

## RESEARCH ARTICLE

# Exploring self-medication practices and managing health among Pakistani immigrant women in the United States

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## Abstract

Literature has explored self-medication practices and its health implications with focus on immigrants, mostly Latinos in the United States, paying less or no attention to other minority population in particular Pakistani community. This study explores the self-medication practices among Pakistani immigrant women in Houston, Texas, and describes reasons associated with it, to better understand their culture, beliefs and patterns. Qualitative methods were utilized including nineteen in-depth interviews with married immigrant Pakistani women, between the age of 25–39 years and five key-informant interviews with senior women of the community. After capturing the participant women stories, data was analyzed using narrative and thematic content analysis. Results show that immigrant Pakistani women adopt various approaches to meet their own and families' health needs including self-medication with either over-the-counter or non-prescribed antibiotics, which may have serious public health implications. There are gaps in knowledge and perceptions especially antibiotic use among this community. Future research to extend on the findings from this study for adaptation or development of a culturally appropriate program to slowdown this practice and increase utilization of healthcare is strongly recommended.

This data informs and adds to our understanding of the social isolation and disconnection that are prevalent for new immigrants, as well as the diminished trust in the U.S. healthcare system that can be further precipitated in the process of migration.



## Open Access

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## Introduction

In many Lower and Middle-Income Countries (LMICs) people self-manage and self-medicate, with non-prescription and prescription drugs both of which are available over the counter (Bennadi, 2014). The World Health Organization defines self-medication as the use of medicines by individuals to treat self-recognized illnesses or symptoms (Gupta et al., 2016). People have self-diagnosed and self-treated for centuries, and the rise of biomedicine during the last century, as part of the growth and specialization of professions, has led increasing attempts by the medical profession and the state to control people's self-treatment practices (Kennedy, 2016; Sanchez, 2014; Guidance for Industry, 2009). While attempts to control

people's ability to self-treat has been more successful in high-income countries that have the means to more effectively regulate pharmaceuticals and people's practices, this is not necessarily the case in LMICs where prescription medicine regularly appears in neighborhood kiosks and pharmacies and can be purchased without a prescription (Bennadi, 2014). The ability to self-medicate is appealing to community members with limited time, money, transport options, and social support to seek care from a biomedical or other healer (Gupta et al., 2016; Sanchez, 2014). However, there are numerous challenges with widespread implications when people incorrectly self-diagnose (Kumarasamy, 2010). They can pay unnecessarily, they may have adverse drug reactions due to incorrect use and dosage and drug-to-drug interactions (Guidance for Industry, 2009; Ruiz, 2010). And finally, the inappropriate overuse of antibiotics leads to multi-resistant strains of Methicillin-Resistant *Staphylococcus aureus* (MRSA), Glycopeptide-Resistant *S. aureus*, Toxin Hyperproducing *Clostridium difficile*, Extended-Spectrum  $\beta$ -lactamase- and carbapenemase-producing coliforms (Rather, 2017).

The most common inappropriate practices related to non-prescription use of antibiotics include using: for an inappropriately short and ineffective treatment period (Widayati, 2011; Onanuga & Temedie, 2011; Ocan, 2015) an insufficient dose (Widayati, 2011; Oyetunde et al., 2010) ingesting for the wrong reason for example treating viral infections (Widayati, 2011; Shehadeh et al., 2012) and exchange/sharing of medicines. In LMICs like Pakistan, India, Bangladesh, Nepal, the people selling non-prescription medicines in stores and kiosks are often used as a source of advice or information, but they do not have pharmaceutical or biomedical training (Kaushal, 2012). Overall studies find that individuals with higher education tend to have relatively low levels of use of antibacterial self-medication. This practice is evident to be more prevalent among illiterate and more than middle school educated. Other studies concluded that education of the respondents is the major factor influencing the practice of self-medication (Sharif et al., 2010; Jagmohan & Shveta, 2011; Ganesh kumar, Selvaraj, & Ramalingam, 2014). Sharma et al. found that people with low literacy had received drugs from the pharmacist, whereas people from high literacy level had used the previous prescription for the same (Sharma et al., 2005).

