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ORIGINAL RESEARCH ARTICLE

Investigating Patient Perspectives on Medical Returns and Buying Medicines Online in Two Communities in Melbourne, Australia: Results from a Qualitative Study

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Abstract

Aims By going online or overseas, patients can purchase a range of prescription and over-the-counter drugs and complementary and alternative medicine (CAM), without prescription and without input from a qualified health professional. Such practices raise questions about medicine safety and how and why patients choose to procure medicines using such methods. The aim of this paper is to examine two unconventional types of medicine procurement—medical returns and purchasing medicines online—from the patient perspective.

Methods Data are drawn from a large qualitative study examining health-seeking practices among Indian-Australians (28) and Anglo-Australians (30) living with depression in Melbourne, Australia. Semi-structured face-to-face interviews were undertaken. Thematic analysis was performed.

Findings A total of 23 (39.6 %) participants reported having obtained medicines either through the internet or via medical returns. Indian-Australians sourced medicines from India while Anglo-Australians purchased CAM products from domestic and international e-pharmacies. Neither group encountered any difficulties in the medicines entering Australia. Cost and convenience were the main reasons for buying medicines online but dissatisfaction with Australian health services also influenced why Indian-Australians sought medicines from India. Nearly all participants reported benefits from consuming these medicines; only one person reported adverse effects.

Conclusion The increased availability of medicines transnationally and patients' preparedness to procure these medicines from a range of sources raise important issues for the safe use of medicines. Further research is needed to understand how patients forge their own transnational therapeutic regimes, understand and manage their levels of risk in relation to safe medicine use and what points of intervention might be most effective to promote safe medicine use.

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Key Points for Decision Makers

Little has been written from the patient perspective on medication procurement via unconventional channels such as going overseas or online sourcing. Addressing this gap, this study examines two unconventional types of medicine procurement: medical returns and purchasing medicines online.

Results show that how patients procure medicines differs according to the practice being examined: those who bought medicines online rarely involved others in their health seeking, while those who made medical returns opportunistically used family and friends to obtain medicines from India. Cost and convenience were the main reasons for unconventional medication procurement. Dissatisfaction with the Australian healthcare system also influenced why Indian-Australians procured medicines from India. High levels of satisfaction with medications procured via unconventional channels were reported by nearly all patients; only one person experienced an adverse effect.

Patient procurement of medicines from unconventional sources is an emerging phenomenon that warrants further study. Research is needed to understand how patients forge their own transnational therapeutic regimes, understand and manage their levels of risk in relation to safe medicine use and what points of intervention might be most effective to promote safe medicine use.

1 Introduction

Globalisation, migration and increased cross-border flows of people, services and products (including medicines, medical knowledge and medical technologies) have significantly changed the way in which many patients conceive and procure medicines [1, 2]. By going online or overseas, patients can access, self-select and buy a range of prescription and over-the-counter drugs and complementary and alternative medicine (CAM), without necessarily obtaining a prescription or indeed any input from a qualified health professional. These purchases may be made via domestic or international e-pharmacies, at overseas destinations and/or by patients asking their relatives and friends to buy and transport medicines for them. Such types of procurement methods are unconventional and differ from traditional procurement practices wherein medicines are obtained from a pharmacy, either over the counter or with a prescription, usually with some advice from a pharmacist or qualified health professional. Obtaining medicines through unconventional means, such as buying medicines online or asking relatives and friends to buy and carry medicines, raises a number of important questions: How safe is it to procure medicines through these unconventional methods? Why do patients choose to procure medicines using such methods? How are the legitimacy of these medicines determined? And what benefits do patients derive from consuming these medicines?

Until now, much of the literature examining unconventional methods of medicine procurement have focused on a singular method of procurement (e.g. via e-pharmacies) and/or as part of a larger practice of transnational health seeking (e.g. medicines may be bought alongside purchasing surgery or treatments overseas). However, the increased availability of diverse medical treatments coupled with patients' increased preparedness to try a range of medicines, necessitate an examination of multiple practices of medicine procurement. Such an exploration will facilitate an understanding of the specific rationales for how patients engage in different practices and when and why one form of procurement is preferred over another. Accordingly, the aim of this paper is to examine two types of unconventional methods of medicine procurement—medical returns and purchasing medicines online—from the patient perspective.

