

Non-Compliance to Doctors' Advices among Patients Suffering from Various Diseases: Patients' Perspectives: A Neglected Issue

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Abstract

Background: An acknowledgement of the patient's perspectives about compliance towards doctors' advices is critical in ensuring better results of medical consultation. The compliance to therapies is a primary determinant of treatment success. The authors found a serious dearth of research on this issue.

Aim: The aim of the study was to determine the frequency & determinants of non-compliance towards doctors' advices among study subjects.

Method: The current community based descriptive cross sectional study was conducted on 230 subjects suffering from various illnesses. The patients were enrolled using convenience sampling. The data was collected on pre-structured Performa. The data comprises of questions regarding Patients compliance to doctor advises, that may be preventive, promotive and therapeutic care.

Results: The mean age of respondents was 36.6 ± 7.4 years. The overall compliance to doctors' advice was seen among 31.2% subjects. Compliance to treatment advice was 35.8%; while towards health promotive advices was 29.5% & towards preventive advices against diseases was 28.4 percent. Seventy three percent of the total compliance was seen to general practitioners in contrast to consultants i.e. 26.4%. Significant association was seen between compliance & older age ($p=0.02$), non-infectious diseases ($p=0.04$), severity of disease ($p=0.01$), oral route of administration ($p=0.00$) & shorter duration of disease ($p=0.00$). The results of association of compliance with gender however remained statistically insignificant.

Conclusion: The study indicated that non-compliance towards doctors' advices is a big public health issue & it should be taken as a hidden risk factor for diseases. The compliance towards doctor's advice was more prevalent for non-communicable diseases compared to communicable diseases. Additionally, fear of side effects and high cost of medicine were two major reasons for treatment non-compliance.

Key words: Non-compliance, compliance, doctors' advice, patients' perspective

Introduction:

The burden of various diseases is on the rise throughout the world including Pakistan. In our country, we face the double burden of infectious diseases & non-infectious diseases. The situation of the global burden of diseases in year 2010 has shown that although more & more people are living longer, but the quality of life is impaired.¹ Globally, the non-communicable diseases account for more than three-fifths of all deaths & nearly 30% of these deaths are avoidable.²

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The situation in Pakistan is not so different; almost 50% of the disease burden among adults is attributable to the non-communicable diseases.³ Additionally, the infectious disease frequency is also very high. According to one study, Infectious diseases in Pakistan are believed to be one of the most pressing medical problems and the major cause of morbidity and premature death.⁴ Even with the correct diagnosis, appropriate treatment for specific condition, number of patients do not get well. Among three proposed categories of patients non responsive to treatment, pharmonic refer to poor adherence to treatment.⁵ Patient compliance describes the extent to which a patient correctly follows medical instructions and advises, this includes therapeutic sessions, self-care and correct use of advises (preventive & procedures) by doctors. Hence, patient compliance management is as important as making correct diagnosis and prescribing appropriate treatment. Pakistan being a very populous developing country with a high rate of illiteracy, non-compliance to the doctors' advices or adherence to the treatment advises, is one of the major

contributing factors. It is well understood that compliance to therapies is a primary determinant of treatment success.⁵The ultimate aim of any therapeutic advice must be the better management of the patient. The management is not just restricted to the medical care but it also encompasses the dietary advices, follow up, as well as many other aspects of patients cure like hygiene, life style changes & avoidance from risk factors for a particular disease. Although there are numerous studies available in the western literature on this issue but there is dearth of research on this issue in developing countries. Therefore this problem should be considered as a hidden risk factor for poor recovery from the diseases and needs to be addressed in research.

Materials and Methods:

A community based descriptive Cross-sectional study was conducted in Mirpurkhas District of Pakistan from January 2015 to May 2015. The convenience sampling was used to enroll 230 patients aged above 18 years of either gender, using pre-designed structured questionnaire. All the new and old (follow up) outdoor patients, regardless of disease, attended qualified medical practitioner clinic in the last three months, giving informed consent were included in our study.

Pre-testing was done on similar setting and subsequently made some changes to the survey's language and style to enhance its comprehensibility. Research assistants with nursing background and related experience of minimum five years were recruited and were given training and orientation about data collection procedure and were also involved in pre-testing of questionnaire. The questionnaire was filled for each participant by research assistant. The questionnaire comprises of three sections. The first section comprises of socio-demographic data regarding age, gender, and education status, section two enquired about nature and severity of diseases and type of advice given by physician such as preventive, promotive and therapeutic. The final section related to questions about reasons to non-compliance.