Fever, headache, and abdominal pain are the most common health conditions for which people use self-medication (Kaushal et al., 2012). While in other studies, some of the chronic conditions like diabetes and arthritis also were managed by self-medication. People opted for self-medication mainly due to nature of the mild illness and lack of time (Kumarasamy et al., 2010; Kaushal et al., 2012). However, in general, the reason (s) associated with individual's decision to self-medication without any professional guidance is unique to different settings and are reflective of a matrix of health system, societal, economic and health factors (Widayati et al., 2011; Chowdhury, Matin, & Chowdhury, 2009). Common factors associated with self-medication included: past successful use, low level of education, female gender, age and middle-income household (Widayati et al., 2011; Chowdhury et al., 2009; Al-Azzam et al., 2007; Osemene & Lamikanra, 2012). Nevertheless, it is an established fact that self-medication is an important health issue especially in LMIC's where universal access to health care is limited and this is one of the common and ideal approaches chosen by the patients (Onanuga & Temedie, 2011; Kaushal et al., 2012; Sharma et al., 2005).

Self-medication is becoming a growing problem in the United States, due in part to the increasing use of prescription and over-the-counter medications as well as home remedies (Sanchez, 2014). A dramatic growth in the number of available medications, limited access to health care, gaining popularity of alternative medicines, and low health literacy have been identified as some key contributing factors (Sanchez, 2014; The Story of Self-care and Self-medication, 2018). Over the last few decades, numerous studies conducted in the U.S. have addressed different aspects of self-medication. For instance, many studies have focused on specific groups of drugs such as prescription medications (McCabe, Teter, & Boyd, 2006). Others have targeted specific populations such as college students (Arrria & Dupont, 2010) or stakeholders for example health professionals (Baldisseri, 2007). A comparatively small body of literature has focused on self-medication among immigrant populations in the U.S. Of these limited studies, the specific group explored was Latino immigrants in the U.S. with no evidence of any such research conducted among other immigrant minority population residing in the U.S. (in particular Pakistani community).

There is evidence that self-medication is the most common initial response to any illness

and a common practice among individuals in Pakistan (Baldisseri, 2007). Numerous studies document that there is substantial self-medication with antibiotics obtained without a prescription in Pakistan (Shaikh, Haran, & Hatcher, 2008). None of the studies so far have directed their attention toward the utilization of prescription and non-prescription medications among Pakistani immigrant population in the United States. This article examines the self-medication practices among immigrant Pakistani women in the Greater Houston area.

### Public Health Significance

Self-medication is a common practice throughout the world, but in the U.S. and Europe drug legislation and enforcement makes licit access to many prescription medicines difficult (Shaikh et al., 2008). In LMICs like Pakistan self-medication is more common partly due to poverty and lack of access to formal healthcare and also due to poor regulation of prescription medicines (Anwar et al., 2015). Consumers from LMICs mostly rely on advice from family and friends, over prescribing physicians, unqualified drug sellers, and the marketing campaigns of the pharmaceutical companies (Yusuff & Wassi, 2011). The misuse of drugs not only poses the risk of delayed treatment, a worsening of the condition, adverse drug reactions, or drug-to-drug interactions but most importantly, the growing burden of antibiotic resistance that is becoming an international public health problem (Anwar et al., 2015). According to WHO report, this problem is spreading and becoming difficult to confront. With growing antibiotic resistance, patients are prone to longer hospital stays, higher medical costs, and increased mortality (World Health Organization, 2016).

Although public health researchers have taken up the study of self-medication use in both developing and developed nations, the medication practices of immigrants in the U.S. remain largely unstudied. Because of varying cultural beliefs and ease of obtaining antibiotics over the counter in other countries, it is likely that self-medication patterns differ among new immigrants to the United States. Few studies conducted in New York and California focusing on Latino immigrants evaluated their treatment options and use of self-medication practices, (Pylypa, 2001; Larson, 2004) but there are none to our knowledge that has focused on Pakistani immigrants in the U.S. Larson (2004), reports that people from countries where drugs are readily available over the counter are more likely to use medications not prescribed by the clinicians, however, the extent to which this is true among Pakistani immigrants in the United States is unknown.

The objective of this qualitative research (descriptive study) was to describe the self-medication practices and explanations associated with it, to better understand the culture, beliefs, and patterns among the Pakistani immigrant women in the Greater Houston area. It describes the diverse system of self-managing practices when these women are confronted with ill-health as well as to maintain health. Our findings can help inform the health authorities and policy makers for the development of a culturally appropriate health education program for this rapidly growing minority community.

