IJCRT.ORG ISSN : 2320-2882

INTERNATIONAL JOURNAL OF CREATIVE RESEARCH THOUGHTS (IJCRT)

An International Open Access, Peer-reviewed, Refereed Journal

Belief Systems And Medication Myths: A Psychological Study On Perceptions Toward Daily Medicine Use In Hypertension And Diabetes In India

Author

Sulaikha Fathima N

Dhruthi S Prasad

Department of Psychology, Jain (Deemed-to-be) University, Bangalore, Karnataka, India

Abstract

Non-communicable chronic diseases like hypertension and diabetes demand prolonged adherence to prescribed medicines. But poor adherence has been observed, especially among Indians. Socio-cultural beliefs and psychological aspects have played a significant role in determining the health behaviors of patients. The current study was carried out to investigate the impact of socio-cultural beliefs and psychological factors like belief in myths, locus of control externally oriented towards health, denial, and fear on medication adherence in patients of hypertension and diabetes. Descriptive and correlational research methodology was utilized in this study, using a sample size of 100 people (50 with hypertension and 50 with diabetes). A structured questionnaire, which comprised the Myth Belief Inventory developed by the researcher himself and questions related to medication adherence, external health locus of control, denial, and fear, was used to collect data. Descriptive statistics, Pearson's correlation, multiple regression analysis, and independent samples t-test were used to analyze the data

collected. The results showed that myth beliefs were moderately prevalent among the participants. There was an important positive correlation between myths and medication adherence ($r = 0.53$, $p < 0.001$), suggesting a complicated interplay of beliefs and behaviors. An external locus of control was also positively correlated with myths ($r = 0.50$, $p < 0.001$). The regression analysis found that denial ($\beta = 0.59$, $p < 0.001$) and fear ($\beta = 0.42$, $p < 0.01$) were strong predictors of myths; denial had the highest coefficient among them. Almost a significant difference was seen between the hypertensive and diabetic samples. This study underlines the importance of tackling psychological aspects to improve compliance with treatment regimens. Programs that help eliminate misconceptions, overcome emotional obstacles, and correct perceptions are vital.

KEYWORDS: Medication Adherence, Myth Beliefs, External Health Locus of Control, Psychological Factor

Introduction

Hypertension and diabetes have become important determinants of morbidity and mortality around the world. In India, there has been an increase in the prevalence of these diseases because of urbanization, lifestyle changes, and demographic trends. Effective management of these diseases depends on taking the medication prescribed by doctors.

Sadly, patients fail to take their medication, leading to health problems, complications, and higher costs of health care. Apart from medical and institutional factors, which contribute to the failure to take medicine, psychological and social factors are equally important.

People develop different attitudes towards medicines, such as concerns about addiction, side effects, and a desire for other types of treatments. These beliefs, often referred to as "medicine myths," influence patient compliance with medication.

Moreover, psychosocial elements such as denial and fear play significant roles in shaping healthy behaviors. Denial may cause individuals to downplay the seriousness of their health condition, whereas fear may lead people to avoid their prescribed medications due to fear of potential risks. Moreover, locus of control is another important element that explains how patients feel about their health conditions. Patients who believe that their destiny or fate lies outside of themselves tend to be less personally accountable for their health conditions.

In this study, researchers seek to investigate the relationship between belief systems and psychosocial elements in shaping medication adherence in hypertensive and diabetic patients.

Review of Literature (ROL)

Medication adherence has been studied extensively in connection with various chronic conditions, with multiple studies revealing the complex nature of the issue. Studies have highlighted the significance of sociodemographic and medical factors as predictors of patient adherence.

However, the role of psychological and belief-based factors cannot be overlooked. Patients' beliefs about medicines, especially their necessity and possible adverse effects, have a crucial influence on whether patients choose to comply or deviate from the prescribed treatment plan. Medication use is often discontinued due to perceived danger and lack of necessity.

Patients' beliefs may also be culturally rooted, especially in a country like India, where traditional and indigenous medicine thrives alongside modern medicine. Some popular misconceptions include "medicines are addictive" and "traditional medicines are more natural and hence superior."

