapy suggested	3
Referral	36
Trial and error nature of treatments	5

Counselling regarding product	Yes	No	Percentage
A product was suggested	94	6	94.0%
A description of the product was provided	87	7	92.6%
The mode of action was explained	52	42	55.3%
Treatment expectations were provided	50	44	53.2%
Duration of use was discussed	41	53	43.6%
Dosage was suggested	62	32	66.0%
Side effects (or lack) of were explained	16	78	17.0%

appropriate method when dealing with mixed continuous and categorical data.²² T-tests were used to determine whether or not the resultant clusters were significantly different from each other.

RESULTS

Of the 217 pharmacies approached, consent was obtained from 101. On 94 occasions the offer to participate was declined whilst 22 pharmacists suggested possible participation at a future date. No pharmacy withdrew consent upon learning that the SP interaction had taken place. One SP recognised staff in a previously consented pharmacy and therefore this pharmacy was excluded from the study, resulting in data from 100 pharmacies, a participation rate of 100 from 101 consenting pharmacies (99%).

Questioning by the pharmacist was anticipated to follow a similar pattern to that suggested for S2 and S3 medicines regarding issues such as symptom duration and severity and other patient well-being issues. Results are shown in Table 3. Just over half (55) of the pharmacists enquired about the duration of symptoms but almost a quarter (23) failed to clarify the patient's specific symptoms. Questioning about the SP's other medications occurred in only 55 pharmacist-SP interactions, and on only 22 occasions was the possibility of other medical conditions raised.

Oral contraceptive pill (OCP) use was disclosed through responses in the SP script if the pharmacist asked about other medications. Specific advice has been provided to pharmacists regarding interactions between St. John's wort and the OCP, however seven pharmacists chose to recommend St. John's wort, (contraindicated with concomitant OCP) even though on four occasions the SP alerted them to its use after being asked about 'other medications'; the other three pharmacists did not enquire about other medication.²³ Only eight pharmacists, enquired

Product	Count	Percentage
B-vitamin complex	57	39%
Bach Rescue Remedy®	27	19%
Valerian	8	6%
RestoraCalm®	8	6%
St. John's wort	7	5%
Seremind®	6	4%
Magnesium	5	3%
Anxiolift	4	3%
Other	23	16%
Total	145	

Number	Total	% pharmacists
1	52	55%
2	34	36%
3	6	6%
4	2	2%

about the pregnancy or breastfeeding status of the SP. No questions were asked by 13 pharmacists. Only 24 pharmacists asked five or more questions with the remaining 76 pharmacists asking between 0 and 4 questions.

Product information discussed by the pharmacist is shown in Table 4. Most (87) of the 94 pharmacists who recommended a product did describe the product to the patient. The suggested mode of action and appropriate dose was discussed in more than half the interactions. Of concern is that seven pharmacists chose not to describe the product (87 of the 94 pharmacists who suggested a product offered a description), just 41 pharmacists discussed duration of use and only 16 pharmacists discussed any possible side effects. Table 5 reveals the extent of extra counselling provided. Just over a third of pharmacists (36) suggested the SP should seek professional advice from a doctor, psychologist or psychiatrist. Only three pharmacists advised the SP that there was limited evidence for CAM in the treatment of stress. Lifestyle tips were offered by 23 pharmacists and 'mindfulness' was recommended on 12 occasions.

Table 6 provides a summary of the products suggested to the SPs with 24 different products suggested. As some pharmacists suggested multiple products, a total of 145 products were recorded. The most commonly suggested product (suggested by 57 pharmacists) was a vitamin B complex. Some products in this group included other minor ingredients marketed for stress relief. For example, some vitamin B complexes contained small, sub-therapeutic doses of anxiolytic herbs such as passionflower. Bach Rescue Remedy® was the second most commonly suggested product (27 pharmacists) representing almost one-fifth of products suggested. Other products recommended by more than one pharmacist included valerian (8 pharmacists), RestoraCalm® (8), St. John's wort (7) and Seremind® (6). The remaining products included magnesium, Anxiolift®, Restavit®, Adrenoplex®, a multivitamin, homeopathic melatonin, kava, Vitascience Stress & Anxiety Release®, vitamin D, Thompsons Stress Manager®, Sedacalm®, rhodiola extract, Revitalix®, ReDormin Forte®, No Doz®, Neurofolin®, Caruso's Anxiety Aid® and Ashwagandha root. Principal ingredients of these products, and related evidence is presented in Table 2. Of 24 products suggested, 11 are devoid of evidence for the treatment of stress.