## Methods

Qualitative research methods were applied to achieve the aims of the study including participant observation, in depth interviews and key informant interviews. A total of twenty-four interviews were conducted, of which nineteen were face-to-face in-depth interviews with married immigrant Pakistani women and five key informant interviews with senior women of the community.

A convenience sampling approach was used, and participant women were invited to briefly explain them the purpose of the study. Women who showed interest in the study were recruited and oral informed consent was obtained from all participants. Semi structured open-ended questions were used for the nineteen in-depth interviews, with probing as needed. Interviews were carried out in participant preferred language either Urdu or Punjabi. The study was carried out between January 2016 and August 2016.

Participant women were recruited from places of worship (Mosque) and public housing apartment buildings in the South part of Houston Harris County, in addition to one community clinic in the same area. The first author U.S. conducted all the interviews in privacy either in the house of the participants or outside in a quiet corner. Our questions were constructed as such to allow participants to tell their story of health, ill health and lived experiences freely. Each interview lasted between forty and sixty minutes. All interviews were audio recorded, and

transcribed into English. Human subjects' approval was obtained from the UT and the Committee for the Protection of Human Subjects (HSC-SPH-15-0572).

## Data Analysis

After capturing the participant women stories, narrative and thematic content analysis was used to analyze this rich data. Broad categories or domains were uncovered through data coding. A list of codes was produced and grouped into potential themes. Finally, the emerging themes were checked to ensure they captured the depth and breadth of the data. Each domain that emerged was further investigated to identify the associated attributes.

## Results & Discussion

Our results revealed that 16 of the 19 participants self-medicated with over-the-counter or non-prescribed antibiotics. Three participants refused to answer for their household. Six themes emerged: home pharmacy, reasons for self-medication, choosing the right drug, dose & duration, garage discussions about home medical pharmacies, prioritizing prescribed medications and lack of trust & acceptance in the U.S. healthcare system.

### Home Pharmacy:

Participants noted that prescription medicines were bought directly from pharmacies outside U.S.(from Pakistan) and were then transported here to the U.S. In LMIC's like Pakistan every pharmacy sells almost all kinds of drugs without any prescription. Sixteen out of nineteen participants admitted to this type of transportation of medications while three refused to answer. Furthermore, when the participants are about to run out of some medicine, their family or friends visiting Pakistan help them fill up their drug supplies.

"...Yes, we brought lot of medications from Pakistan like Amoxil antibiotic, allergy medicine, etc., for sore throat and other infections or minor health problems, we have about a two year stock..." (Age 33, in U.S 3 yrs participant #20)

"..I have brought so many different types of medicine with me from Pakistan to treat all the basic illness....I take those and keep myself on my heels...first I do home remedies...if nothing works then I think about visiting a doctor..." (Age 39, in U.S 2yrs, participant #09)

"...When we came to the U.S. we packed all kinds of medications because you know we were traveling with kids and then initially no one has insurance to see a doctor....it is always convenient to have medications at home rather than struggling to get some through this system..." (Age 34, in U.S 2yrs, participant #10)

Using this stock of medicines available at home was the most popular option among immigrant Pakistani women and their families. Studies strongly support that having home-pharmacies were shown to be correlated with the practice of self-medication (Lukovic et al., 2014; Klemenc-Ketis & Kersnik, 2010). Almost every household in this community is equipped with a tiny medical store, the access of which is controlled by the women of the house. The value of this home drug store is, for the Pakistani community, comparable to any cash or jewelry possession. One participant added '....So whenever I have some health problem I take few tablets from my own medicine store and that keeps me good and running....' (Age 39, in U.S 2yrs, participant #09). Another participant responded, '...for small little things like pain and aches or sore throat we have plenty of medicine in the house like Panadol, antibiotics, steroid drops and creams....' (Age 34, in U.S 2yrs, participant #10)

"..usually we have medicines at home to take care of little illness....it is common in our family to treat small minor illness at home because it usually works...it is coming down from generations...but in serious situation we go to the doctor..." (Age 38 in U.S. 8 yrs. participant #18)