Data were edited and coded manually before entering in to computer software, double entry was done to reduce the data entry error. The data was analyzed on SPSS software version 16. Mean ± standard deviation was calculated for age. Frequencies and percentages were presented for categorical variables such as gender, socioeconomic status, education, nature of disease, severity of disease, type of physician advise and reason for non-compliance

A chi-square test (χ^2) was applied to find out the association of different socio-demographic variables with the type of compliance and reason for non-compliance (variables mentioned above). A p-value less than 0.05 is considered

significant. p-value of less than 0.01 (< 0.01) is considered highly significant.

Results:

Total two hundred & sixty persons were approached for the filling of questionnaire, but two hundred & thirty persons were able to complete the questionnaire. The response rate was therefore 88.5%. The mean age of respondents was 36.6 ± 7.4 years. Among respondents, 174 (75.7%) were males while remaining 56 (24.3%) were females. One hundred & fifty (65.2%) were illiterate while 51 (22.2%) were primarily educated; remaining (12.6%) were secondarily educated or higher. One hundred & fifty four respondents (66.9%) belonged to lower socio-economic class while 76 (33.1%) belonged to middle class; not a single person in our study belonged to upper social class.

The overall compliance to doctors' advice was seen as 31.2%. Compliance to treatment advice was 35.8%; while towards health promotive advices was 29.5% & towards preventive advices against diseases was 28.4% (Fig.-1).

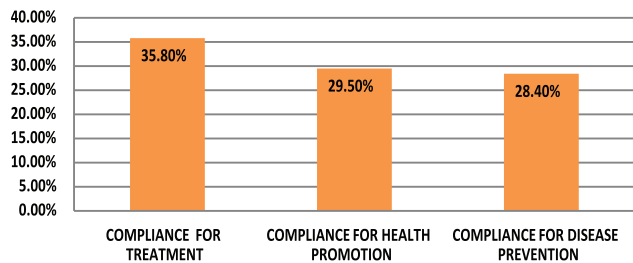


Fig.-1: Distribution of study subjects according to type of compliance

The non-compliance rate was 68.8%. A strong statistically significant association was seen between older age (> 40 years) & better compliance to doctors' advice (p=0.02); (Fig-2).

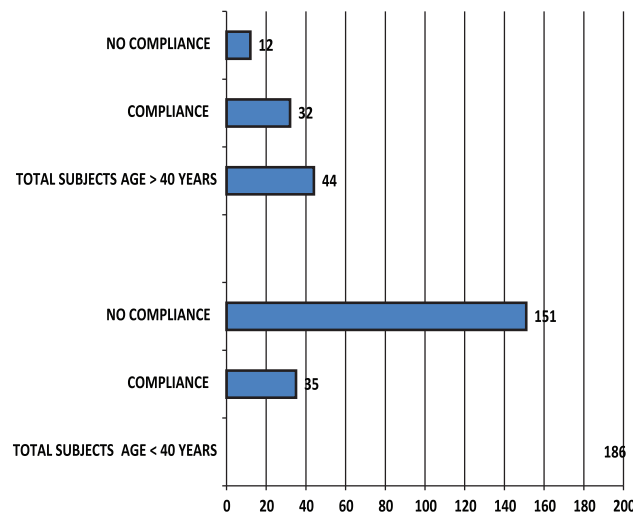


Fig.-2: Age-wise distribution of study subjects

Majority of the compliance was seen in those who seek health care from general practitioners(73.6%) in contrast to consultants' i.e (26.4%) (p=0.04). Surprisingly, the majority of the patients showed compliance towards doctors' advices for non-infectious diseases (72.8%, p=0.04).

The association of male gender with overall compliance was insignificant i.e. 0.06; the same were the results for association of compliance to socio-economic status (p= 0.15) & to educational status of the respondents (p=0.07) (Table I.).

Table I
Relationship of patients' compliance with various demographic variables

S.No:	Demographic Variables	p-value
1.	Age	0.02
2.	Gender	0.06
3.	Educational status	0.07
4.	Social status	0.15

This association was statistically more significant with the severity of the disease (p=0.01). Orally prescribed drugs were seen to have better compliance on the part of patients (p= 0.00); the same was the association for shorter duration of treatment (p=0.00) (Table II).

