

# RELATIONSHIP BETWEEN OBJECTIVE AND SUBJECTIVE QUALITY OF LIFE MEASURES

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## **Abstract**

### **Introduction**

Arguments exist on the agreement between objective and subjective QoL construct measures. This study determined the relationship between the objective and subjective QoL constructs and the socio-demographic correlates of QoL.

### **Methods**

Data was collected using the fifth edition of the Comprehensive QoL (Adult) questionnaire from 10 tertiary health institutions located in 8 cities in Nigeria. The study involved 191 (71 patients and 120 apparently healthy) participants. Data was analyzed using Spearman's Correlation Coefficient, Kruskal-Wallis, Mann-Whitney-U test and McNemar's test.

### **Results**

Participants were aged  $59.9 \pm 11.5$  with objective and subjective QoL scores of  $71.2 \pm 9.2$  and  $49.2 \pm 12.1$ . There was no significant correlation between objective and subjective QoL scores ( $p > 0.05$ ). None of age, gender, occupational status, marital status or educational attainment had any significant effect ( $p > 0.05$ ) on QoL.

### **Conclusion**

It was concluded that no significant relationship exists between subjective and objective QoL measures. Therefore, each axis should be considered to reflect the true state of individual QoL.

### **Key words**

Subjective quality of life, Objective quality of life, Life satisfaction.

## **Introduction**

Quality of life is an individual's perception of his or her position in life taken in the context of the culture and value systems in which he/she lives in relation to his/her goals, expectations, standards and concerns (WHO Group, 1999). It has also been defined as the possibility for an individual to take control of the outcomes of his/her life (Dissart & Deller, 2000) and as the subjective perception of satisfaction or happiness with life in domains of importance to the individual (Bowling, 1995; Leidy et al, 1999).

The quality of life construct has a complex composition, so there is neither an agreed definition nor a standard form of measurement. It is a concept that is often misunderstood and misapplied (Claussen, 2004). Not only do different disciplines define it differently, but the issue of cross-cultural measurement also affects a stable and lasting definition (Claussen, 2004). Therefore, there is no single definition of the quality of life that has become a standard. This could be due to the fact that there is no external criterion of the quality of life against which measures could be tested (Hunt, 1997). Different settings adopt the term quality of

life for different purposes, each of them using different kinds of assessment (Pais-Ribeiro, 2004). This problem is due to the fact that the quality of an individual's life is bound up with so many dynamic and complex interactions and idiosyncratic personal values that the notion of an average quality of life may not make much sense (Hunt, 1997). Romney, Brown and Fry (1994) offer explanations for this which includes that the psychological processes relevant to experience of quality of life can be described and interpreted through many conceptual filters and languages; the concept of quality of life is degree value laden; that the concept embodies the understanding of human growth and development processes, the average life span of individuals within communities, and the extent to which these psychological processes are influenced by environmental factors and individual value systems.

The theoretical definitions of the related concepts of happiness, well-being, the 'good life', and the quality of life arouse much conceptual confusion and preoccupy a wide range of disciplines (Veenhoven, 1991; Argyle et al., 1995; Bowling, 1995, Bowling & Windsor, 2001). Generally, the only point of agreement among theorists and researchers is that the quality of life is a multi-dimensional construct comprising both objective and subjective factors (Cummins, 1996). It has been suggested (Allison, Locker & Feine, 1997) that the quality of life is best interpreted as a dynamic construct, because personal priorities and satisfactions in life vary as a result of changes of both objective and subjective factors. Furthermore, people's personal frames of reference vary among people in response to a combination of their current experiences and the salience of previous experiences.

Despite the difficulty in defining and measuring quality of life, the importance of the effort is obvious, given that the findings from quality of life research are directly relevant to the fundamental concern of societies and individuals (Wolfensberger, 1994; Diener & Suh, 1997; Claussen 2004). However, during the last two decades, two main scientific approaches have been used in defining quality of life. These are the objective or social indicators, and the measurement of subjective well being (Diener & Suh, 1997). Objective quality of life is

achieved through measurements that reflect people's objective circumstances in a given cultural or geographical unit (Diener & Suh, 1997). Objective indicators can be relatively easy to define and quantify without relying on individual perceptions (Diener & Suh, 1997). The measurement focuses on modifiable aspects of life such as the degree to which basic needs are met, and the degree of social attainment (Shallock et al, 2002).

Subjective quality of life has been defined as the perception of satisfaction or happiness with life in domains of importance to the individual (Leidy, Revicki & Geneste, 1999). It recognizes individuals' own internal judgments of well-being, rather than what policy makers, academia or others consider important and captures experiences that are important to the individuals (Diener & Suh, 1997). Subjective measures tend to correspond more closely to people's value systems than objective measures do (Claussen, 2004). However, a major weakness of subjective measurement is that it may not fully reflect the objective quality of community life in a location or population (Diener & Suh, 1997). Individuals may report having a high life quality even if they are in poor health or live in absolute poverty, which may be due in large part to individual's temperament and personal relationship (Claussen, 2004). Most social indicators are indirect measures of how people feel about their life conditions, whereas subjective measures provide important additional information that can enhance and validate the data provided by objective indicators (Claussen, 2004). Subjective measures also tend to correspond more closely to people's value system than objective measures do (Claussen, 2004).