Medical returns, a term coined by Sarah Horton [3], refers to immigrants who temporarily return to their homelands for the express purpose of seeking healthcare. Research shows that medical returns typically occur because migrants are dissatisfied with health services in their countries of settlement, more culturally familiar with health services in their countries of origin and are able to leverage their economic prosperity (as a result of migration) into purchasing better health services 'back home' [4–6]. Cost and convenience are also common reasons for medical returns [7–9] as well as for online medicine purchases [10, 11]. However, the literature on patient decision making regarding these two procurement practices is sparse; for example, much of the evidence for why patients might buy medicines online is derived from either population-level surveys or individual clinical case studies originating mainly in the USA, UK and Europe, with few studies actually exploring this issue with patients [12]. Addressing this gap through qualitative data will yield valuable insights into patient procurement of medicines and better understandings of medicine safety vis-à-vis unconventional methods such as e-pharmacies and medical returns.

2 Methods

Findings for this paper come from a large qualitative study that examined the perspectives of Indian-Australians and

Anglo-Australians on depression and health seeking in Melbourne, Australia. Indian-Australians were defined as either first- or second-generation migrants from India who had settled in Australia; Anglo-Australians were defined as individuals of Anglo-Saxon and Celtic heritage who had been born and raised in Australia. The former were selected because they represent the fastest growing immigrant population in Australia and the latter because they represent the majority population in Australia [13].

Multiple methods were used to collect data: 58 semi-structured interviews were undertaken with individuals with depression and ten focus group discussions were held with community members from the Indian- and Anglo-Australian communities. In this paper, only the data from interviews with people with depression are presented. Focusing the fieldwork upon interviewing people with depression allowed an exploration of the meanings and intricacies of individuals' experiences and motivations, intentions and logics of behaviour in a way that helped us to understand the meanings participants ascribed to particular phenomena and practices in context [14].

2.1 Recruitment

Following ethics approval from Monash University Human Research Ethics Committee, advertisements of the study were placed in community centres, local libraries, religious centres, universities and receptions in health clinics. Electronic versions of the advertisements were distributed to a number of local government and community organisations to disseminate via e-newsletters and were also placed on local e-classifieds and other websites (e.g. community Facebook pages). The research team also made presentations to various community groups (e.g. women's groups, religious associations and sporting clubs).

Individuals interested in participating in the study were invited to contact the researchers. To be included, participants had to confirm they were a member of either the Indian- or Anglo-Australian community, proficient in English, be 18 years of age or over, as an adult have received a diagnosis of depression by a qualified health professional (e.g. general practitioner, psychiatrist or psychologist), be currently receiving biomedical treatment and have used or be using one or more CAM for their depression. Individuals who were pregnant, substance dependent, disabled, or had a history of severe head injury or neurological disease were excluded from the study.

Approximately 6 months into our data collection we encountered a small number of participants ($n = 6$) from the Indian-Australian community who had neither been professionally diagnosed with depression nor were under current biomedical management for depression. Nevertheless, these individuals felt that they had depression, self-selected to participate in our study, were self-medicating and had obtained medicines in a variety of ways, including via medical returns and buying medicines online. To capture these individuals' experiences, we revised two inclusion criteria: these six undiagnosed participants had to obtain a score of five or more on the Diagnostic and Statistical Manual (DSM) Depression Checklist [15] and a score of $\geq$16 on the Kessler Psychological Distress Scale (K10) [16]. These scores reflect standard assessments for medium to high risk for depression and are widely used in Australian healthcare settings (especially the K10). These individuals were encouraged by the research team to seek help from a qualified medical doctor and provided with contact information about relevant help organizations.

Other individuals with depression who were diagnosed by a qualified health professional were also screened using the DSM and K10 checklists, but their scores were not used as a basis for exclusion. In this way, we managed to capture diverse data ranging from individuals who had mild depressive symptoms as a result of ongoing treatment and/or recovery to those individuals with high scores either as a result of severe illness, non-treatment and/or other factors.

2.2 Procedure

Participants were purposively sampled based upon gender, age, income, the severity of their depression and experiences with biomedical and CAM products to capture a diversity of views and circumstances (see Table 1). Recruitment of participants continued until data saturation was reached. A total of 58 people with depression (30 Anglo-Australians and 28 Indian-Australians) were interviewed.

