

Assessment of the Perceived Patient-Centered and Social and Economic Factors Affecting Patients' Adherence to Prescription

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Abstract: Since the 20th century, therapeutic compliance has been a topic of clinical concern because of the large percentage of non-compliant patient in medical therapy. Non-adherence is a great problem facing the health care system and it places a threat on the economy. The primary aim of this study was to assess the perceived factors affecting patient's adherence to the prescription given to them. The perceived factors emphasized were patient's health literacy, their knowledge on their medication, and the cost of their therapy and income. Fifty outpatients of the University of Santo Tomas Hospital were selected as the respondents through convenience sampling. The perceived factors were assessed by a questionnaire and adherence was assessed by self-assessment by the patients. Chi-Square Test was used to determine whether there is a significant difference between the perceived factors and the adherence to prescription. It showed that there is no significant relationship between health literacy and the patient's adherence to prescription, since their chi-square value of 4.882 is less than the critical chi-square value of 23.685. It also showed that there is no significant relationship between patient knowledge and the patient's adherence to prescription, since their chi-square value of 9.355 is less than the critical chi-square value of 12.592. It revealed that there is a significant relationship between forgetfulness and the patient's adherence to prescription, since their chi-square value of 28.288 is greater than the critical chi-square value of 5.991. It indicates that there is no significant relationship between time commitment and the patient's adherence to prescription, since their chi-square value of 1.786 is less than the critical chi-square value of 5.991. It showed that there is a significant relationship between the patient's income and the patient's adherence to prescription, since their chi-square value of 12.602 is greater than the critical chi-square value of 5.991.

Keywords: adherence, assessment, compliance, outpatient, prescription

I. Introduction

Achieving desired outcomes for a patient in need has always been the ultimate aim of a prescribed medical therapy. These desired outcomes are part of the objective in the management of diseases and conditions. Quality healthcare outcomes depend upon patients' adherence to recommended treatment regimens. Adherence with therapy is a positive indication in which the patient is motivated to undergo a prescribed therapy because there is self-benefit and a positive outcome. However, despite the best intentions of health care providers to inform patients of their need of therapy, positive outcomes might not be achievable if a patient is non-compliant. This shortfall may also have serious and detrimental effects from the perspective of disease management.

Since the 20th century, therapeutic compliance has been a topic of clinical concern because of the large percentage of non-compliant patient in medical therapy. Non-adherence is a great problem facing the health care system and it place a threat on the economy. It can be a pervasive threat to health and well-being. In a study conducted in the United States, patient non-adherence costs the country's economy \$100 - \$300 billion dollars annually which includes avoidable hospitalizations, nursing home admissions, and premature deaths. Moreover, about 75% of the patients were reported as non-compliant.

According to a study conducted by Jin, et al, factors contributing to patient medication non- adherence may be grouped into several categories such as patient-centered factors (demographic, psychological, patient-prescriber relationship, health literacy, patient knowledge, physical difficulties, tobacco smoking or alcohol intake, forgetfulness, history of good compliance); therapy-related factors (route of administration, treatment complexity, duration of treatment

period, medication side effects, degree of behavioral change required, taste of medication, requirements for drug storage); healthcare system factors (lack of accessibility, long waiting time, difficulty in getting prescriptions filled, unhappy clinic visits); social and economic factors (time commitment, cost of therapy and income, social support); and disease factors (disease symptoms, severity of disease).

Decades of research studies agree that successful attempts to improve patient adherence depend upon a set of key factors. These include realistic assessment of patients' knowledge and understanding of the regimen, clear and effective communication between health professionals and their patients, and the nurturance of trust in the therapeutic relationship. Adherence to medical therapy is the key to the management of diseases, so health care providers or professionals must be aware of the factors that affect patient non-compliance and what action they could take in order to decrease the increasing percentage of non-compliant patients.

This study is an attempt to assess the factors affecting patients' adherence to prescription through respondents outside University of Santo Tomas (UST) Hospital Outpatient Center (Lacson corner Dapitan). Its emphasis is on patient-centered factors (health literacy, patient knowledge, forgetfulness) and social and economic factors (time commitment, cost of therapy and income).

II. METHODOLOGY

Research Design

A descriptive research will be carried out for this study. Using this design, different factors namely health literacy, patient knowledge, forgetfulness, time commitment, and income, affecting patients' adherence to prescription will be focused on and made clear.

Subject

The chosen respondents for this study will be 50 respondents outside UST Hospital Outpatient Center (Lacson corner Dapitan). They are preferred because they represent diversity and thus, more or less, correspond to majority of the general population in the Philippines. The researchers believe that the answer of the respondents will be of great help to the study. Furthermore, convenience sampling was used in this research. This type of sampling technique is under non-probability where subjects are selected because of their convenient accessibility and proximity to the researcher. The subjects are selected just because they are easiest to recruit for the study and the researcher did not consider selecting subjects that are representative of the entire population. The researchers prefer this sampling technique because it is fast, inexpensive, easy and the subjects are readily available.