Health locus of control has also emerged as a critical factor in medication adherence. People who are characterized by having an external locus of control tend to attribute their results in terms of health issues to the actions of other people.

Denial and fear have long been explored among other psychological factors in health psychology. Denial will prevent patients from getting diagnoses or treatment. However, on the other hand, fear could act as a motivator or an inhibitor of taking medications.

Nevertheless, most studies have only focused on these determinants in isolation. There is no research that investigates all these components together in terms of influencing medication adherence. In light of this situation, the current study aims to investigate these factors in unison.

Methodology

The present study employed a descriptive and correlational research design to investigate the relationship between belief systems and medication adherence.

Sample

A total of 100 participants were included in the study, comprising:

- 50 individuals diagnosed with hypertension
- 50 individuals diagnosed with diabetes

Participants were selected using convenience sampling and met the inclusion criteria of being diagnosed with the respective condition and currently undergoing treatment.

Tools Used

The following instruments were used for data collection:

- Myth Belief Inventory (self-developed)
- Medication Adherence Scale
- External Health Locus of Control Scale
- Denial Scale
- Fear Scale

Statistical Analysis

Data were analyzed using:

- Descriptive statistics (Mean, SD)
- Pearson's correlation
- Multiple regression analysis
- Independent samples t-test

The internal consistency of the scales was found to be good, with Cronbach's alpha values above acceptable levels ($\alpha > 0.80$).

Results

Table 1: Socio-demographic Characteristics

Variable	Category	Value
Age (years)		49.99 ± 11.37
Gender	Female	54 (54%)
	Male	46 (46%)
Condition	Diabetes	50 (50%)
	Hypertension	50 (50%)

The sample included 100 patients with a mean age of 49.99±11.37 years. Females comprised 54% of the sample, and males 46%. There was an even split between those with hypertension and diabetes.

Table 2: Descriptive Statistics of Study Variables

Variable	Mean	SD
Myth	21.56	7.052931
Adherence	4.00	1.864067
External LOC	16.32	5.913313
Denial	15.25	4.226838
Fear	14.85	4.171512

The average scores for myths were relatively high at 21.56 (SD=7.05), implying that there were moderate levels of misconceptions among respondents. The scores of medication adherence (4.00; SD=1.86) indicated that respondents had relatively moderate adherence behavior. External locus of control, denial, and fear were also moderately present due to their effect on health behavior.

Table 3: Correlation Analysis

Relationship	Correlation	P value
Myth vs Adherence	0.5255205	< 0.001
Myth vs External LOC	0.4979713	< 0.001

It was evident that there existed a significant positive correlation between myth beliefs and medication adherence ($r=0.53$; $p<0.001$). Myth beliefs were also correlated with an external locus of control ($r=0.50$; $p<0.001$), meaning that people with a high level of external locus tended to develop more myths.

Table 4: Regression Analysis

	Estimate	Std. Error	t value	P Value
(Intercept)	6.3912696	3.1272390	2.043742	0.0436900
denial_score	0.5853607	0.1520781	3.849079	0.0002125
fear_score	0.4203354	0.1540951	2.727766	0.0075699

Further analysis using regression indicated that denial ($\beta=0.59$; $p<0.001$) and fear ($\beta=0.42$; $p<0.01$) strongly predicted myth beliefs. Denial was the strongest predictor in this regard.

Table 5: Group Comparison

Comparison	T value	P value
Hypertension vs Diabetes	1.925733	0.0571684

An independent samples t-test conducted to compare groups of patients with hypertension and diabetes produced a marginally significant result (p=0.057). This finding, while insignificant from a statistical perspective, indicates some differences in patterns of beliefs between these two patient groups.

Discussion

The results of the current study offer significant contributions to the understanding of the impact of belief systems and psychological variables on adherence to prescribed medications. The moderate degree of myth beliefs in the participants demonstrates that people are prone to having many misconceptions regarding medications.