Similarly, when inquired about the means of transportation, one responded explained '...this is a common practice here...when our friends or family members are visiting Pakistan we give them a long list of medications to bring and pay them in advance...' (Age 33, in U.S 3yrs, participant #20)

The Pakistani immigrant Muslim community has a closely interweaved network when it comes to healthcare. Most of the women interviewed noted that taking care of their health in the U.S. is an impossible task if done alone; it required the Pakistani community to stick



together and help one another. This concept of helping in the domain of health included: advising the correct medicine based on signs and symptoms, the exchange of medicines, loaning of medicine, gifting of medicine, especially antibiotics, and in a rare case, donating medicine from the home pharmacy to a needy patient within the larger Pakistani community.

The most common drugs used by our study participants to self-medicate were anti-pyretic (for fever), anti-allergic, pain relievers (NSAID's), nasal and eye drops, topical steroid creams, Flagyl for stomach issues, Xanax and Lexotanil for anti-depressive, anti-anxiety symptoms, and finally antibiotics, mostly from the penicillin family like Amoxil, Augmentin but included any broad-spectrum drug like the cephalosporin group. Common ailments likely to be self-medicated were cold, fever, flu, cough, sore throat, upper respiratory infection, urinary tract infection (UTI), allergy, nasal congestion, kidney pain, joint aches/pain, migraine and allergies, abdominal pain, high blood pressure, high cholesterol, palpation, constipation, diarrhea. To get a diagnosis for high blood pressure participants would relate headache, neck pain, sweating or altered thinking process as having a high blood pressure and sometimes it would be a joint family consensus. As for being aware of having high cholesterol some women noted they already knew about it (once they were tested back in Pakistan or here in the U.S.) while some said they can feel it and everybody has it.

An interesting aspect of our study was the level of education of the respondents, where education is evident to play a significant role in this practice of self-medication. Illiteracy has been reported by previous studies as a potential factor in facilitating self-medication. It is seen more among respondents who are illiterate or have less than higher secondary education (McCabe et al., 2006; Haseeb & Bilal, 2016; Awad, Eltayeb, & Capps, 2006). Some might suspect that self-medication behavior would decline with increasing education status, but this was not the case in our study. In our study except for two participants who completed secondary schooling the rest had graduate degrees. This substantial utilization of self-medication practice among our well-educated participants may attribute to culture, tradition or complex healthcare system of a new country or personal and financial constraints. However, this educated Pakistani immigrant group self-medicated as a shortcut to save themselves and their family from the confusing, complex, and complicated health system that included the ordering of expensive and, in their opinion, unnecessary lab tests conducted in the U.S.

Participants of this study self-medicated or self-managed family's health because they considered the ailment to be 'mild' or 'minor' and this ranged from a simple common flu or a sore throat to respiratory infection, urinary tract infection and high blood pressure. According to the interpretation of the participant's narrative, any ailment that does not require a visit to the (ER) emergency room is considered mild/minor and can be self-managed at home. Since there can be no standard definition of 'minor' for all, it will be impossible to generalize any findings. This is a new concept not much explored in other studies, that participants prefer to direct their own care and not engage biomedicine in that process (Baldiressi, 2007; Anwar, Green, & Norris, 2012).

#### **Reasons for Self-medication:**

The basic reason explained by participants for their self-medication practice were, lack of health insurance, extremely high cost of healthcare system in the U.S. financial difficulties, time constrain, long wait time, home or family responsibilities, missing work/job, transportation problem, who will accompany. While some respondents further justified their self-medication practice as a response to the challenges of getting a doctor's appointment in a reasonable amount of time and their dislike of a lot of costly unnecessary blood work that was part of a clinic padding its practice to build a massive bill by the end of the visit. In their opinion and based on their past experience of Pakistani healthcare, ailments such as flu, sore throat, migraine, ache and pain, and fever are basic conditions that do not need blood work and can be cured by simple medications that physicians can prescribe without the hassle of testing and generating costly visit bills. One participant noted '....I never followed any prescription vitamins during my antenatal visits because when I asked the price at the store it was like \$60 or \$80...' (Age 28, in U.S 2 yrs, participant #04). While another respondent added, '...time is an important factor, the long wait at the clinic, plus I cannot afford baby sitters, then who will cook for us...I prefer taking medicine on my own... because I do carry them at home...' (Age 37, in U.S 6 yrs, participant #06)

