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RELIABILITY TEST OF NEW QUESTIONNAIRE DESIGNED TO MEASURE SOCIAL WELLBEING OF BREAST CANCER PATIENTS

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ABSTRACT

Introduction: Physical, psychological, social and emotional domains are four major elements that affect quality of life of patients with chronic diseases. The study is aimed to examine the reliability of new instrument that has been developed to measure social wellbeing of patients suffering from breast cancer particularly in Indian context. The study has been conducted to understand the impact due to prevalence of various socio cultural norms in Indian society on patients of breast cancer.

Method: Reliability is a test to recognize the degree to which an instrument generates consistent results. The internal consistency reliability is tested with the help of Cornbach's Alpha.

Result: The new instrument to measure social wellbeing of the breast cancer patients is found to be reliable as value of Cornbach's Alpha is more than 0.75.

Conclusion: The Indian social customs generate huge effect on quality of life of patients suffering from chronic disease like cancer. New instrument should be used as a supportive instrument to measure an important dimension "social wellbeing" of the quality of life of breast cancer patients in detail particularly in Indian context.

Key Words: Quality of life (QOL), Breast Cancer, Social wellbeing, Reliability

INTRODUCTION

The fast and changed life style has given rise to several challenges in society. Health is one of the challenges. Many diseases are sprouting and becoming widespread among general public. Cancer is one of the diseases which is spreading at a very fast pace. This is one of the oldest diseases but till today even in the twenty first century diagnosis of this disease is like a death sentence for a patient and family members of a patient. The treatment of the disease is dreadful for patients physically, emotionally, psychosocially and financially. Diagnosis of this disease has its impact on the QOL of a patient. Most often treatments for a chronic disease like cancer particularly in advanced stage fail to cure the illness and there may be very trivial benefits gained at the cost of taking harmful and toxic medicines and painful treatments. In this scenario, measurement of QOL in cancer patients has become essential requirement for assessment of health outcome. Surat is one of the fastest growing cities of India and facing problems like other growing cities. It is becoming health care centre in South Gujarat region. Surat has all the facilities for treatments for cancer patients. So, study is carried out in Surat city.

The methodological issues were discussed regarding assessment of QOL of cancer patients by Aaronson. [1] He was one of the firsts to identify that measurement of HRQOL in cancer patients must cover at least functional status, disease symptoms, psychosocial status, and social functioning. Meas-

urement of health related quality of life (HRQOL) is more critical in these patients. [2] Sometimes this evaluation offers meaningful ways of finding consequence on wellbeing particularly when treatment is not feasible in chronic illness. [3] Initial instruments to capture QOL of Patients were objective in nature. Karnofsky Performance Scale (KPS) was one of the first instruments developed in 1947 to capture condition of patients beyond clinical parameters. Then over a period of time the development took place in QOL instruments. The concept of QOL was accepted by the medical fraternity in 1970. Here need of measurement instrument for assessing QOL of patients suffering from chronic disease evolved which included subjective aspects too. Quality of Life Scale (QOLS) is one example that covers five domains related to QOL; material and physical well-being, relationships with other people, social, community and civic activities, personal development and fulfilment, and recreation. The development of second generation of questionnaire underway in late 70's of past century. These instruments were sound in capturing physical functioning and psychological indicators, distress and satisfaction in life. Sickness Impact Profile (SIP) and Nottingham Health Profile (NHP) are two of the examples.

The next generation of measurement instruments were developed based on these preliminary activities of constructing QOL instruments. These versions of instruments were stronger in capturing subjective aspects of QOL. SF-36, EORTC, FACT-G, EQ-5D are some of the examples of these instruments. These are multidimensional questionnaires to measure quality of life. Consider the example of one of the most popular and reliable instrument EORTC. European Organisation for Research and Treatment of Cancer (EORTC) is a non-profit organisation founded in 1962 with the objective to conduct, develop, coordinate and stimulate cancer research in Europe. EORTC had developed standard structured disease specific questionnaires to measure QOL in cancer patients. Like these many other instruments were evolved.