As shown in Table 7, product recommendations ranged from a single product, on 52 occasions, to four products recommended on 2 occasions. The two most recommended products, Vitamin B complex and Bach Rescue Remedy® were the sole product recommendations on 26 and 10 occasions respectively.

A two-step cluster analysis was conducted to assess the relationship between the quality of the pharmacist-SP

interaction (Total CARE score) and the appropriateness of the product (Product Efficacy score). The range of the Total CARE Score was 3 to 17 and the Product Efficacy score was rated from zero to 2. The results suggested a two-cluster solution for pharmacist sub-groups: (a) those who recommended appropriate over-the-counter (OTC) natural medications for stress and (b) those who recommended inappropriate OTC medications for stress. The Total CARE Scores for the two groups were 9.72 (SD 3.28) and 6.67 (SD 2.58) (2 tailed, p=0.000). Cluster 1 was formed by 74 pharmacists who recommended a product which had a Product Efficacy score of 2. Cluster 2 contained 20 participants (Product Efficacy score zero or 1). The six pharmacists who did not recommend a product were excluded for this analysis.

DISCUSSION

This simulated patient study revealed unsatisfactory outcomes across several areas of pharmacy practice in the participating community pharmacies. Although no official protocol exists for the provision of CAMs, pharmacists are nonetheless bound by the professional practice requirements relating to the provision of all non-prescription medicines. These require the pharmacist to follow a 'systematic process for gathering patient information, determining the severity of patient condition(s), and discussing potential solutions and points of referral' and to 'provide advice to optimise use'.¹⁵ Shortcomings in meeting these standards were evident in three key areas: information gathering (questioning), counselling and the appropriateness of the selected product.

Suitable questioning to satisfy pharmacy practice requirements was lacking. For instance only 55 pharmacists enquired about duration of symptoms and even fewer (44) asked about severity. A practice point in fulfilling the practice standards states that the pharmacist should assess 'risks and benefits' of the medicine. The risks of using CAM, including herb-drug interactions, are well documented yet questions relating to other medications or medical conditions were asked by only 55 and 22 pharmacists respectively.²⁴

The SPs were clearly of reproductive age however only eight pharmacists enquired about pregnancy and breastfeeding, and four pharmacists incorrectly recommended the contra-indicated herb St. John's wort. The significance of failing to enquire about pregnancy is highlighted by the fact that, of the suggested products which contained herbs, no herb was found to be considered totally safe in pregnancy, sometimes because of lack of data and on other occasions due to specific concerns.^{17,18} Data for safety in breastfeeding was also lacking.

Based on comparisons with protocols for S2 and S3 medications such as the CARER protocol, seven questions relating to therapeutic need and safety were considered essential. Only 24 pharmacists asked five or more questions, the average being 3.1 (SD 1.9). The failure to ask

any questions by 13 pharmacists is disturbing as it reveals a clear breach of the professional practice standards.

Overall, provision of information by pharmacists was marginally better than questioning. One positive aspect was that more than a third of pharmacists suggested the SP seek advice from a doctor or mental health practitioner. However, findings regarding the explanation of mode of action, treatment expectations and duration of use indicate a need for improvement. These topics were addressed by only 52, 50 and 41 pharmacists respectively. Only 16 pharmacists discussed possible side effects. These findings indicate that the majority of pharmacists did not meet the requirement in the professional practice standards to 'confirm the patient understands when treatment is no longer appropriate'.¹⁵ Whilst some pharmacists offered lifestyle advice supported in scientific literature or endorsed by reputable consumer resources such as Better Health Channel, the numbers were disappointingly low at 23, indicating a poor application of professional guidelines which require pharmacists to 'provide evidence-based lifestyle management choices'.^{15,25,26}

The professional practice standards also require that the pharmacist 'selects and recommends the most appropriate non-prescription medicine'. Given that products which may be suitable for stress are formulated and labelled as such, the prerequisite knowledge for selection is significantly reduced. It is therefore worrisome that only 12 of the 24 products recommended were considered appropriate, notwithstanding that some inappropriate products may have been labelled as stress treatments.