Data were collected between May 2012 and May 2013. Interviews were conducted by the first and second author. Each interview lasted between 45 and 60 min. Reflecting the average Australian hourly wage, participants received a $40 gift voucher for their time [17]. Interview questions were designed based on a review of the literature on culture, migration and mental health seeking; participants were asked questions such as how they were feeling, their views about the care they had received, barriers to health seeking, use of biomedical and CAM treatments, the effects of these treatments, sources of medicine procurement and experiences of stigma (see Table 2). The clarity of the questions being asked was checked by consulting with the Indian- and Anglo-Australian communities prior to data collection.

2.3 Data Analysis

All interviews were digitally recorded and transcribed verbatim, then cross-checked for transcription accuracy and data quality. Data were de-identified and participants assigned pseudonyms. Thematic analysis was conducted to extract overarching themes to capture underpinning

Table 1 Socio-demographic characteristics of interview participants ($n = 58$)

	Anglo-Australians (30 [51.7 %])	Indian-Australians (28 [48.3 %])
Mean age, years (SD)	40.9 (15.9)	38.3 (15.8)
Gender		
Male	10 (33.3)	13 (46.4)
Female	20 (66.7)	15 (53.6)
Religion[a]		
Christian	10 (33.3)	3 (11.1)
Hindu	–	18 (66.7)
Muslim	–	1 (3.7)
Atheist/agnostic	18 (60)	2 (7.4)
Other	2 (6.6)	3 (11.1)
Mean years lived in Australia (SD)	39.5 (16.8)	9.9 (9.28)
Languages spoken at home[b]		
English	30 (100)	19 (67.9)
Hindi	–	14 (50)
Punjabi	–	6 (21.4)
Malayalam	–	1 (3.6)
Tamil	–	3 (10.7)
Employment status		
Full time	7 (23.3)	11 (39.3)
Part time	8 (26.7)	5 (17.9)
Casual	5 (16.7)	2 (7.1)
Unemployed	10 (33.3)	10 (35.7)
Weekly income		
<$300	7 (23.3)	7 (25.9)
$300–600	10 (33.3)	7 (25.9)
$600–900	5 (16.7)	8 (29.6)
$900–1,500	5 (16.7)	4 (14.8)
>$1,500	3 (10)	1 (3.7)
Weekly expenditure		
<$660	17 (56.7)	17 (60.7)
$660–1,000	6 (20)	7 (25)
$1,000–1,200	3 (10)	2 (7.1)
$1,200–1,500	3 (10)	1 (3.6)
>$1,500	1 (3.3)	1 (3.6)
Diagnosed with depression		
Yes	30 (100)	22 (78.6)
No	–	6 (21.4)
Mean DSM score (SD)	4.4 (2.5)	5.7 (2.1)
Mean K10 score (SD)	24.3 (8.9)	29.0 (7.0)

Data are presented as *n* (%) unless otherwise indicated

SD standard deviation

[a] One entry missing from one Indian-Australian

[b] Percentages for Indian-Australians are more than 100 because participants spoke more than one language at home

Table 2 Examples of questions in the interview guide

When did you decide to seek help? Tell me about the process of diagnosis
Tell me about the care that you have received to date?
Are there any barriers to your seeking healthcare?
What do you think about biomedical/CAM/treatments?
What kinds of pharmaceutical medicines/CAM/have you taken for your depression?
How do you access these medicines?
Have you ever used the internet as part of your health seeking?

meanings [18]. A total of 24 (ten Anglo-Australian; 14 Indian-Australian) interviews were read by the first author to become more familiar with the data and to generate a series of initial codes by coding the data line by line. These codes were then cross-checked by an independent colleague and interpretive differences were resolved by consensus. Subsequently, a revised set of codes were created, collated into thematic clusters and the entire data set (including the initial 24 transcripts) were analysed according to the new themes. A third and final round of coding was undertaken to review the themes, ensure inclusion of any new codes identified during the second round of coding and to further refine and name themes. Thus, three rounds of coding took place before all the data were imported into NVivo for further analysis and data management. Constant comparison across the data and memo writing were used to facilitate the process [19]. This iterative procedure ensured consistency and clarity in views with regards to the underlying meaning of the data. For this paper, only those themes related to unconventional methods of medicine procurement have been described.