Instrumentation

A questionnaire will serve as the tool for data recovery. It will be composed of five parts: the first four parts will contain series of questions regarding each of the different factors namely, health literacy, patient knowledge, forgetfulness, time commitment and patient's income; the second part will contain a question regarding the patient's adherence to his/her doctor's prescription. This questionnaire that will be utilized for the collection of data will first undergo a pilot testing, to know its errors and to improve its contents. After going through the pilot testing, it will be revised accordingly. The revised questionnaire will be given and explained to the chosen respondents to ensure clear understanding and thus, an accurate response. The researchers will also guarantee the confidentiality of the answers of the respondents. After the respondents have finished answering, the questionnaires will be retrieved. The data collected will be tabulated together and calculated

Data Analyses

Analysis	Statistical Tool
Health Literacy	Chi-square test
Patient Knowledge	Chi-square test
Forgetfulness	Chi-square test
Time Commitment	Chi-square test
Income	Chi-square test

III. RESULTS AND DISCUSSION

The health literacy, patient knowledge, and income of the patients are the perceived factors that may influence their adherence to prescription.

Extent of Perceived Health Literacy Factor with Respect to Patients' Adherence to Prescription

Table 1 shows the frequency of patients who were and were not health literate with respect to their adherence to prescription, designated as always, sometimes, and never.

Table 1. Extent of Perceived Health Literacy Factor with Respect to Patients' Adherence to Prescription

Health Literacy	Always	Sometimes	Never	Total
Had difficulty understanding written information	11	9	1	21
Did not have difficulty understanding written information	17	12	0	29
Had problems learning about the disease because of difficulty understanding written information	9	8	1	18
Did not have problems learning about the disease because of difficulty understanding written information	19	13	0	32
Confident in following the prescription	28	19	0	47
Unconfident in following the prescription	0	2	1	3
Needed someone to help him/her read the prescription	10	9	0	19
Did not need someone to help him/her read the prescription	18	12	1	31

The table shows that out of 21 respondents who had difficulty understanding written information, 11 always adhere, 9 sometimes adhere, and only 1 did not adhere to his/her prescription. However, 29 of the respondents did not have difficulty understanding written information; 17 of them always adhere, 12 sometimes, and no one did not adhere to his/her prescription.

Also, the table reveals that out of 18 respondents who had problems learning about the disease because of difficulty understanding written information, 9 always adhere, 8 sometimes, and only 1 did not adhere to his/her prescription. However, 32 of the respondents did not have problems learning about the disease because of difficulty understanding written information; 19 of them always adhere, 13 sometimes adhere, and no one did not adhere to his/her prescription.

It also illustrates that out of 47 respondents who were confident in following the prescription, 28 always adhere, 19 sometimes adhere, and no one did not adhere to his/her prescription. However, only 3 of the respondents were not confident in following the prescription; no one of them always adhere, 2 sometimes adhere, and only one did not adhere to his/her prescription.

Lastly, the table shows that out of 19 respondents who needed someone to help them read the prescription, 10 always adhere, 9 sometimes adhere, and no one did not adhere to his/her prescription. However, 31 of the respondents did not need someone to help them read the prescription; 18 of them always adhere, 12 sometimes adhere, and only 1 did not adhere to his/her prescription.

Extent of Perceived Patient Knowledge Factor with Respect to Patients' Adherence to Prescription

Table 2 shows the frequency of patients who were and were not knowledgeable with respect to their adherence to prescription, designated as always, sometimes, and never.

Table 2. Extent of Perceived Patient Knowledge Factor with Respect to Patients' Adherence to Prescription

Patient Knowledge	Always	Sometimes	Never	Total
3 Points (Knowledgeable)	12	6	0	18
2 Points	8	4	0	12
1 Point	2	7	0	9
No point (Not knowledgeable)	6	4	1	11

The 50 respondents were asked to answer three questions regarding their knowledge about their medications.

The table shows that out of 18 respondents who answered all three questions correctly, 12 always adhere, 6 sometimes adhere, and no one did not adhere to his/her prescription. While out of 12 respondents who answered two questions correctly, 8 always adhere, 4 sometimes adhere, and no one did not adhere to his/her prescription. Whereas out of 9 respondents who answered only one question correctly, 2 always adhere, 7 sometimes adhere, and no one did not adhere to his/her prescription. However, out of 11 respondents who failed to answer any of the three questions correctly, 6 always adhere, 4 sometimes adhere, and only one did not adhere to his/her prescription.

