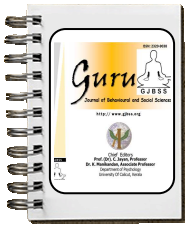
Guru Journal of Behavioral and Social Sciences
Volume 5 Issue 1(Jan –March, 2017)
ISSN: 2320-9038 www.gjbss.org



Construction and Validation of Adherence to Treatment Scale among patients with essential high blood pressure

KARA Said
Researcher, Lecturer, University of M'sila - Algeria

Received: 12 Jan 2017
Revised: 13 Feb 2017
Accepted: 27 Mar 2017

Keywords:

Adherence to treatment, Essential high blood pressure, Scale.

Abstract

The main goal of the study was to construct a scale of Adherence to treatment among patients with high blood pressure. The scale elaborated contains 32items, measure different axes integrated with each other. The psychometric characteristics of the scale were calculated by applying it to a sample of 116 patients with high blood pressure. Reliability of the scale was established by employing split half method, it was found to be 0.85. Validity of the scale was determined from the judgment of expert and Internal consistency validity, also by Statistical validity which is found to be .923. The index of validity and index of reliability indicate that the scale has validity and reliability for measuring the hypertensive's Adherence to treatment

Patients living with chronic diseases must strictly follow their medications to avoid any complication. obviously, healthy people are supposed to practice a primary prevention to avoid getting sick. However; for patients with chronic diseases, they have to apply a secondary prevention in order to avert complications by following healthy behaviors as having their medicines in time, practice suitable physical activity, respect the medical appointments in other words, they have to adhere to their treatment. Most researches have focused on adherence to treatment.

The adherence project has adopted the following definition of adherence to long term therapy, a merged version of definitions of Hayens and Rard which states that the extent to which a person-s behaviors - taking medication, following a diet and/ or executing lifestyle changes, corresponds with agreed recommendations from a health care provider (WHO, 2003, p.3).

A number of rigorous reviews have found that, in developed countries, adherence among patients suffering chronic diseases averages only 50%, the magnitude and impact of poor adherence in developing countries is assumed to be even higher given the paucity of health resources and inequities in access to health care (WHO, 2003, p.7).

Among the most frequent chronic diseases in the world, we find the hypertension. In France, there are 14.4 million patients over than 35 years old living with hypertension, among them, 7.6 million patients follow regular medical consultations, and 6.8 million without having neither medical consultation nor taking medicines (Flash, 2006). The Switzerland league of cardiology diseases demonstrates that there is 1 per 7 adult lives with hypertension, it means there are 500.000 patients with hypertension, 2/3 of them don't adhere to treatment (Fondation Suisse de cardiologie).

According to the Algerian statistical association of hypertension for the year 2003, 35% of people over than 18 years old are suffering essential high blood pressure. It means 7 million patients living with that disease. 1 patient per 5 don't adhere to his treatment (Ait hamlet, 2007).

Purpose of the study

The shortage of scales measuring the adherence to treatment, was the main cause for the researcher to construct a scale measuring this important variable for patient's health. In reality the researcher has found some questionnaires as Morisky and Girered scales that measure

adherence (Adoubi et al., 2006, p. 19), but they measured only the compliance to drugs and neglect the other healthy comportment related to adherence such as (following a diet, respect of the appointments and the practice of adequate physical activity,...). So, the purpose of the present study is to construct a scale of adherence to treatment among patients with essential high blood pressure, then to examine the psychometric properties of the scale in 116 samples.

Method

Participants

The study adopted a convenience sampling design in recruiting 116 patients with hypertension (Male 52, Female 64), aged between 20-79 years old, their mean age was 57 years old, with the majority of them was aged between 60-69 year old, 16.3% of them were widowed, 74% were still married, 4.9% were never married and 4.9% were divorced. The majority of these patients belong to the middle social class with different educational attainment.

Instrument

Adherence to treatment's scale:

This scale isused for measuring Adherence to treatment among patients with essential high blood pressure. The scale has been developed on the basis of literature of adherence to treatment (After going through the existing literature on Adherence to treatment, Definitions, Theories,..), and some questionnaires as Morisky and Girered scales that measure adherence to treatment (Adoubi et al., p. 19).