3 Findings

Just under half of the participants said that they had searched for information regarding their depression on the internet (Anglo-Australians 13; Indian-Australians 15), specifically: symptoms of depression, types of medications available, side effects of medication, various health services and techniques to promote relaxation and stress reduction. Most participants found the internet informative and helpful, though a few were circumspect:

> "I do a lot of searching on the internet about it [depression]. And I think I understand the condition; that's why I volunteered for this [study]" (Lynette, f, 74 years, Anglo, K10 = 20).

> "Whenever I hit some kind of a rock bottom level, that's the only friend [internet] you have. But it even

confuses you a bit, it scares you. Definitely I haven't found internet making you feel comfortable. No it scares you" (Amir, m, 35 years, Indian, K10 = 40).

Of those who used the internet, six Anglo-Australians and two Indian-Australians said they also used the internet to purchase medicines online. Fifteen Indian-Australians explained that, while they did not purchase medicines online, they had obtained medicines and treatments through medical returns. In total, 23 (39.6 %) participants reported that they had obtained medicines through these two practices. Those who did not use the internet to purchase medicines cited reasons such as having not contemplated such an option, a fear of credit card theft, fear of buying adulterated or fake products, lack of trust in the information available via the internet, trust in their health provider and preferring to only consume medicines on advice from a qualified health professional.

Analyses of the 23 interviews where participants reported they had obtained medicines either through the internet or medical returns identified (1) from where participants sourced medicines; (2) how these medicines entered into Australia; (3) participants' rationales to explain why medicines were sought transnationally rather than locally; (4) how participants determined the legitimacy of CAM bought online; and (5) what benefits the participants perceived from consuming these medicines.

3.1 From Where are the Medicines Sourced?

When asked from where they sourced medicines, 16 Indian-Australians (including one participant who also bought medicines online) said their medicines were obtained from India. The types of medicines sourced included biomedical and CAM for depression as well as other conditions such as colds, flus, sinusitis, vitamin deficiencies and liver diseases. Participants described obtaining these medicines in India through their family doctors, clinical specialists and traditional healers with whom they had an ongoing medical relationship or from whom they had sought help for the first time.

"Yeah probably word-of-mouth people. Because people would talk about these things and I wondered if this [CAM for depression] could also help my problem and I just decided to explore that" (Pragya, f, 27 years, Indian, K10 = 33).

"It [medicine for depression] was all like prescribed from the doctor I used to go to … so the doctor kind of knew and he was a family doctor" (Zeenat, f, 24 years, Indian, K10 = 32).

Medical returns as described in the literature matched how participants in this study perceived such activity. Returning home was seen by participants as a therapeutic journey, which included not just seeking medical care for their depression but also 'getting away' from a stressful environment:

"The purpose of travelling to India was not purely, actually only for the sake of treatment … Partially, it was also to do with changing the scene and the environment a bit, for some time, just to get away from everything here. Part of it was also to do with sort of visiting grandparents and a family visit … when you say treatment, it's very hard to isolate treatment from other things" (Sumant, m, 31 years, Indian, K10 = 33).

Those who could not return home were prepared to have medicines from India brought to them and opportunistically involved family and friends in this process. Some participants, like Amir, asked for particular medicines to aid in managing their depression while others provided very basic descriptions of what they wanted, trusting their family and friends to correctly identify and procure the right medicines:

"I've heard a lot about *Brahmi* and Liv52 so that's why I take it. It's a blind belief that it works … I can ask anyone who is coming from India to get it for me and they will get it" (Amir, m, 35 years, Indian, K10 = 40).

"If somebody, if they're coming over, I just ask and say, 'Look, you know, get me something, you know … to relax my mind a little bit.' Things like that" (Vir, m, 43 years, Indian, K10 = 24).

In contrast, those who sought help online for their depression did not involve others in their health seeking, viewing it as a solitary endeavor. Close family and friends were rarely told about purchasing a medicine online. Typically, participants explained that the interview was the first time they had disclosed this information to someone else. For example, Olivia (f, 19 years, Anglo, K10 = 30) said:

"There are some things that I would only have a look up on the internet and I would never discuss it with people."