Table II
Determinants of patients' compliance

Sl. No:	Factors	p-values
1.	General practitioners' advice	0.04
2.	Non-infectious diseases	0.04
3.	Severity of the disease	0.01
4.	Route of administration of prescribed drugs	0.00
5.	Duration of treatment	0.00
6.	Lesser side effects due to prescribed drugs	0.02

Among the various reasons for overall non-compliance, among 158 persons showing non-compliance, fear of side effects (77.2%) & being symptom free (67.1%) were the major reasons; High cost of medicine was the reason for non-compliance among 52.4% patients; while least reported reason for non-compliance was thenon-availability of the prescribed medicine (24.1%) (Fig.-3).

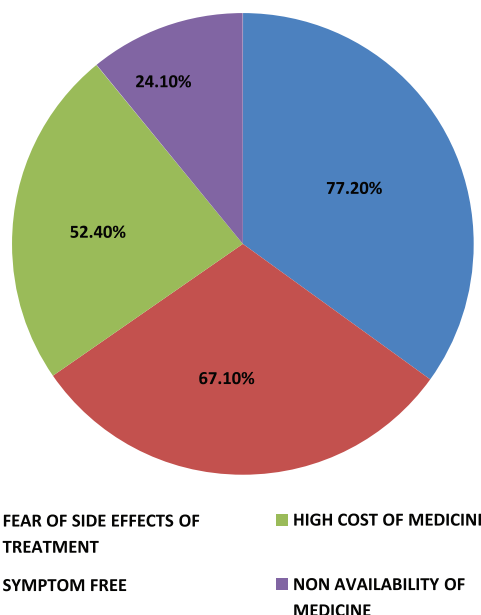


Fig.-3: *Reasons of patients' non-compliance to treatment*

Discussion:

Compliance towards doctors' advices is the most promising factor determining the health outcomes & bringing about improvements in health indicators in a developing country like ours. Unfortunately non-compliance to doctors' advices is the least touched topic as far as operational research in developing countries is concerned. As a matter of fact, there is more need of methodologically sound research on this issue. The World Health Organization defines compliance as the extent to which a person's behavior – taking medication, following a diet pattern, and/or executing lifestyle changes – corresponds with agreed recommendations by a health care provider.⁶ Not taking the doctors' advices seriously may result in treatment failure and unfavorable disease outcome. There is a long list of factors that are observed playing a role in poor compliance by the patients. Going through the literature, we find no single factor reliably predicted as having the significant effect on patients' level of compliance. The patients' behavior in this regard may be influenced by a complicated interplay of factors likeage, educational & socioeconomic status, their beliefs, the interrelationship between patient & health service providers, disease characteristics, and the prescribed drug regimens as well as their duration. The current study was undertaken to estimate the magnitude of the problem of non-compliance and to explore the factors contributing towards this problem of public health importance.

The overall compliance to doctors' advice in the current study was seen as 31.2%. It indirectly revealed non-compliance rate as 68.8%. This is a little higher as compared to that seen in developed countries. The previous record on this issue in developed countries revealed that non-adherence to doctors' advices averaged at about 50 percent.⁷ Another research conducted in Middle East showed that the overall prevalence of therapeutic non-compliance of the study subjects was 67.9%.⁸ The World Health Organization (WHO) report revealed that in developed countries, non-compliance especially towards long-term therapy for chronic illnesses averaged at 50% whereas in the developing countries, even higher rates were evidenced.⁹ These facts highlight the need for finding the real magnitude of this problem prevailing in our set up so that this issue may be addressed in a more consolidated way.

Regarding socio-demographic distribution of the participants, although the mean age of the respondents in our study was 36.6 ± 7.4 years but we found a strong statistically significant association between older age & better compliance to doctors' advice ($p=0.02$). Chan et al also found younger patients being non-compliant.¹⁰ This could be due to the fact that older aged patients were generally more serious about their diseases & therefore they complied the most with doctors' advices.

