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Gender Variations In Over the Counter Sale of Prescription Medicines in Abu Dhabi, UAE

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Abstract: **Over the counter sale of medicines is endemic in Abu Dhabi and all sorts of medicines can be purchased without the submission of a prescription (Yeboah, 2013). This study looks at the gender dimensions of the practice and examines the reasons given by pharmacists and their clients for the practice, emphasizing the specific differences between male and female respondents. The methodologies involve survey of pharmacists and their clients together with direct observation of the practice in selected pharmaceutical outlets. The results point to clear differences in the reasons given by male and female purchasers, but little to no differences in the reasons given by male and female pharmacists. The study concludes that both males and females are involved in the practice, albeit more male purchasers were observed buying the medicines.**

I. Introduction

Ethics is the heart of health (Seedhouse, 2003), and there is an expectation that health care providers and other professionals will adopt a degree of ethics in the professional duties and practice. Throughout the United Arab Emirates (UAE), stories of unethical health care practices continue to be heard and read in the local newspapers unabated. From Abu Dhabi to Ras Al Khaimah, Dubai to Fujairah, stories of unethical health practices have been doing the newspaper rounds regularly (see, for example, Yeboah, 2013; Gulf News, 2011a, page 2; and Gulf News, 2011b, page 3). This article focuses on one essential issue - over the counter sale of prescription only medication in the Emirate of Abu Dhabi and its gender dimensions.

There is evidence in the research literature to suggest that gender differences exists in health, criminal justice, psychology and other areas of human behavior (see, for example, Yeboah and Brathwaite, 2010), and this study attempts to establish if any gender differences exists in the over the counter sale and purchase of prescription required medicines in Abu Dhabi.

The purpose of this study is, therefore, to investigate the gender variations in the sale of prescription only medicines without the necessary prescription in Abu Dhabi, establish the extent to which the practice is perpetrated by males and females and identify differences in the reasons given by males and females for the practice. Analyses such as these are essential for the development of strategies to eradicate or minimize the practice. This is the rationale behind this study. The point must also be made that the lack of published research literature on health in the UAE, especially ethics in health care delivery, adds to the significance of this article.

II. Literature Review

Not much exists on ethics and health care in particular and population and health generally, in the published research literature on the UAE. Raven (2002) discussed the intersection of healthcare organizational ethics, pointing out that healthcare providers are business organizations with ethical issues. Gulf News (2011c) discussed ethical issues surrounding Doctors being remunerated by commission instead of salary, while Gulf News (2011b) reported warnings from health professionals regarding the sale of prescription medication over the counter.

National Newspaper (2011:1) pointed out the growing problems with waiting lists for various health procedures in the UAE while Yeboah (2007) examined population growth and the demand and provision of health services in the UAE up to 2006. He found that population growth was accompanied by new medical centers and increased number of public and private health services.

Yeboah (2005) compared reproductive health in the Gulf with the Caribbean, noting the vast improvements in maternal and child health in the UAE and GCC over the decades. Okaida (2003) examined mental health in the Arab world while Zufur (2003) focused on women empowerment in the Arab world. Burn et al. (1993) investigated variables affecting health in the UAE, focusing on primary health care. They examined the 1986-1991 health strategy and concluded that health care had improved in the UAE. In addition, Matthew (2001) studied obesity in the UAE, indicating that there was a need to target obesity in the UAE. He concluded that obesity has a far greater impact in the UAE than acknowledged. UAE Ministry of Health (2001) presented professional code of conduct for health professionals, defining clearly what ethical practices were expected from medical practitioners and other health professionals. Ethical issues in health care have not received any attention in the published research literature on the UAE.