Participants described sourcing medicines from websites in China, the US, Singapore and within Australia. Most could not recall specific websites or key search terms used, describing how they often searched on Google or on online patient blogs:

"Basically I had Googled the name … I had Googled that, and that [website] came up as number one. So I

went on there, and yeah, had a look at it, and [you can] make it to PayPal, and I paid the PayPal. But there was nothing that made it [website] stand out" (Georgia, f, 28 years, Anglo, K10 = 18).

"I was reading about a girl, she's in the UK somewhere, and she was taking this Chinese herb [for depression and anxiety] and so I ordered it online and yeah, I took that too" (Jennifer, f, 31 years, Anglo, K10 = 28).

3.2 How do Medicines Enter into Australia?

Procuring medicines transnationally raises questions about how such medicines, which may include prescription medicines or banned substances, cross national borders. According to Australian Customs and Border Protection Services [20] all prescription medicines, banned substances and/or CAM medicines that may contain plant or animal products need to be declared on arrival. In addition, no more than 3 months' medicine supply may be brought in at any one time. These rules are supposed to be strictly enforced and there are severe penalties for those who are found to be breeching them.

Participants who transported medicines from India to Australia explained that they always declared their medicines and carried a prescription, thus encountering no difficulties. None mentioned that they had experienced any difficulties in India to secure a prescription or that their medicine supplies had ever been checked by customs officers at the airport. Zeenat (f, 24 years, Indian, K10 = 32), who said she suffered from depression and panic attacks that left her feeling breathless, describes how she brought in a large supply of Adipine® (Nifedipine) to lower her blood pressure:

"I'm supposed to declare them. Once I declare them I don't have any problem to get it over here. Because it's all declared and I had prescriptions for it so it isn't a problem.

Bianca: Okay was it easy to get the prescriptions from India for them?

He [doctor] kind of also knew what kind of problem I'm going through so he prescribed Adipine® and I told him I'm going overseas so he gave me a big number of it so I just got them easily."

More ambiguous practices for how medicines arrived in Australia were outlined by participants who purchased medicines online. Jennifer (f, 31 years, Anglo, K10 = 28), who purchased a herbal pill from China for her depression, said there were incongruities between what was on her consignment description and what was actually contained in the package:

"On the consignment note I remember because I was like, 'That's weird, they put paperwork' because obviously I have to clear what's in the box and I was like, 'Oh that's really weird that they've written paperwork and they've got the bottle of pills in there,' so I was a bit dubious of that but still gave it a whirl".

On the other hand, Clifford (m, 29 years, Indian, K10 = 16), who purchased a number of proteins and vitamins from a US website, explained that the website would not ship any products to Australia if it was banned:

"They will tell you if it is banned from Australia, so they will not even ship it. So even though the responsibility is on me, the only thing I have had rejected is toothpaste because it had xylitol, which is a sweetener".

However, Clifford also said that he tended to order in bulk (up to 4 months' supply at a time) and had never faced any restrictions about the quantity he was purchasing online:

Bianca: "Have you ever been approached by any sort of the agencies where these sorts of things will go through, like postal services, customs?

No. I do not think that is a normal practice … No, never had any [questions]. No drama."

3.3 Why do Patients Procure Medicines Using Unconventional Methods?

Unlike Indian-Australians who obtained medicines from India for numerous health conditions, including depression, participants who went online only described purchasing medicines in order to minimise the symptoms of their depression and/or the side effects of anti-depressant medications (e.g. feeling tired, lethargic, overly sleepy, anxious, having difficulty sleeping).

"It [herbal relaxation pills] was meant to have more of I suppose a calming effect. And also to help me [with] sleeping because … a while ago when I was not sleeping great, I was having a lot of nightmares, it was pretty strange. (Later in the interview)… I took it basically to help just, yeah, to help calm my mood and everything" (Georgia, f, 28 years, Anglo, K10 = 18).