Poor product choices included:

- Rescue Remedy® and homeopathic melatonin, neither containing pharmacologically active molecules, recommended by 27 and two pharmacists respectively
- St. John's wort: St. John's wort and concurrent use of the OCP should be avoided, (or additional non-hormonal contraception used including for 4 weeks after stopping St. John's wort): breakthrough bleeding and contraceptive failure has been reported due to an induction of CYP450 enzymes by St. John's wort (recommended by seven pharmacists).¹⁷
- No Doz®: a caffeine containing stimulant. Caffeine was shown to be likely associated with stress, anxiety and depression in high school students and as 'best avoided' in people with anxiety (recommended by one pharmacist).^{27,28}

A disturbing finding is the choice of Bach Rescue Remedy® by 27 pharmacists, representing the second most recommended product. Bach Flower Remedies, also referred to as flower essences, are produced by placing fresh flowers in water yielding a 'mother tincture' which is then preserved with brandy. Flower remedies do not contain pharmacologically relevant amounts of the flowers from which they originated and thus have similarities to homeopathic medicines although are not classed as such.²⁹ It is claimed that flower essences, which are used in drop doses, owe their activity not to any molecular or

pharmacological mechanism, but to the 'energy' transmitted from the flowers.

Equally worrying is that of the seven pharmacists who recommended St. John's wort, three did not inquire about other medications. This illustrates an alarming ignorance of many possible herb-drug interactions. Notwithstanding that many of these interactions are widely reported in community pharmacy publications, the Australian Pharmaceutical Formulary provides a list, described as 'not exhaustive', of 30 classes of drugs or individual drugs with 'potential interactions'. To the other four pharmacists (recommending St. John's wort) who did inquire about 'other medication' (a question expected to be asked) the SPs reply was 'yes, the oral contraceptive pill': a reply which should have indicated a change of recommendation but did not.

The two-step cluster analysis revealed a significant association between groups of pharmacists based on their Total CARE Score and Product Efficacy Score. Pharmacists fell into two clusters. The significantly different clusters showed that those pharmacists (74) who recommended an appropriate product had also engaged in a well conducted interaction with the SP. Conversely, 20 pharmacists exhibited a poor pharmacist-SP interaction and had recommended a product with no, or limited efficacy. The majority of these products (11) had an efficacy score of zero, with one product scoring 1. This association cannot be said to be causative, however it is unsurprising that those pharmacists who had conducted poor questioning and counselling also recommended a product with limited or no effectiveness. Conversely, a more thorough pharmacist-SP interaction was associated with an appropriate product choice.

Professional pharmacy practice standards require pharmacists to provide assessment, advice and product selection in a manner that 'meets best practice expectations'.¹⁵ Specifically in relation to CAM, pharmacists are advised to 'provide the same level of evidence-based advice' as for other medicines, to be 'aware of evidence to support safety and efficacy claims' and to recognise potential interactions with conventional pharmacotherapy or other CAMs.¹⁷ Stress is an important mental health issue. Pharmacists are often the first-line health practitioner accessed by members of the public undergoing stress. To provide optimum patient-centred care consistent with professional practice standards, pharmacists must be aware of their responsibilities in communication with customers so that a high level of information gathering, counselling and product selection or referral is provided. This study demonstrates that this is not the case for the Melbourne pharmacists visited. The shortcomings displayed in this study indicate the necessity for guidance in the form of CAM guidelines similar to those provided for 'pharmacy only' (S2) and 'pharmacist only' (S3) products as well as the provision of better CAM education for mental health and by extension for other areas of health and well-being. The development of guidelines by pharmacy authorities and appropriate curriculum development are recommended.

Limitations

Limitations of this study include first, the collection of data from a representative sample of pharmacies only within Melbourne, Australia. Secondly, pharmacists consented prior to the pharmacist-SP interaction and may have changed their behaviour. Given the findings of the study, this second limitation appears to have had very little impact.

CONCLUSIONS

This study illustrates deficiencies in the correct application of professional practice standards required of pharmacists in the provision of CAM for stress in three areas: information gathering (questioning), counselling and appropriate product selection. Whilst results across the 100 pharmacists were varied, basic standards were not met by significant numbers. For example, basic questions regarding symptom duration and severity were asked by only 55 and 44 pharmacists respectively. Alarming, only eight pharmacists enquired about pregnancy and breastfeeding. Counselling was also poor. Three key areas of advice, mode

of action, treatment expectations and duration of use were addressed by only 52, 50 and 41 pharmacists respectively. Of the 24 products suggested, only 12 could be considered appropriate. Illustrative of the poor product selection is that on 27 occasions pharmacists recommended a flower essence remedy which has no pharmacological activity. These three areas of pharmacist-SP interaction (questioning, counselling and product selection) are basic but important areas that demand thorough application of pharmacy standards and clearly this was not the case in this study. Further analysis of the data revealed that those pharmacists who scored poorly in the areas of information gathering and counselling also recommended inappropriate products.

CONFLICT OF INTEREST

None declared.

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