III. Methodologies and Data Sources

A triangulation approach was adopted for the study methodologies. This allowed for diverse analysis of data from at least 2 or more methodologies to be used in the investigation (see Patten, 1990). About 90 pharmaceutical outlets were initially selected randomly for the study. However, 17 refused to participate in the study, resulting in a response rate of approximately 77.2%. Survey and participant observation data were obtained on the 73 pharmaceutical outlets or chemists which agreed to participate. It was impossible to randomly select patients who were buying prescription medicines without the necessary or required prescription, as no sampling frame could be created for customers or patients who buy prescription medicines over the counter. A convenience but systematic sampling approach was adopted, involving the selection for inclusion of every 3rd patient who bought medicines without the necessary prescription. 131 patients in various outlets were interviewed as they agreed to participate. The results are presented later in this article.

A predesigned questionnaire was used to interview both patients and pharmaceutical outlets to identify the underlying reasons for the practice and how the practice could be stopped. Participant observation methodology was used to establish the extent of the practice through the direct observation of the practice in the selected outlets. The main sources of data were, therefore, the survey responses and the observation of the practice in the selected outlets. The selected pharmaceutical outlets were visited at different times, the incidence and prevalence of selling and buying prescription required medication without prescription were observed and recorded.

The survey data were scientifically analysed using SPSS/ Descriptive statistics were used to show the demographic and related characteristics of the study subjects and their responses to the survey questions. Finally regression analysis was undertaken to determine the impact of gender. In this stepwise regression analysis, the effect of gender was determined from the R^2 change when gender was added to the equation.

IV. Results

Participant observation data showed that over the counter sale of prescription required medications was very endemic in the Emirate of Abu Dhabi. All the 73 pharmaceutical outlets observed in the study actually sold medicines without the required prescription. Evidence from participant observation methodology showed further that all kinds of powerful medication were sold without prescription. Pharmacists were observed selling medicines such as Daonil, Loric 100, Ex-Forge, Concor, Augmentin etc. without prescriptions. In addition, participation observation revealed that the perpetrators of the practice were from various nationalities, gen der and age groups.

Table 1 shows the geographical distribution of pharmaceutical outlets by geographical region in the Emirate of Abu Dhabi. Consistent with the geographical distribution of pharmaceutical outlets in the Emirate of Abu Dhabi, about 78.1% of the selected pharmaceutical outlets were in Abu Dhabi city, followed by Al Ain, 20.5%.

Table 1 Geographical distribution of pharmaceutical outlets

Locality/Region	Number of Outlets	% of total
Abu Dhabi City	57	78.1
Al Ain District	15	20.5
Western Region	1	1.4
Total	73	100

Source: Survey data

V. Study Population

The proportion of male and female pharmacists observed in the study was about even, 51% males and 49% females, but that almost 65% of the customers interviewed were males compared with about 35% females. The age distribution of respondents was also different for males and females with the largest difference in proportions occurring in the 65 years and over age group (table 2). The point must further be made that all the pharmacists were qualified to work in the industry while 71% of the purchasers had at least high school certificate or equivalent. All the respondents were employed in one occupational category or the other.

Table 2 Age-gender distribution of customers

Age Group in Years	% Male	% Female
<15	100.0	0.0
15-24	50.0	50.0
25-44	60.0	40.0
45-64	55.0	45.0
65 and over	70.7	29.3
Total	65.0	35.0

Source: Survey data

VI. Key Survey Questions

Purchasers of medicines were asked a number of key questions directly related to the practice of buying prescription required medication without prescription and their responses are presented in table 3.

Table 3 Customers/Buyers responses to key questions on the practice

Question asked	Male % Yes	Male % No	Female % Yes	Female % No
Do you buy prescription medicines regularly without prescription?	98.0	2.0	99.0	1.0
Has any outlet ever refused to sell you prescription medicines without prescription?	1.0	99.0	0.5	99.5
Has any pharmacist ever told you of the dangers involved in buying medicines without prescription?	0.0	100.0	0.0	100.0
Do you know that it is unlawful to buy those medicines without prescription?	14.0	76.0	7.3	92.7
Are you aware or know that these medicines can do serious harm to you?	21.1	78.9	18.5	81.5
Will you buy medicines without prescription again?	100.0	0.0	100.0	0.00

Source: Survey data

Pharmacists were also asked key questions regarding over the counter sale of prescription medicines and their responses are tabulated in table 4.