All online purchases were made only for CAM products, usually vitamins, minerals and herbal pills. These CAM products were purchased to improve sleep, improve skin, increase energy, increase virility and promote relaxation. Participants explained they bought CAM products online because in conventional pharmacies and health food stores

they were expensive, difficult to obtain, with no guarantee that the stock would be carried and in sufficient quantities. One reason why participants may not have purchased biomedical medicines online could be because in Australia, most biomedical medicines are heavily subsidised on the national Pharmaceutical Benefits Scheme (PBS), thus making them relatively cheap and easy to access. Participants who purchased CAM online described how they were appreciative that the medicines arrived within 2 to 4 days, were low cost and easy to obtain:

> "They [website] have everything for any symptoms, it is from America and it is really cheap. Usually I find that if I go into health food stores and all of that, the price of a lot [of] medication is quite expensive for exactly the same thing which you can get from America for half the price and sometimes a quarter of the price" (Clifford, m, 29 years, Indian, K10 = 16).

Participants who purchased medicines from India also said there was greater availability of CAM and traditional medicines in India and that they were cheaper to procure there. The rationale of these participants for buying medicines from India, like those who purchased medicines online, centred on practical considerations to do with cost, access and convenience. Interestingly, none of these participants talked about these medicines as products with which they were more culturally familiar.

Indian-Australian participants also cited cost as a barrier to purchasing biomedical medicines in Australia. Abha Rastogi (f, 32 years, Indian, K10 = 32) recalled how as a student she did not have access to the nationally funded Medicare scheme (to access subsidised healthcare) or the PBS (to access subsidised medicines). Instead she asked her father to refill her prescription with her psychiatrist in India and then send the medicines to her:

> "When I was here on student visa, I was on private insurance. And that didn't cover all these things … That's why I had to get medicines from India and was still calling my psychiatrist back in India and getting [medicines] … Now, I have applied for my permanent residency, I've got Medicare. With that, things have changed. Initially, like I was really scared to go to a doctor because that might cost me, which I can't afford but now, it's really, really helpful".

However, access to Medicare and the PBS did not mitigate procuring medicines from India and Indian-Australians said they encountered additional barriers to health seeking from Australian providers and services, which prompted them to seek medicines from India. Barriers included not receiving a desired prescription, feeling like too little time was spent with doctors, long waiting times to obtain an appointment and the lack of fully subsidised coverage for a number of mental health services.

> "Of course it's [cost] been an issue because it's like only the things that are officially covered are the prescription medications, which are on the PBS and whatever it was 10 or 12 or 14 sessions with a psychologist, and even that was I think only partially rebated … [so] how much of it is covered? Or how do you get it covered? Is it better to take it here or is it better to actually take it in India?" (Sumant, m, 31 years, Indian, K10 = 33).

> "I might be tempted in Australia [to buy medication online] but in India it's not like a big deal to get medications. So in Australia, since you just can't see a doctor, you might just get tempted to, you know, self-diagnose yourself and try different combinations" (Dhruv, m, 26 years, Indian, K10 = 19).

Those who did visit doctors in Australia usually had contingencies. For example, Nitish Yadav (m, 26 years, Indian, K10 = 32) went to his doctor to obtain antidepressants and sleeping pills but instead was referred to a psychiatrist. While he was satisfied with not receiving antidepressants, he explained he did want medication to help him sleep. On not receiving his desired prescription, Nitish asked a friend to transport sleeping pills for him from India:

> "I was also looking for some sort of medicine from him [general practitioner] but he didn't give it to me because as I told you he told me that I do this thing [go and see a psychiatrist first]. But sometimes I do take Alprax® (Alprazolam) because … I take because I can't sleep sometimes".

3.4 How do Patients Determine the Legitimacy of CAM?

While cost and convenience were reasons for procuring medicines overall, the rationale for pursuing CAM medicines in particular was because participants tended to view these products as 'natural' and therefore less harmful.

> "I think if I could switch to herbal … because it seems more natural, I would probably do it … it's [antidepressant medication] artificial, so you don't really know what it's doing" (Adam, m, 33 years, Australia, K10 = 15).

Participants described that when the medicines were received by them they often appeared similar to pharmaceutical medicines with safety seals and labels. Such packaging often reassured participants that these medicines

were legitimate and safe. For example, Jennifer could not read the label on her herbal pills package because it was in Chinese. Nevertheless she opted to take the medicine because:

> "[It had] a blue and white box and it had the like, white bottle with a blue label on it inside and it had a, like silver, like, it's like a safety seal from the packets. It's like someone just put a safety seal for it. Yeah so, you know, it looked legit and it probably is".