Regarding gender, despite male preponderance among our study participants (75.7%), the association of gender with overall compliance was statistically insignificant ($p=0.06$). Males were found more likely to follow the advices of their doctors in a study conducted by Chan et al.¹⁰ Contrasting to it, another study revealed females complying towards doctors' advices.⁸ However, some other studies have concluded with more compliance in favor of males.¹¹ This difference may be due to geographical variation in their education, and social factors & it may be due to the fact that gender's association with compliance could not be analyzed without focusing on educational status & social class. The current study concluded with insignificant results for compliance & its association to socio-economic status ($p=0.15$) & to educational status of the respondents ($p=0.07$). Surprisingly, a study conducted on the same issue in United Kingdom showed that patients with a lower level of education had better compliance irrespective of social class.¹² It may be presumed that patients with a lower educational level may have more trust in the physician's advice. However, these results showed that education may not be a good predictor of therapeutic compliance.

The current study revealed better compliance towards treatment advice (35.8 %); while health promotive advices

were followed by 29.5% patients & preventive advices against diseases were taken by 28.4%. This shows that the actions required to get better compliance are needed for the disease preventive as well as for health promotive steps. The patients, who are already suffering from an illness, are usually found more compliant towards doctors' advices till they get cured / recovered from disease. Contrary to this, majority of the healthy persons avoid taking advices of their doctors seriously regarding bringing about improvement in their health & adopting the healthy life styles. Contrasting to it, a recent study revealed that people were more compliant towards health promotive advices.¹³ The health literacy encompasses the awareness & compliance towards health promotive & disease preventive perspectives & it has been long advised by many researchers including Hawk et al.¹⁴ We found more compliance among those patients who seek health care from general practitioners as compared to consultants (73.6% against 26.4%; $p=0.03$).

Overall, many researchers cited higher compliance rates among patients with acute conditions, as compared to those with chronic conditions.¹⁵ The current study revealed results opposite to such findings. It showed higher compliance rate among those who suffered from non-infectious diseases ($p=0.04$). This could be due to the reason that we had incorporated more study subjects suffering from non-infectious diseases as compared to those suffering from infectious diseases; this could have tilted the results. However, one such study endorsed our findings that patients suffering from chronic & non-infectious diseases, in particular those with fluctuation of symptoms (eg, asthma and hypertension) were more likely to follow advices of their doctors.¹⁶ This demands that special efforts and attention be paid to address the issue of non-compliance in acute infectious diseases. It has been rigorously researched that patients most often become non-compliant for chronic diseases, like hypertension, where they do not have any unpleasant symptoms. In one study, the estimates of medication non-compliance were recorded as greatest when the patients were symptom-free.¹⁷ We found a strong statistically significant association of compliance with the severity of symptoms ($p=0.01$). The current study also revealed same level of significance i.e. $p=0.00$ with the oral route of administration of medicine & short duration of treatment. The results were statistically significant with lesser side effects of the prescribed medicine ($p=0.02$).

It has been stated in one of the study with the same objectives that treatments which were easier to take, invited better compliance.¹⁸ The same was also endorsed by Bender & Bender that medications with a convenient way of

administration (eg, oral medication) were likely to make patients compliant.¹⁹The reasons for non-compliance & non-persistence to treatment have been studied through a variety of methodologies. The non-compliance & non-persistence has been defined as a dilemma in which patients decide to stop taking a medication after starting it, without being advised by a health professional to do so. Rodondi N et al had extensively studied this subject & had concluded that the barriers towards effective compliance specifically included poor provider-patient communication, inadequate knowledge about a drug and its use, not being convinced of the need for treatment, fear of adverse effects of the drug, long term therapy & complex regimens that require numerous medications with varying dosing schedules.²⁰

Conclusions & recommendations:

The compliance to therapies is a primary determinant of treatment success. In Pakistan, the non-compliance to healthcare provider's advice is a serious healthcare concern that poses a great challenge to the successful delivery of healthcare to the consumers and it should be taken as a hidden risk factor for diseases. Our study indicated very high non-compliance rate to physicians' advice. The compliance towards doctor's advice was more prevalent for non-communicable diseases compared to communicable diseases. Additionally, fear of side effects and high cost of medicine were two major reasons for treatment non-compliance. Therefore this problem should be considered as a hidden risk factor for poor recovery from the diseases and needs to be addressed. Further investigations using stronger research design with larger sample size required to better study this area.

Conflict of Interest: None

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