Need of New Instrument

In previous century researches on analysis of QOL were largely limited to descriptive statistics. Initially in medical science interest of performing clinical trials were objective in nature as the primary outcomes of these trials measured only survival, cure and biological response to treatment. In recent times, equal attention is given to the subjective indicators of QOL like physical well-being, social well-being, psychological and emotional well-being, pain, fatigue and other symptoms which arise due the treatment. With the help of advanced statistical tools, analysis of QOL has become more reliable. Some of the conceptual models include Physical well-being, Functional well-being, Emotional well-being and Social-well being as the four major areas which affect the QOL of a patient suffering from chronic disease. In this regard separate instrument is required to measure social wellbeing in detail. The women survivors of breast cancer need social support when they are health anxious, therefore Multidimensional Scale of Perceived Social Support (MSPSS) was used to measure the adequacy of social support in breast cancer patients. [5] The effort made to develop social support battery as support of familiar people construct impact on QOL of patient that contained 19 functional support items to measure five dimensions of social support: emotional support, informational support, tangible support, positive social interaction and affectionate support. [6]

The socio-cultural setting in India is unique compared to the rest of the world. Here social responsibility and family synchronization are at priority for any person. Prevalence of this social culture and custom influences the QOL of patients of chronic diseases. The social wellbeing can partially be measured by available instruments as it captures multi-dimensions of QOL. To measure effect of variables of social well being on QOL of women suffering from breast cancer in detail, effort has been made to develop a new instrument which includes many variables that affect QOL of patients in Indian social context. Importance is given to social interactions, relations and support which create huge impact on QOL of patients positively and negatively. The basic objective to analyze QOL of a patient is to recognize the benefit of therapeutic care and wellbeing of a patient. Advance statistical analysis can help to identify the difference between the opinion of clinician and patient about the wellbeing of patient. The new instrument is presented in annexure.

STATISTICAL ANALYSIS

Reliability of the Instrument

Reliability can be explained as the degree to which an instrument generates consistent results. There are four types of reliability. First is Inter rater reliability that analyses the degree of how different investigators give consistent estimates of the same phenomenon. Second is Test-retest reliability that analyses consistency of an instrument at different points of time. The limitation here is that practically it may be difficult to distinguish measurement error from real changes in QOL. The third is Parallel forms reliability that analyse the consistency of the results of two sets created in similar way from same content. The fourth is internal con-

sistency reliability which analyse consistency of the results across items within test. Here single measurement instrument is administered to a set of individuals at one particular point of time to estimate reliability. As a result we check the reliability of the instrument by estimating how well the items that reflect the same construct yield similar results. We can judge how consistent the results are for different items for the same latent within the measure. There are a wide variety of internal consistency measures that can be used. Average inter item correlation, Average item total correlation, split half and cronbach's Alpha are the ways of checking Internal consistency reliability. Cronbach's alpha is an estimate of measuring internal consistency of the instrument. It measures how a set of items are strongly related as a construct. It is generally used to measure degree to which a set of items measure a single one-dimensional latent construct. In split-half reliability we randomly divide all items that assert to measure the same construct into two sets. Cronbach's Alpha is mathematically equivalent to the average of all possible split-half estimates.

RESEARCH METHOD

A brief overview of the methods in which the research is carried out has been explained briefly below.

Study Design and Data Collection: This is a cross sectional study. The study was conducted in Surat city on women survivors of breast cancer. Here patients of breast cancer come from whole south Gujarat region as well as western part of India for treatment. Majority of the respondents included in the study are residents of Surat city or they have been living in the outskirts of Surat city.

Sampling Method: This is a multicentre study. The hospitals have been stratified in three categories: private clinic, trust hospitals and government health centre. Majority of the patients are selected through convenience sampling method. Very few patients are selected by snawball sampling method. The data is collected through primary source using structured questionnaire. The size of the sample is 318.

Inclusion Criteria for Respondent and Instrument: The women survivors of breast cancer of age more than 18 who were receiving treatment for breast cancer in different cancer hospitals of Surat city were selected. The respondents from all socio-economic profile were included in the study to generate proper idea about the instrument. The new instrument to measure social wellbeing of the breast cancer patients has been used. The reliability of the instrument is checked by cronbach's alpha.