Extent of Perceived Patients' Forgetfulness Factor with Respect to Patients' Adherence to Prescription

Table 3 shows the frequency of patients who were and were not forgetful with respect to their adherence to prescription, designated as always, sometimes, and never.

Table 3. Extent of Perceived Patients' Forgetfulness Factor with Respect to Patients' Adherence to Prescription

Forgetfulness	Always	Sometimes	Never	Total
Forgetful	0	19	0	19
Not forgetful	23	7	1	31

The table shows that out of 19 respondents who often forget to take their medication, no one always adhere, 19 sometimes adhere, and no one also did not adhere to his/her prescription. However, 31 of the respondents did not have forgotten to take their medication; 23 of them always adhere, 7 sometimes, and only one did not adhere to his/her prescription.

Extent of Perceived Patients' Time Commitment Factor with Respect to Patients' Adherence to Prescription

Table 4 shows the frequency of patients who allotted and did not allot time with respect to their adherence to prescription, designated as always, sometimes, and never.

Table 4. Extent of Perceived Patients' Time Commitment Factor with Respect to Patients' Adherence to Prescription

Time Commitment	Always	Sometimes	Never	Total
Allotted time for their medication	24	15	1	40

Did not allot time for their medication	4	6	0	10
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The table shows that out of 40 respondents who allotted time for their medication, 24 always adhere, 15 sometimes adhere, and only one did not adhere to his/her prescription. However, 10 of the respondents did not allot time for their medication; 4 of them always adhere, 6 sometimes, and no one did not adhere to his/her prescription.

Extent of Perceived Patients’ Income Factor with Respect to Patients’ Adherence to Prescription

Table 5 shows the frequency of patients whose income affects their adherence to prescription, designated as always, sometimes, and never.

Table 5. Extent of Perceived Patients’ Income Factor with Respect to Patients’ Adherence to Prescription

Income of Patients	Always	Sometimes	Never	Total
Income was sufficient to buy the prescribed medicines	1	10	0	11
Skipped taking medication due to insufficient income	26	12	1	39

The table shows that out of 11 respondents whose income is sufficient to buy the prescribed medicines, only 1 of them always adhere, 10 sometimes adhere, and no one did not adhere to his/her prescription.

Moreover, it reveals that out of 39 respondents who skipped taking medication due to insufficient income, 26 of them always adhere, 12 sometimes adhere, and only one did not adhere to his/her prescription.

Relationship between Perceived Factors and Patients’ Adherence to Prescription

Table 5. Perceived Factors VS Adherence to Prescription

Perceived Factors	Test of Significance	X ²	Critical X ²	Decision
Health Literacy	Chi-Square Test	4.882	23.685	Accept Ho
Patient Knowledge	Chi-Square Test	9.355	12.592	Accept Ho
Forgetfulness	Chi-Square Test	28.288	5.991	Reject Ho
Time Commitment	Chi-Square Test	1.786	5.991	Accept Ho
Income	Chi-Square Test	12.602	5.991	Reject Ho

Table 5 shows that there is no significant relationship between health literacy and the patient’s adherence to prescription, since their chi-square value of 4.882 is less than the critical chi-square value of 23.685. This means that the null hypothesis which states that there is no significant relationship between patients’ health literacy and their adherence to prescription is accepted.

Table 5 also shows that there is no significant relationship between patient knowledge and the patient’s adherence to prescription, since their chi-square value of 9.355 is less than the critical chi-square value of 12.592. This means that the null hypothesis which states that there is no significant relationship between patients’ knowledge and their adherence to prescription is accepted.

Table 5 reveals that there is a significant relationship between forgetfulness and the patient’s adherence to prescription, since their chi-square value of 28.288 is greater than the critical chi-square value of 5.991. This means that the null hypothesis which states that there is no significant relationship between patients’ forgetfulness and their adherence to prescription is rejected.

Table 5 indicates that there is no significant relationship between time commitment and the patient's adherence to prescription, since their chi-square value of 1.786 is less than the critical chi-square value of 5.991. This means that the null hypothesis which states that there is no significant relationship between patients' time commitment and their adherence to prescription is accepted.

Table 5 displays that there is a significant relationship between the patient's income and the patient's adherence to prescription, since their chi-square value of 12.602 is greater than the critical chi-square value of 5.991. This means that the null hypothesis which states that there is no significant relationship between patients' income and their adherence to prescription is rejected.

CONCLUSION

Based on the foregoing findings and the hypotheses posited in this study, it is concluded that there is no significant difference between the patients' health literacy, patient knowledge, and time commitment and their adherence to prescription. It is also concluded that forgetfulness and patient's income have something to do with their adherence to prescription.

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