"....the only compromise on health I do is delay in seeking care and sometime I even ignore my health...because I don't drive....my husband have to take leave...then the

wait time at the clinic even with appointment...then kids accompany me because we don't have any baby sitter....without insurance we have to balance when to seek doctor help and what type of medication to take..." (Age 34 in U.S. 3 yrs. participant #17)

"...I don't understand the concept of doctors here...even if you go with a minor health problem they will do hundreds of tests, waste your time, your resources, year energy, your patience, at the end prescribe you medications that you can hardly afford..." (Age 33 in U.S. 3 yrs participant #20)

Furthermore, in cases where the prescribed medicine is not appropriate for the patient (having trouble adjusting with the medicine or its dosage) participant would need to schedule another appointment which means another wait time of couple of weeks or months. They can bypass this route and visit an emergency room (ER), but that means a wait time of 12-24 hours and at the end ER physician will refer the patient back to the same primary care physician (PCP). In the end, the women are stuck with the same medical practice they deem unsuitable.

Pakistani women described the U.S. health system as a vicious circle of struggle and challenges and patient exploitation. For this reason, women consider themselves competent and capable enough to manage and maintain their own health. It appears that the women have become agents themselves, acting autonomously making decisions about their health and life, managing their health problems without feeling/being oppressed by biomedical authority and its agents. They are also to a certain degree taking power over the situation and not letting the state and biomedical folks control them.

"..when you call the nurse, she tells you go to the ER....if you go to the ER they tell you only PCP who prescribed this medicine can change your dose etc so go back to the PCP.....it's like catch-22.....no matter what you do you have to suffer....so in short, why should you go through all this hassle and torture..." (Age 33 in U.S. 3 yrs. participant #20)

"..for allergy he will say go see allergy doctor, for heart burn go see internal medicine etc....you will then call for appointment that you will get after 3 to 4 months....by that time either you will die or treat yourself on your own..." (Age 33 in U.S. 3 yrs. participant #20)

They also felt more comfortable using medicines from Pakistan. The medicines are much cheaper compared to the U.S. and they are more used to the brand of medicines available in Pakistan. Participants claim to have very good knowledge of the mode of use of these medications, and they feel that drugs from Pakistan are more suitable for their body and health. In short, for the participants, the easy and straightforward way out is to opt for their home remedies or self-medicate and save themselves of all the healthcare exploitation they experience in the U.S. Self-medication was an act of self-care that allowed them to save time, money and mental stress.

#### **Choosing the right drug, dose and duration:**

The process of choosing the right drug, dose, and duration varied widely among participants. Some followed advice from lay members of the family or friend, while some followed instruction on the drug packet, others searched for the best match on the internet, some try to utilize the left over from the previous prescription, still others try to decide mutually with their spouse and finally, some simply make a wise guess. A common observation evident in other studies as well especially LMIC's (Sharif et al., 2010; Yusuff & Wassi, 2011; Cars & Nordberg, 2005). One respondent noted '...my sister is a doctor (doing residency) so I call her and usually she has sample medicines at home so I get it from her....' (Age 28, in U.S 2 yrs, participant #04). Another women added '...I also consult my friend neighbors for my health issues...once my neighbor gave me medicine for high blood pressure and I felt much better....' (Age 39, in U.S 2 yrs, participant #09)

"..nobody goes to a doctor for minor small things like flu, allergy, sore throat.....I take antibiotics and the symptom is over in 2-3 days....unless if something is very serious that we cannot handle with home medicine then we go see a doctor....who has this much time to spend waiting in the clinic and then the expenses..." (Age 34 in U.S. 2 yrs. participant #10)

An aspect that appears to boost the participant's self-confidence is their prior successful

experience with antibiotics (Lukovic et al., 2014), and this tends to make them believe that they are able to manage subsequent illness without consulting a physician (Alhomoud et al., 2017). Another feature that keeps this community motivated to continue practice self-medication is the success stories of friends and neighbors who do the same as evidence in other studies (Anwar et al., 2012). Moreover, when medicine, in particular, antibiotic is approaching its date of expiry, participants ensure to utilize it first, as the need arise or use it anyways afterwards, a common finding documented in LMIC's (Lukovic et al., 2014; Klemenc-Ketis & Kersnik, 2010; Anwar et al., 2012).