By contrast, Indian-Australians did not conflate CAM products as being natural or exotic. Nor did the Indian-Australian participants discuss the packaging of their medicines in the interviews. Rather, they were more mixed in their opinions about particular CAM and their effectiveness:

> "I have a positive opinion for *āyurvedic* medicine. It's more natural. But with homeopathy, I don't have that feeling. It takes forever for a small treatment to go on" (Gauri, f, 25 years, Indian, K10 = 32).

Often, Indian-Australians based their preference for a particular medicine on the experiences and expertise of other family members and friends:

> "My wife is a *āyurvedic* doctor, so for me that's one. At the same time, it has helped a couple of my other family members as well. Those medications, that's how I trust them" (Amir, m, 35 years, Indian, K10 = 40).

> "I have a lot of my friends who are *āyurveda* doctors. So I read their books sometimes. I know how *āyurveda* has originated and what this whole idea is all about" (Shan, m, 30 years, Indian, K10 = 29).

3.5 What Benefits do Patients Perceive from Consuming these Medicines?

When asked about the perceived benefits of consuming medicines obtained either via medical returns or via e-pharmacies, most participants said that these medicines helped their depression. The participants cited improved sleep, better mood, more energy and improved sexual function as examples of positive outcomes.

> "Proof is in the pudding like anything … with Maca [root] there have been physical changes in sexual performances … I don't seem to have had any bad side effects" (Stephen, m, 62 years, Australian, K10 = 21).

> "I used to take them [biomedical medicines from India] at night. So, I used to have a good sleep. And then, in the morning, I was able to, you know, do my normal chores. But otherwise, I was really like feeling very low, no energy levels. And most of the time, I used to cry" (Abha, f, 32 years, Indian, K10 = 32).

While the majority of participants had positive experiences with the medicines, Jennifer did not. She described the effect of her herbal Chinese pills like 'drinking a bottle of red bull' and said, "I didn't sleep, I was hyperactive, sweaty palms. It was just out of control." She said she discontinued taking the medicine after 2 days and had not purchased another medicine over the internet since.

4 Discussion

This paper presents patient perspectives of two unconventional practices for procuring medicines—medical returns and buying medicines online. Hitherto, little has been published on this domain, and study findings provide insight into patient decision-making processes relating to online medication purchasing, risk management of medicine procurement and consumption of medicines. Drawing on a large qualitative sample collected in Melbourne, Australia, we have detailed from where participants sourced these medicines, how these medicines entered into Australia, participant rationales to explain why medicines were sought transnationally rather than locally, how the legitimacy of CAM products were determined and what benefits participants said they derived from consuming these medicines.

Our study findings reveal four key insights. First, if and how participants mobilise their social networks to help them procure medicines appears to differ according to the practice being examined. While those who purchased medicines online rarely discussed this with their family and friends, participants who made medical returns to India were opportunistic, asking family and friends to source and bring medicines to them in Australia as well as returning 'home,' which was perceived as part of a therapeutic process [6].

Second, cost and convenience were key considerations for making medical returns, having medicines sent from India and purchasing medicines online. These findings match the wider literature [7–9, 11, 21] and underscore how the cost of medicines in the country of settlement plays a critical role in influencing why and what medicines are procured transnationally. In Australia, for example, biomedical medicines are subsidised but CAM is not, thus resulting in a variety of CAM medicines being purchased online. The systematic review by Orizio et al. [12], drawing mainly on studies from the US and Europe, showed that mainly prescription medicines, not CAM products, were

bought online. Similarly, Indian participants who could not access subsidized biomedicines in Australia did so from India, where medicine prices (especially for generic medicines) are considerably lower than in Australia partially due to India's ever-expanding pharmaceutical industry.

Third, as previously found [3–6], feelings of dissatisfaction with the healthcare system also influenced why participants (Indian-Australian) in our study made medical returns. Echoing some of the reasons found in previous work [9], the main reasons for dissatisfaction with Australian health services centred on not receiving the desired medication from a prescribing physician in the country of settlement, searching for an alternative treatment or medication and the therapeutic value of being taken 'home' to recover. Lack of trust in the diagnosis and asking relatives or healers to perform healing rituals at home in the absence of the patient were mentioned in the work by Tiilikainen and Koehn [6], but were not reported by our participants.