RESULT

Data was gathered from 318 patients. Table 1 provides the detail about the data resources. Out of 318 patients 144 patients were surveyed from private clinics, 118 from government hospitals and 51 from trust hospitals. Only 5 patients were surveyed through reference. The socio economic profile of patients is given in table 2. The women included in study having age below 51 were 144 and 174 women were of age above 50. Out of 318 respondent 61 (19.20) were illiterate, 195 (61.30) were studied up to different level of school, 53 (16.70) respondents were graduates and 9 (2.80) patients were post graduates. Only 7 (2.20 percent) women were unmarried and 40 (12.60 percent) women were widowed or divorced. Rest 271 (85.2 percent) patients were married. The 71 (22.33 percent) patients were from segment of lower income group, 162 (50.94 percent) patients were from group of middle class and 85(26.73 percent) patients were of elite class.

Table 1: Profile of hospital included in the study

Hospitals	Frequency (n=318) (%)
Private Clinic	144 (45.3)
Government Hospital	118 (37.1)
Trust Hospital	51 (16)
Reference	5 (1.6)

Table 2 Demography profile of the patients (n=318)

Profile	Frequency (%)
Age of the patients	
50 or less than 50	144 (45.3)
More than 50	174 (54.7)
Education	
Illiterate	61 (19.2)
School	195 (61.3)
Graduate	53 (16.7)
Post Graduate	9 (2.8)
Marital Status	
Never Married	7 (2.2)
Married	271 (85.2)
Widow/Divorce	40 (12.6)
Income Level	
Lower Class	71 (22.3)
Middle Class	162 (50.9)
Upper Class	85 (26.7)

Table 3 Reliability Statistics

Cronbach's Alpha	No. of Item
0.773	17

This paper examines the internal consistency reliability of a new instrument developed to measure social wellbeing of breast cancer patients which affect their QOL. This is a self-report designed measure that includes 17-items which measure social

functions like social layoff, social support and social contact. Internal consistency reliability estimates for the 17 multi-item scales exceeded 0.75. Cronbach's Alpha statistics has been applied on the data to test reliability of the new instrument. The instrument can be considered to be reliable as value of the Cronbach's alpha is 0.773. Thus, the result of this study provides support for the reliability of the new instrument.

DISCUSSION

The intention of assessment of health related quality of life is to offer more accurate analysis of individuals' wellbeing. Second goal is to understand what benefits and impairment that may result from treatments.[4] Many times the opinion of doctors and patients differ significantly about the wellbeing. The scientific and statistical analysis of QOL can help professionals to bridge this gap. More efforts help us to make QOL data clinically significant as many technical questions cannot be answered appropriately without ample measurement of QOL. In this regard multi item constructs, reliability of instrument and practical utility are the basic requirements of assessment of QOL. Multi dimensional instrument reduce the difficulty of handling many instruments to capture different aspect of QOL but at same time it reduce the responsiveness to get detailed view on effect of particular dimension on health care. To get precise image about the particular facet of QOL, separate instrument is indispensable which capture that facet in detail.

CONCLUSION

In India discussion of cultural issues with respect to health has varied perspectives. Here, family and friends are equally important to patients like the doctors and treatment for them. The isolation of patient is never considered whatever maybe the seriousness of the illness as in Indian culture visit of friends and relatives to meet a patient is inevitable and unavoidable even if the patient has been hospitalized and requires intensive care. Sometimes negative and repetitive talks on illness or disease with patient or with family members become a nuisance. They discuss similar cases and adverse effects of treatment and their illness. The negative stories of similar type of cases disturb the mind of patients and caretakers. Conventionally in India household work is generally done by the female member of the family. It is really challenging to manage the routine activities and to cope up with other family members when she is passing through such a trauma. These variables of social function which affect the QOL of a patient are not captured adequately in available instruments. So, effort has been made to develop new questionnaire which could measure these problems faced by the patients and its reliability has also been checked. This instrument should be included in a support of multi dimensional instrument to measure social wellbeing of patients in detail particularly in Indian context. Study should be carried out to get more dependable result in other part of the country.

Annexure : Refere Page No. 420

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