The scale was constructed by the researcher, it contains 32 items measuring different axes of adherence to treatment integrated with each other, with 4 items are negatives. Initially 32 items were prepared in National language (Arabic) and it was distributed (the scale) among experts in the field of medicine (Cardiology, Internal medicine, Pneumology, General medicine, and in the field of psychology (Professors, Associate Professors and senior researchers who are well versed in psychometrics) and also among psychologists who are working as counselors, trainers etc., to verify the construct. After obtaining the comments/ suggestions some items were rewritten. So as result, the scale consists of 32 items. Since it is in National language (Arabic) the scale was translated in English version, so it was given to three language experts for verifying the structure, appropriateness and quality of each item, So the contents of the items (The meaning and the clarity of the items) were retained and approved.

Scoring

The scale has been constructed to get three alternative responses, Always, Sometimes, Never, with weights of 2. 1. 0. For positive items, and for the four negative items (8-9-29-30) the weights are: Always=0, Sometimes=1, and Never=2. The scale is a self administration without any time limit, The maximum possible score can be 64. The score which indicates the patient's adherence to treatment is 50, it represents approximately the ratio of 80% of the maximum score (the 80% is the threshold has set by WHO to define a hypertensive patient adhering to his treatment). The researcher has also calculated the psychometric properties of the scale.

Try out

To know how will be the patients receive, perceive, interpret and respond each item or any difficulty in responding to the items in the scale, The scale was administered among 52 Hypertensive from some medical clinics in M'sila (Algeria). All most all respondents reported that they have no difficulty in understanding the meaning of the statements, marking the responses etc.

Validity: Validity refers to the extent to which a scale measures for which it is intended to measure. The content validity of the scale was determined from the judgment of experts in the field, (Medicine and health psychology), so the scale was given to these experts (face validity), and they agreed that the items in the scale were relevant to the objectives of the scale measuring.

The validity was calculated also by internal consistency validity, which according to some authors (Cortina, 1993; Cronbach, 1951), means the measure based on the degree of bivariate correlations between different items on the same test (or the same sub scale of a composite test), (Tang, Cui & Babenko, 2014, p. 207). The scale's internal consistency was calculated by the degree of bivariate correlations (spearman brown) between each item and the total score of the scale, Table 1 shows the results.

Table 1
Internal consistency (Pearson Correlations)

Items	Pearson correlation between each item & the total score of the scale (R)	Signification (Sig)
1	0.824	0.01
2	0.512	0.05
3	0.862	0.01
4	0.717	0.01
5	0.619	0.01
6	0.725	0.01
7	0.709	0.01
8	0.774	0.01
9	0.682	0.01
10	0.552	0.05
11	0.895	0.01
12	0.565	0.05
13	0.511	0.05
14	0.552	0.05
15	0.821	0.01
16	0.565	0.05
17	0.725	0.01
18	0.624	0.01
19	0.514	0.05
20	0.782	0.01
21	0.841	0.01
22	0.552	0.05
23	0.574	0.05
24	0.821	0.01
25	0.723	0.01
26	0.741	0.01
27	0.752	0.01
28	0.523	0.05
29	0.545	0.05
30	0.852	0.01
31	0.792	0.01
32	0.842	0.01

From table 1, it can be seen that all the 32 items in the Adherence to treatment scale are statistically significant. It shows that all the correlations between each item and the total score of the scale are statistically significant between .01 - .05 which means that there is a high

internal consistency between the items, and proves that the scale has a high validity. The validity was calculated also after measuring the scale's reliability by statistical validity method which was found to be .92.

Reliability: The reliability is defined as the extent to which a scale is consistent in measuring whatever it measures. So the present study employed Split half method to determine the internal consistency, the spearman brown correlation between 1st part and 2nd part of the scale was found to be 0.85.

The index of validity and index of reliability indicate that the scale has validity and reliability for measuring the hypertensive's Adherence to treatment.