Unlike previous studies, our participants did not describe feelings of cultural familiarity with Indian health systems as reasons for medical returns or procuring medicines from home [5, 6]. Cultural familiarity might have been a contributing factor—we did not specifically ask about this—but the absence of this issue in the Indian-Australian interviews is noticeable. Interestingly, it was participants (predominantly Anglo-Australian) who purchased medicines online who applied culturally familiar methods (e.g. safety seals) to evaluate the legitimacy of their purchases. At the same time, these participants said the apparent 'naturalness' and 'exoticness' of these medicines were ways to ascertain legitimacy. The co-presence of the unknown/exotic with the safe/culturally familiar suggests that it is important to look at how seemingly contrary ideas influence patient understandings of the legitimacy of medicines. Such ideas should be explored in all communities that obtain medicines using unconventional procurement practices and not just migrants who make medical returns.

Our fourth and final point is that where and how patients procure medicines and the benefits they derive from consuming these medicines must be taken seriously by health practitioners and policy makers. Nearly 40 % of our sample said they procured medicines using unconventional methods, and only one person described the experience as negative. Such patient perspectives might not align with the views of health practitioners; the latter probably would question the safety of many of the practices described in our findings. Due to a lack of data on the provider perspective and our inability to verify the legitimacy of the medicines being procured, we have not been able to establish the safety and efficacy of these medicines. Future research could examine these issues with regards to unconventional procurement as well as how patients forge their own therapeutic regimes, and understand and manage their levels of risk vis-à-vis safe use of medicines when employing multiple medical systems to manage their depression.

Many additional research questions also need addressing: how is the conventional doctor–patient relationship affected by procuring medicines unconventionally? Does the increased global accessibility and choice in medicines signal a need for public health campaigns to improve patient literacy about safe and appropriate medicine use? What regulations, nationally and internationally, should be put into place to better control what types of medicines enter the country? Are there 'safe' websites to which patients should be referred?

These are questions beyond the scope of our current data, which are limited by a focus on a single condition (depression), a focus only on patient populations and a single-country setting (Australia). Incorporating the perspectives of key service providers (including doctors, CAM practitioners, customs agents) and patients with different chronic diseases who might have different health-seeking behaviours from diverse country settings might yield different results. So too, might a more balanced patient sample: we are aware that only eight participants purchased medicines online, whereas 16 either made medical returns or procured medicines from India. Nevertheless, the rigor and reliability of our findings lie in the detailed description of methods for replication, the input of multiple researchers during data collection and analysis, the presentation of findings in their context, the triangulation of data by comparing and contrasting them within the data set, the links made between the findings to secondary sources from the literature to ensure credibility, believability, and validity and clear demonstration of how findings relate to the discussion and how conclusions were reached [22, 23].

5 Conclusion

The increased availability of medicines and the preparedness of patients to procure these medicines using unconventional methods necessitate that we pay more research attention to this emerging phenomenon. As highlighted in this paper, medicine procurement is complex, varied and highly dependent on the type of methods used to obtain them. There is no 'one size fits all' model and, as such, we need to move away from studying single types of procurement practices to more comparative approaches in order to identify key similarities and differences as well as points of intervention. Further research is needed to understand how patients forge their own transnational therapeutic regimes,

understand and manage their levels of risk in relation to safe medicine use and what points of intervention might be most effective to promote safe medicine use. Generating a rigorous and multidisciplinary evidence base on this topic will assist health practitioners and policy makers to design and deliver sophisticated population-level patient education campaigns that can improve decision making about safe medicine use and also aid in more careful engagement and design around medicine regulations and controlling how medicines cross national borders.

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Contributions Bianca Brijnath designed the study, undertook data collection and analyses and drafted the first iteration of this article. Josefine Antoniades contributed to the data collection, final data analyses and various drafts of the article. Jon Adams contributed to the article argument, final data analyses and various drafts of the article. All authors approved the final manuscript; Bianca Brijnath is the overall guarantor of the manuscript.

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