Similarly, the dosage and length of treatment, in particular for antibiotic is decided mostly by mutual consent between wife and husband or by reading the instruction on the packet or occasionally by a wise guess. However, it was a widespread practice across all study participants and their families to discontinue prescribed as well as self-medicated anti-biotics as soon as their symptom subsided. It could be within three days or one day or sometime even one pill would do.

"...We usually take antibiotics for three days...that is enough to get better, occasionally we may need it for 5 or 7 days...but my husband takes it for only one day and saves the rest because he feels fine..." (Age 33 in U.S. 3 yrs. participant #20)

"...when doctors prescribe antibiotics it is always for ten to fourteen days...I never do the full course that the doctors want...symptoms usually resolve after taking couple of tablets so I discontinue after 3 or 4 days when I feel fine.." (Age 34 in U.S. 3 yrs. participants #08)

Women reinforced this practice as a way to protect their body from adverse effects of strong antibiotics and to lessen the complication of prolonging usage. One of the respondent noted "When we recover and feel good with much shorter period of treatment why should we take strong medicine for so long and harm our body." (Age 34 in U.S. 2 yrs participant #10). Comparable results have been documented in several studies conducted in African, and Asian countries, as well as the Middle East, highlighting inconsistent use of antibiotics, either by not taking them regularly or altering the dosage without consulting a physician (Widayati, 2011; Haseeb & Bilal, 2016; Anwar et al., 2012). Nonetheless one major finding that adds to our study is the fact that majority of participants in the past studies either belonged to a low social income group or were rural dwellers or were illiterate, that is not consistent with this study (Onanuga & Temedie, 2011; Sharif et al., 2010; Anwar et al., 2012; Clinical Efficacy....The Lancet, 2002).

#### **Garage discussions about home medical pharmacies:**

An interesting feature observed among this community of participants was their regular evening assembly in the parking lot of apartment building to share and discuss their family updates. This assembly was a daily evening routine except for weekends when husband and children are home. The importance of this gathering was evident when the first author U.S observed women's motivation to be punctual by pausing their house work, formally dressing up and the regret in case they are unable to attend. This would intermittently include chat on home pharmacy status, swinging between, being satisfied with the present stock of medicines or fear of running out of certain important items. At this platform, since women are in-charge of their home-based pharmacy, they would make major decision of exchanging medications between household. Meaning, they can replenish their stock in exchange of brands of medicine they seldom use but is popular in another household. Women seemed highly motivated to keep themselves well informed about community medicine exchange matters. A way to keep their home pharmacy up and running until a family member or friend makes a visit to Pakistan. At this same platform woman would also share their success stories of health and healing as well as lessons learned.

#### **Prioritizing prescribed medications**

Prioritizing prescribed medicine was another feature of immigrant women based on her finances and price of the drug. If need arises to bypass home pharmacy and buy the prescription drug, women try to wisely choose the ones she thinks is most needed and affordable, despite the fact it may take much longer to recover. Similar findings are evident in other studies where out-of-pocket costs of prescription medicines that are burdensome to many patients, they may prioritize medicines according to their own affordability and willingness to pay, or personal beliefs about its safety and effectiveness (Alexander et al.,

2006; Ramay, Lambour, & Ceron, 2015). However, this practice was not observed if the expensive antibiotics are for her husband. Wife would persuade him to follow the prescription and purchase the medicine. An added extension of our study not reported elsewhere (a gendered approach).

"...once I had severe chest infection and eye infection....I was seen at this foundation clinic free of cost but the medicines that; were prescribed some of them were very expensive, unaffordable, especially anti-biotics, so the ones that were affordable, some syrups etc. I bought and left the others. I choose myself, the ones that seemed important to me. It took me about two months to get better also because I seek medical advice very late and then I cut down on prescribed medication..." (Age 37, in U.S 6yrs, participant #06)

"..yes we do decide what prescribed medications to buy at the pharmacy...because we don't have insurance so once the doctor prescribed us an antibiotic that was like \$200 so we left those...took rest of the medicine and it was okay..." (Age 34, in U.S 3yrs, participant #17)

Reason women associate with this behavior was that husbands are the bread weaner's and have less tolerability to sufferings compared to women; hence, they need proper treatment. Even in situations where money is not an issue and spousal support is present, women still tries to wisely manage finances and do not believe in spending too much on expensive antibiotics. In-fact discourages her husband in doing so as well (for the wife).