Table 4 Pharmacies/Sellers responses to key questions on the practice

Question asked	Male % Yes	Male % No	Female % Yes	Female % No
Do you sell prescription medicines regularly without prescription?	100.00	0.00	100.0	0.0
Has your outlet ever refused to sell prescription medicines without prescription?	3.3	96.7	1.9	98.1
Have you ever advised buyers of the dangers involved?	5.6	94.4	1.0	99.0
Do you know that it is unlawful to sell those medicines without prescription?	100.0	0.00	100.	0.0
Are you aware or know that these medicines can do serious harm to buyers?	100.0	0.0	100.0	0.0
Will you sell medicines without prescription again?	100.0	0.0	100.0	0.00

Source: Survey data

Tables 5 and 6 identify the main reasons given by pharmacists and buyers respectively for selling and buying medicines without prescription. Two reasons stand out for pharmacists, namely "everybody is doing it" and "the next pharmacy will sell if I don't".

Table 5 Main reasons given by pharmacists for the practice

Reason	% Yes Male	% Yes Female
Everybody is doing it	100.0	100.0
Next pharmacy will sell if I don't	100.0	100.0
Customer satisfaction	68.0	94.2
Make more sales	79.0	99.7
Customers ask for it	70.7	61.3
Easy to sell without prescription	55.0	11.7

Source: Survey data

Table 6 shows that the overwhelming reason given by buyers is "easy to get what you want" (100% for both males and females), followed by "pharmacists don't mind" (over 99.0% for each gender), "all my friends are doing it" and "I have not had any harm or problem".

Table 6 Reasons given by buyers for the practice

Reason	% Yes Male	% Yes Female
Pharmacists don't mind	100.0	96.9
All my friends are doing it	92.0	100.0
Easy to get what you want	80.0	97.0
No harm to my body so far	83.0	53.4
You save money by not going to the Doctor	18.0	76.7
You save time	59.0	85.0

Source: Survey Data

VII. Effect of Gender on the Responses

Gender explained 71.3% of the variance in the reasons given by buyers for purchasing medicines over the counter. The stepwise regression results showed that the marginal effect of gender on why customers buy medicines over the counter was strong, evidenced in the R^2 change of 44.6% when gender is introduced oradded to the model equation. Gender was a good predictor of over the counter purchase of medicines, making the largest unique statistically significant contribution of .479 (sig= .000) to the prediction compared with age (beta .112, sig= .000), education (beta, 313, sig= .001) and employment (beta .189, sig= .013).

The bivariate relationship between gender and the key reasons given for purchasing medication without prescription was strong. For example, a statistically significant χ^2 of 15.133 (sig= .000) was obtained for gender and pharmacists don't mind, and χ^2 of 11.103 (sig= .000) for gender and all my friends are doing it.

Gender explained 49.6% of the variance in the responses of the pharmacists to the key questions. The R^2 change was 39.1% when gender was added to the regression model, and this was statistically significant at .001. This means further that gender had a marginal effect of 39.1% on the responses. In addition, gender made the largest unique statistically significant contribution of -.543 (sig= .000) to the prediction of responses by pharmacists, compared with age (beta- .053, sig= .001), education (beta, .123, sig= .000) and employment (beta .221, sig= .213). Beta values have been used instead of the usual B values because the beta values are standardized, converting the values of the different variables to the same scale. With a χ^2 of 22.110 (sig=.000), there was a relationship between gender and pharmacists' responses to key questions.

VIII. Discussion

That over the counter sale of prescription medication is endemic in Abu Dhabi is not in question (Yeboah and Yeboah (2013).The dangers of the practice cannot be over emphasized, especially in the light of potential injuries and fatalities. The issue is to establish how male and female sellers and purchasers perceive the practice to allow for strategies to be developed to eradicate the dangerous practice. The study found that both males and females indulged in the practice either as pharmacists or purchasers and that people of all ages were involved. This presupposes a need to carefully evaluate what is happening and identify comprehensive strategies to address the problems.

