MEDICAL PRESCRIPTION ADHERENCE AMONG PATIENT VISITING GYNECOLOGY DEPARTMENT

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ABSTRACT

Objective: The aim of this study was to explore the level of Medical prescription adherence among gynecological patients of Pakistan.

Study Design: Cross-sectional study.

Place and Duration of Study: The study was conducted in Punjab province and data were collected from June 2015 to April 2016.

Material and Methods: This cross-sectional study was carried out in main cities of Punjab province of Pakistan; Lahore, Gujranwala, Faisalabad and Sheikhupura. The survey data was collected from different location of cities. Patients visiting the gynecological and going to chemists for getting the prescribed medicine were selected through probability based random sampling for this study. The questionnaire consisted on the extent to which they adhere to time, dose, frequency and procedure prescribed from their doctors. The questions were asked in native language (Urdu). The data analysis was performed by using SPSS software (Ver.21).

Results: Results of this study, based on sample from four big cities of Punjab province of Pakistan, showed that the level of medical prescription was associated with the age, qualification and background of the patients. Adherence level of patients reporting with rural background was observed higher than the adherence level of patients from urban areas.

Conclusion: Over all the patient require counseling regarding adherence to medical prescription irrespective of the nature of the disease.

Keywords: Gynecological patients, Health care, Medicine adherence, Pakistan, Urban and rural.

INTRODUCTION

Education of patients regarding adherence to medicine prescribed by the doctor has become an important aspect in health care systems throughout the world. The discrepancy between what patients are advised and what they actually take, leads to complications such as unnecessary disease progression, complications both in disease and patients' psychological aspects, thus, resulting in poor quality of life. During last few decades a lot of attention has been paid to improve the adherence rate among patients throughout the world. Adherence has been defined as the extent to which the patients follow the prescription of health care providers[1]. Despite emphasizing the adherence to medications through formal and informal channels of awareness for adherence, the results are still, below the required standards even in developed countries[2]. Results of different research studies show that, although the adherence level of patients has risen a little bit but still requires considerable effort to put in this aspect[3,4]. According to the World Health Organization (WHO), only about 50 percent of patients typically take their medicines as prescribed. Although the problems of non-adherence are based on different types and condition of medicines, the problems are varying in nature and have different percentages of adherence in different diseases. As per research studies, highest adherence level (more than 80%) appears in cancer patients, followed by the patients with infection diseases[5]. Similarly, high percentage of

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adherence to medication was observed in patients with psychiatric problems[6]. Research findings[7] show that about one third percentage of the patients takes non-prescribed medicines.Research studies depict different adherence level in patients bearing asthma problems[8]. Similarly, on the average, less than forty percent of the patients with cardiovascular disease adhere to the prescribed medicine[9]. The literature shows that adherence level in patients varies with diseases (heart, tuberculosis, asthma, liver, cancer) and along with other social and psychological factors. The studies[10-12] highlight different factors attributing to adherence level of different diseases. In developing countries like Pakistan, the adherence level of patients having prescribed medicines, are found almost in the same pattern as of developed countries though there are limited studies highlighting specific behaviors for specific diseases.

Gynecological patients have diversity in their adherence level due to multiple reasons such as education, age, type of disease and patient doctor relationship during treatment. Although, these patients respond to doctors and their prescription but to the best of our knowledge no study has been carried out in Pakistan, highlighting different levels of medication adherence in gynecologic patients. This study, therefore, aims to fill this gap and explores the extent of medication adherence in three shades (High, Medium and Low). This study narrows down its focus and takes into account the patients having gynecological problems. More over the study has been carried out only in main cities of Punjab, Pakistan. This research addresses the level of adherence in the light of following research question; "How the gynecological patients in big cities of Pakistan adhere to medication as prescribed by their health care providers?"

PATIENTS AND METHODS

This cross-sectional study was carried out in four big cities Punjab province of Pakistan; Lahore, Gujranwala, Faisalabad and Sheikhupura. These cities are surrounded by the rural areas and gynecological patients approach these big cities for their treatment. The survey data were collected from different location of cities (urban and rural) with the age range of below 26 – above 45 years during the period of June, 2015 - April, 2016. The data was collected from wide range of age of respondents. The patients' qualification ranged from no qualification to high qualification such as Masters, specialists etc. Their education level was graded in three shades.The patients visiting the gynecological doctors and going to chemists for getting the prescribed medicine were selected through probability based simple random sampling for this study. The patients with invalid prescription were not included in the study. The questionnaire consisted on the extent to which they adhere to time, dose, frequency and procedure prescribed from their doctors. The questions were asked in native language (Urdu) and answers were sorted. The questionnaires were filled by researchers for the uneducated respondents. A total of four hundred and forty four respondents having a valid allopathic prescription from gynecologists participated in this study. The respondents were asked to fill the questionnaires at the spot. Their answers were endorsed in three shades (High, Medium and Low) against their responses. Data were analyzed by SPSS version 21. Frequency and percentage were calculated for the variables. Chi square test was applied for the comparison. A *p*-value 0.05 considered as a significant value.