### **Lack of trust and acceptance in the U.S. healthcare system**

An aspect of lack of trust on the U.S. doctors as well as healthcare system seems to play a strong concealed role among the participant women, their families, and this community. Their struggle to settle in this western society and to understand the system, in particular, healthcare, seems too complex, confusing and complicated. This, in turn, augments their self-trust and confidence in their behavior of self-medication. One woman noted '...we are educated and can handle our problems, think of all those immigrants who are not even educated or speak English..' (Age 33 in U.S. 3 yrs participant #20). Participants felt self-medication was harmless, acceptable, and the easy way out in the U.S.

"..If you have some minor regular health issue, go for your home remedies, take out medicine from your cupboard and eat it and you will be fine in no time...everybody here is doing this, Indians, Pakistani, Afghani, Bangladeshi all..." (Age 33 in U.S. 3 yrs. participant #20)

Past study on Latino immigrants in the U.S reflects a similar view of the overwhelming difficulties this community experiences in accessing the U.S. health care system, that seemed to them (Latino's) very complex and expensive for those without health insurance (Sanchez, 2014). Lack of trust on doctors and the healthcare system seem to play a significant role among this community. A possible explanation could be their past exposure and experience in Pakistan. When they do a comparison between U.S. health system and Pakistani healthcare, the contrast is enormous. The U.S. system is more complicated, confusing and complex. They found the U.S. health system apuzzle that was nearly impossible to fit together, solve and understand. As this 33 years old woman residing in U.S. for three years noted, "...the healthcare system here is like the concept of Catch-22....no matter how hard you try you have to suffer....so in short, why should you go through all this hassle and torture....' (Participant #20)

"..Even pain medicine prescribed by these doctors are so high dose/strength like ibrufen 600mg....I don't like taking such high dose....I usually take Panadol 100 mg or so.... that we all carry from Pakistan and that is good enough for me..." (Age 34 in U.S. 3 yrs participant #08)

"..I don't understand the concept of doctors here...even if you go with a minor health problem they will do hundreds of tests, waste your time, money and at the end prescribe you medications that you can hardly afford..."(Age 33 in U.S. 3 yrs. participant #20)

In absence of any other options, believing in oneself to protect their own health seems suitable to the Pakistani women. These circumstances have made Pakistani immigrant women 'agents' of their own body, managing their health and life without being worried about



the biomedical agents nor letting them take control. Reflecting Foucault's concept of 'biopower', where these women have taken control over their own bodies as well as their larger community through diverse techniques (Scott, 2018). This is not a much-explored topic among Pakistani community, nonetheless, past research supports that decision of an individual to self-medicate is the result of a complex interaction of several factors, most important of which is, quality of healthcare, ease of accessibility to healthcare, regulatory environment of healthcare including user-friendliness, convenience and availability, all of which are not available for immigrant Pakistani women or their families (Radyowijati & Haak, 2003).

To summarize women's narrative, their general attitude towards self-medication was that it is harmless, it is acceptable, and it is the easy way out in a host country. They anticipate practicing it in the future and would advise others in their family and community to do the same. To the best of our knowledge, this is the first study of its kind and there is no such data available on immigrant Muslim Pakistani women, as a result, there is no study available for comparison on a national level. Hence study from a similar community in South Asia has been referred and compared. Despite a small sample size our findings added to the existing literature as well as extended a bit on previous work.

## Conclusion

This study describes in detail the beliefs and understanding among Pakistani immigrant women in Houston concerning self-health management and self-medication practices. Our finding demonstrated that women adopt various approaches to meet her own and her families' health needs. As evident, there are gaps in knowledge and perceptions of self-medication especially antibiotic use among this community and this, in turn, boost the importation of antibiotics into the U.S. Their self-management or self-medication choices have public health implications. Future research to extend on the findings from this study for the adaptation or development of a culturally appropriate health education program to slow down this practice of self-medication and in turn increase utilization of health care is strongly recommended.

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