Pharmacists were fully aware of the existing legislation which bans over the counter sale of prescription medicines, albeit many buyers were ignorant of the legislation. Health Authority Abu Dhabi (HAAD) has been quick to point out that the issue is enforcement and that no new legislation is required. The problem is exacerbated by the fact that pharmacists continue to knowingly disregard the law. While male and female purchasers of prescription required medicines were unaware of the law, the sellers were fully aware of the law but chose to ignore it.

Some understanding can be given to the key reason given by pharmacists that if they did not sell the next outlet would. Perhaps this explains why majority of male and female pharmacists responded that they would continue to perpetrate the practice. Under this circumstance, only a thorough and comprehensive approach aimed at getting all pharmacists to adopt the code of ethics (UAE Ministry of Health, 2001) and the existing legislation will succeed. The fact is that no outlet would like to lose business and, as such, no pharmacist (male or female) would stop the practice unless it was perceived that all outlets have stopped.

As both male and female pharmacists converged in their response that they regularly sold prescription medicine, any effort to address the problem should target both gender equally. With regards to the reasons given for the practice, male and female pharmacists diverged in their response to the questions on customer satisfaction, make more sales, customers ask for it and, more so, "easy to sell without prescription" (table 5). The study's standpoint is that specific targeting of gender groups would be essential in changing this attitude and mentality. For example, while only 12% of female pharmacists affirmed the belief that it was easy to sell without prescription, over 55% of their male counterparts supported that position. Any attempt to address this issue would be well advised to target male pharmacists to change their perception that it is easy to sell medicines without the necessary prescription.

With regards to purchasers, the main areas of divergence occurred in responses to the items "you save time, you save money by not going to the Doctor, and no harm to my body so far". Almost 80% of female purchasers engaged in the practice

because they believed that "you save money by not going to the Doctor", compared with only 18% of male respondents. It would appear that male purchasers were not so concerned about money when it came to buying medicines over the counter. Perhaps, a comprehensive customer education program targeting women and aimed at deemphasizing money and focusing on the dangers of taking medicines will help in solving the problem. Again, it may suffice to argue that a need exists to draw attention of purchasers, especially females, to the fact that the dangers outweigh the pecuniary benefits (see Xpress Newspaper, 2013).

It is evident from all aspects of the study that gender dimensions are discernible in the practice of over the counter sale and purchase of prescription required medicines. This is corroborated by the evidence from the regression analysis which shows clearly the e effects of gender. While the χ^2 results point to a strong relationship between gender and the responses, the Pseudo Rs (R^2 changes when gender is introduced to the model equation)actually confirm the prediction value of gender. While sellers and buyers of both gender groups indulge in the practice, their perceptions vary. The gender variations seen elsewhere in human behavior research (see for example, Yeboah and Brathwaite, 2010) is seen to exist in the over the counter sale or prescription medicines in Abu Dhabi.

IX. Conclusion

Over the counter sale of prescription required medicines is rife in Abu Dhabi. This study has established some aspects of gender in the practice, especially difference in responses to key survey questions by male and female respondents. The standpoint taken in the paper is that gender has a statistical effect on the responses and that clear relationships exist between the responses of sellers and buyers and their gender. The study concludes further that a need exists to take these effects of gender into consideration in any attempt to address the issue.

While the study touched on some potential strategies, it is the conclusion of this study that more research is required to identify potentially effective evidence based strategies. The present study proposes this as an area for further research in the quest to find solutions to the problems associated with the over the counter sale of prescription medicines in Abu Dhabi. The point is that the practice is endemic with various dimensions including gender aspects. It is the present study's standpoint that only well researched strategies will have any chance of succeeding in eliminating or minimizing the practice.

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