RESULTS

Out of 444 respondents 336 (75.7%) respondents were from urban area and 108 (24.3%) of the respondents came from rural areas. The respondents of this study came from different qualification levels from no qualification to highly qualified. The respondents who could not read the names of medicine were placed in the category of uneducated (UNEDU). The respondents with high qualification and well conversant with the prescription were placed in the category of highly educated (HEDU) and the

respondents falling in the middle way of these two were named as moderately educated (MEDU). These categories participated in the study with 20%, 34.2% and 45.7% respectively.

The respondents with different age groups participated in the study. The respondents were divided in four age groups from young (below 26 years and old above 45 years). Highest percentage (38.7%) of patients participating in this study consisted on age bracket of 26-35 years followed by respondents below 26 years of age (29.3%). The patients who participated in study with the age brackets (36-45 years) were 56 in number (12.6%) and 86(19.4%) patients, above the age of 45 years. Table-I shows the characteristics of the patients.

Out of total sample of 444 patients, 226 (50.9%) had high level of adherence to medical prescription. One hundred and sixty six (37.4%) had the medium level adherence level to the medicine prescribed by their doctors, whereas, low adherence was observed in 52 patients (11.7%).

Table-I: Demographic characteristics of the patients (N=444).

		Frequency	Percent
Location	Urban	336	75.7
	Rural	108	24.3
Qualification	Unedu	89	20.0
	Hedu	152	34.2
	Medu	203	45.7
Age	Below 26	130	29.3
	26-35	172	38.7
	36-45	56	12.6
	Above 45	86	19.4

Table-II: Cross tabulation of adherence level with location, qualification and age among the patients

			Level of adherence			Total
			High	Medium	Low	
Location* level of adherence						
Location	Urban	% within location	155(46.1%)	129 (38.4%)	52(15.5%)	336(75.68)
	Rural	% within location	71(65.7%)	37 (34.3%)	0(0.0%)	108(24.32
Total		% within location	226(50.9%)	166(37.4%)	52(11.7%)	444(100.0%)
Level of significance: p<.001						
Qualification* level of adherence						
Qualification	Unedu	% within qualification	37 (41.6%)	52 (58.4%)	0 (0.0%)	89 (20%)
	Hedu	% within qualification	86 (56.6%)	56 (36.8%)	10 (6.6%)	152 (34.23%)
	Medu	% within qualification	103 (50.7%)	58 (28.6%)	42 (20.7%)	203 (45.72%)
Total		% within qualification	226 (50.9%)	166 (37.4%)	52 (11.7%)	444 (100.0%)
Level of significance: p<.001.						
Age* level of adherence						
Age	Below 26	% within age	51 (39.2%)	60 (46.2%)	19 (14.6%)	130 (29.28%)
	26-35	% within age	118 (68.6%)	40 (23.3%)	14 (8.1%)	172 (38.74%)
	36-45	% within age	43 (76.8%)	10 (17.9%)	3 (5.4%)	56 (12.61%)
	Above 45	% within age	14 (16.3%)	56 (65.1%)	16 (18.6%)	86 (19.37%)
Total		% within age	226 (50.9%)	166 (37.4%)	52 (11.7%)	444 (100.0%)
Level of significance: p<.001						

The patients belonging to rural areas strongly observed prescription (65.7% with high level and 34.3% with medium level) as compared to the patients belonging to urban areas (46.1% with high level and 34.3% with medium level). Low percentage of patients (15.5%) observed prescription with low level, whereas, non-adherence was not found in patients coming from rural areas (table-II). High percentage of uneducated patients (58.4%) followed prescription with medium level followed by educated patients (36.8%) and moderately educated patients (28.6%). High adherence to medical prescription prevailed in highly educated patients (56.6%) with comparable percentage (50.7%) of patients with moderate level of education, however, low percentage (41.6%) of uneducated patients was observed in this bracket. Results about non adherence to prescription in patients with no education were observed lowest (0%). Overall, the ration of medical prescription adherence to no medical prescription adherence was observed highest in patients with no education (100% vs 0%) followed by highly educated patients (93.4% vs 6.6%) and patients with moderate education (79.3% vs 20.7%).