Conclusion

The present research was conducted to construct and validate an instrument to measure Adherence to treatment, the scale of Adherence to treatment among patients with Essential high blood pressure was constructed by the researcher, it contains 32 items, Measuring different axes of adherence integrated with each other. The result and estimation of validity and reliability indicates that the present instrument has a high validity and reliability. It permits to measure exactly the adherence to treatment, So this instrument is useful for assessing patient's adherence to treatment.

References

Abdul Gafoor, K., & Abidha, K. (2014). Construction and Validation of Scale of Parenting Style. *Guru Journal of Behavioral and Social Sciences.* 2(4), 315-323.

Adoubi, K. A., Diby, K. F., Nguetta, R., Yangni-Angate, K. H., & Adoh, A.M. (2006). Facteurs de la mauvaise observance de l'hypertendu en Cote D'ivoire. *Rev. Int. Sc. Méd.* 8(2), 18-22.

Ait-Hamlat, A. (2007). 7M illions d'Algérienss on thypertendus. J*ournald 'Expression.*

Bose, P., & Banerjee, D. (2015). Construction and Standardization of a Scale for Measuring Self Concept of the Learners Studying Through Formal and Distance Mode at all Levels. *Indian Journal of Applied Research.* 5(9), 208-212.

Fondation Suisse de Cardiologie (FSC). (n.d.). L'hypertensionArtérielle: brochure d'information.Trouvéle 21 Octobre 2007, dans

http://www.prevention.ch/hypertensionarteriellel.htm

French League Against Hypertension survey (FLAHS). (2006). Enquetes FLAHS. France.

Manikandan, K. (2015). Construction and Standardization of Self-confidence Scale in Malayalam. *Guru Journal of Behavioral and Social Sciences.* 3(3), 441-449.

Tang, W., Cui, Y., & Babenko, O. (2014). Internal Consistency: Do We Really Know What It Is and How to Assess It?.*Journal of Psychology and Behavioral Science.* Vol. 2, n° 2, 205-220.

World Health Organisation (WHO). (2003). *Adherence to long term therapies*. Switzerland: WHO.

Adherence to Treatment Scale

Dr. KARA Said. (Researcher in Health Psychology)

(2017)

Items	Always	Sometimes	Never
1- Do you buy your prescribed drug?			
2- Are you convinced that the prescribed drug is the most suitable for you?			
3- Do you take your drug with you when you travel or during your absence?			
4- Do you (ask) consult your doctor about how to take the drug during the periods of habitudes changement (fast, travelling,…)?			
5- Do you respect the time of your drug?			
6- Do you feel Anxious whenever you are in delay from taking your drug?			
7-Do you respect your limited medical posology?			
8- Do you neglect having your drug?			
9- Do you refrain from having your medication whenever you feel all right?			
10- Do you ask the view of your doctor in case you are exposed to secondary effect of your drug?			
11- Are you well informed about your illness?			
12- Are you conscious about the complications of the illness if you don't take the drug?			
13- Do you avoid taking drugs that are not prescribed to you?			
14- Do you ask (consult) your doctor if you take drugs of your own prescription (Auto medication)?			
15- Do you renew the medical prescription frequently?			
16- Do you follow the medical instruction exactly?			
17- Do you respect your medical appointment?			
18- Do you do the periodic consultations?			
19- Do you measure your blood pressure frequently?			
20- Do you use blood pressure note book ?			
21- Do you measure your blood pressure before having a hot shower or hot bath?			
22- Do you trust in your doctor?			
23- Do you respect the instructions of your doctor and don't consult other?			

24- Do you take meals with limited salt amounts?			
25- Do you avoid having products that may rise your blood pressure? (Licorice, salted peanuts, …).			
26- Do you avoid fatty foods?			
27 Do you follow a special diet?			
28- Do you avoid the access of having coffee or tea?			
29- Do you take alcoholic beverages?			
30- Are you smoker?			
31- Do you practice physical activity regularly (walking, swimming, riding bicycle,…)?			
32- Do you avoid to be stressed or anxious (avoid stressing situation, going for picnic,…)?			