The positive association between myth beliefs and adherence confirms the assumption that the formation of certain beliefs has an effect on individuals' behaviors. Although the connection between myths and adherence may seem intricate, it is crucial to consider the process of belief implementation.

External locus of control turned out to be positively related to myth beliefs, which implies that people believing in external factors affecting their lives tend to develop misconceptions. Hence, the importance of instilling in patients' awareness of their responsibilities cannot be underestimated.

The variables of denial and fear turned out to be good predictors of myth beliefs. Denial, in particular, seems to be playing the role of a mechanism for protecting oneself from accepting one's disease condition. This leads to misunderstandings and false beliefs. As for fear, its influence is exerted by means of emotional reactions towards diseases and treatments.

The absence of a significant difference between the two groups of patients shows that these predictors work in almost the same way for people suffering from various chronic diseases.

Summary / Conclusion

This research finds that the belief system and psychology have a very important part to play in determining the level of adherence to medications for patients with chronic illnesses. It is found that

myths, external locus of control, denial, and fear impact the perception and behavior of the patients regarding taking their medication.

These can be dealt with effectively through an integrated psychological, educational, and behavioral approach.

Limitations

- Smaller sample size reduces generalizability
- The use of convenience sampling could have led to bias
- Cross-sectional studies cannot establish causality
- Self-reporting is subject to response bias
- Other confounding variables like socio-economic status were not considered

Future Research

Future research should:

- Larger and more diverse samples
- Inclusion of additional psychological variables
- Longitudinal and intervention-based studies
- Exploration of cultural and regional differences

References

1. Baumgartner, P. C., Haynes, R. B., Hersberger, K. E., & Arnet, I. (2018). A systematic review of medication adherence thresholds dependent of clinical outcomes. *Frontiers in Pharmacology, 9*, 1290.
2. Bakhshi, S., Heidari, S., Zanjirani, S., & Zakeri, M. A. (2023). The effect of Health Belief Model-based education on empowering cardiovascular patients for medication adherence. *Journal of Nursing and Midwifery Sciences, 10*(1), e134214.
3. Corsi, D. J., & Subramanian, S. V. (2019). Socioeconomic gradients and distribution of diabetes, hypertension, and obesity in India. *JAMA Network Open, 2*(4), e190411. https://doi.org/10.1001/jamanetworkopen.2019.0411.
4. Dalal, J. J., Kerkar, P., Guha, S., Dasbiswas, A., Sawhney, J. P. S., Natarajan, S., Maddury, S. R., Kumar, A. S., Chandra, N., Suryaprakash, G., Thomas, J. M., Juvale, N. I., Sathe, S., Khan, A.,

Bansal, S., Kumar, V., & Reddi, R. (2021). Therapeutic adherence in hypertension: Current evidence and expert opinion from India. *Indian Heart Journal, 73*(6), 667–673.

5. Driever, E. M., & Brand, P. L. P. (2020). Education makes people take their medication: Myth or maxim? *Breathe, 16*(1), 190338.
6. Gerland, H.-M. E., & Prell, T. (2021). Association between the health locus of control and medication adherence: An observational, cross-sectional study in primary care. Frontiers in Medicine, 8, 705202.
7. Kaur, G., Chauhan, A. S., Prinja, S., Teerawattananon, Y., Muniyandi, M., Rastogi, A., Jyani, G., Nagarajan, K., Lakshmi, P. V. M., Gupta, A., Selvam, J. M., Bhansali, A., & Jain, S. (2022). Cost-effectiveness of population-based screening for diabetes and hypertension in India: An economic modelling study. *The Lancet Public Health, 7*(1), e65–e73.
8. Patierno, C., Fava, G. A., & Carrozzino, D. (2023). Illness denial in medical disorders: A systematic review. Psychotherapy and Psychosomatics, 92(4), 211–226.
9. Shahin, W., Kennedy, G. A., & Stupans, I. (2020). The consequences of general medication beliefs measured by the beliefs about medicine questionnaire on medication adherence: A systematic review. Pharmacy, 8(3), 147.