The majority of the patients with age brackets of 36-45 years and 26-35 years strictly followed the prescription with 76.8% and 68.6% respectively. The patients (39.2%) below the age of 26 strictly observed the prescriptions as compared to the patients, above 45 years of age (16.3%). However, this bracket moderately followed prescriptions with highest percentage (65.1%) followed by age bracket (below 26 years) with 46.2% and age bracket (26-35 years) with 23.3%. The lowest percentage (17.9%) moderately following prescription came from age bracket of 36-45 years. The patients not following the prescriptions suggested by doctors were observed in extremes (below 26 years and above 45 years) with percentage of 14.6% and 18.6% respectively followed by age groups of 26-35 years and 36-45 years with observed percentages of 14.6% and 8.1% respectively.

DISCUSSION

Respondents of different age groups and education level, both from rural and urban areas, participated in the study. The results of this study show that gynecological patients belonging to rural areas have higher level of medicine adherence as compared to rural area patients. The difference in adherence levels in patients coming from rural and urban areas depict the cultural differences[13] in these two segments of patients. In rural areas, though the gynecological patients approaching the gynecologists are lesser in number, but those who come, do adhere to the prescribed medicine. In contrast, the patients coming from urban areas follow prescriptions comparatively with low percentage. This is inferred that adherence level in gynecological patients in these four cities is negatively associated with development level (urban to rural). In rural areas surrounding these cities, a strong joint family system[14] is found which leads them to address treatment process with strong adherence to medication as a group effort of care givers[15] in general. Moreover, the patients and their care givers are mostly not well aware of alternatives of medication and they have a strong belief in their health care providers and they strictly follow their directions.

The behavior of respondents towards adherence was also evaluated based on their qualification level. The respondents were categorized from illiterate to highly educated. It is observed that patients on both the extremes (highly educated and uneducated) have high level of adherence as depicted by[16] that education may increase adherence level to prescribed medicines. The reasons of high adherence may also come from two opposite extremes (fully educated with repercussions of non adherence vs. ignorance to repercussions but strong belief in gynecologists). The patients with moderate education have high level of adherence but with almost equal percentage of these with non-adherence. The highest percentage of non-adherence in these patients, as opposed to other two categories, highlight that either these patients

have high difference of opinion with the doctor or are not convinced to follow doctor based on their immature knowledge. This may be due to the reason that multiple inputs are fed to them either by people surrounding them or by the knowledge collected by them regarding medication, leading them to fiddle with the prescription. There could be other multiple reasons leading them to establish such behavior of non-adherence.

The results, based on evaluation of respondents in relation to their age groups, show that high percentage of respondents adhering the prescribed medicine fall in the age groups of 26-35 years and 36-45 years. The patients below the age of 26 years follow the prescription with equal percentage of high and moderate adherence level, yet with considerable percentage of non-adherence. In Pakistan, majority of the gynecological patients with pregnancy issues fall under the age of 45 and above 26 years with high adherence level. On the average, the females in Pakistan are married below 30 years of age and again the group effort in adherence to medication comes true as everybody in the family is concerned about the new baby therefore, adherence becomes a group effort in these patients. Majority of the patients above 45 years and below 26 years of age moderately follow the prescription with comparatively high percentage of non-adherence in these patients.

Despite difference in adherence level among gynecological patients, the percentage is observed high as compared to the patients with other diseases[2] referring to low percentage of adherence.

CONCLUSION

Gynecological patients in Pakistan have high level of adherence to the medical prescription from the urban and rural areas.

However, it could further be enhanced through education and creating awareness among patients through seminars and social media campaigns.

This study aimed to explore adherence level in gynecological patients only in four major developed cities of one province of Pakistan, therefore, because of difference in culture among different regions of Pakistan; we expect different results of studies if conducted in different regions especially in rural areas with less developed medical health care facilities and rare availability of valid healthcare providers (gynecologists). This study has not incorporated any specific gynecological disease among patients for adherence measurement; therefore, future studies conducted in context to specific diseases may have results differing to this study.

RECOMMENDATIONS

The studies in other areas of Pakistan may be conducted with and without specific diseases by incorporating social and cultural factors. Reasons of non adherence of medication may be explored in future studies followed by suggestions to formulate policy making for effective adherence.

CONFLICT OF INTEREST

This study has no conflict of interest to declare by any author.

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