In comparing the objective and subjective quality of life, it has been said that quality of life is the difference between a person's expectations (objective quality of life) and actual experience (subjective quality of life). Authors (Wolfensberger 1994; Cummins, 1997; Shallock et al, 2002; Claussen 2004) have argued that the objective quality of life may not reflect an individual's perception as it only measures the societal norms and values. Diener and Suh (1997) also opined that objective measures only measure those attributes that researchers and academia considered important and not the mind of an individual.

Therefore there is need to find if there is any significant relationship between the objective and subjective quality of life measures. This study therefore determined the relationship between the objective and subjective quality of life constructs and the socio-demographic correlates of quality of life.

### Method

The instruments for this study was administered to 202 participants (102 males and 100 females) who were workers (127) and patients (75) in 10 tertiary health institutions located in 8 major cities in southwestern Nigeria. They were selected among the patients of various clinics and staff of the health institutions using simple random sampling technique. They were all proficient in English. Ethical approval was obtained from the joint committee of the University of Ibadan and the University College Hospital, Ibadan, Nigeria (UI/UCH) Institutional Review Committee before embarking on the study. Informed consent was also obtained from each participant. This was attached as an introduction page to each of the questionnaires. The population was chosen to give room for assessment of heterogeneous set of population (apparently healthy and ill) to allow for generalization of the results obtained.

The quality of life of the participants was assessed using the fifth edition of the Comprehensive Quality of Life adult (COMQOL-A5) questionnaire (English version). This instrument was chosen for its ability to measure quality of life in two perspectives: societal referenced rating (objective quality of life) and self referenced rating (subjective quality of life). The questionnaire has two axes: objective and subjective. The objective axis asks for some factual information about life relative to the environment (section a). The subjective axis is a product of two sections [importance (section b) and satisfaction (section c)]. Section 'b' asks how important some issues of life are to the subject, while section 'c' asks about his/her satisfaction to those issues (Cummins 1997). Each of the sections has seven domains in each of the axis, which are Material, Health, Productivity, Intimacy, Safety, Community, and Emotion. It consists of one additional domain (spiritual) in the subjective axis (sections b and c). However, the spiritual domain has only been utilized as an additional domain within the Australian and Nigerian populations (Cummins

1997; Akinpelu & Gbiri 2009). The measurement of the objective quality of life domain is achieved by obtaining an aggregate score items in each domain. The measurement of each subjective quality of life domain is achieved by a satisfaction score of that domain which is weighted by the importance of the domain for the individual (Cummins 1997). The full administration of the scale yields two measures of life quality that are quite separate from one another. This instrument has been used in different countries (Akinpelu & Gbiri, 2009) with satisfied psychometric properties (Cummins, 1997).

The socio-demographic details (gender, age, occupational status, highest educational status and marital status) of the participants were obtained with another instrument attached to the COMQOL-A5. The questionnaires were distributed and the completed ones received in enclosed envelopes through the intermediaries who were staff of the health institutions. Kruskal-Wallis was used to compare the quality of life across each of age group, occupational status, educational qualification and marital status. Mann-Whitney U tests was used to test gender influence on quality of life while McNemar's test was used to compare the objective and subjective quality of life of the participants.

### Results

Out of 202 responses, 191 (97 males and 94 females) were valid (94.5% return rate) comprising 120 apparently healthy and 71 ill individuals. Their age ranged between 28 years and 94 years with a mean age of  $59.9 \pm 11.5$ . Their mean total subjective and total objective quality of life scores were  $71.2 \pm 9.2$  and  $49.2 \pm 12.1$  respectively. Most of the participants (102) were married while 53 were still single with 54 between 40-49 years and 37 between 30-39 years (Table 1). More than a quarter (59) of the participants had postgraduate education while 72 had university education with 73 being professionals and 59 skilled workers (Table 1). None of age, gender, occupational status, marital status or educational attainment had any significant effect ( $p > 0.05$ ) on quality of life ratings (Table 1).

There was no significant relationship ( $p > 0.05$ ) between the total objective and the total subjective quality of life scores (Table 2). In each of the domains of the objective axis there was no significant relationship ( $p > 0.05$ ) with those of their

**Table 1: Comparison of the Quality of Life (QoL) of Participants across age groups, gender, educational qualification, marital status and occupational status.**

Variable	Total Objective QoL		Kw-Value	p-value	Total Subjective QoL		Kw-Value	p-value
	Mean	SD			Mean	SD		
<b>Age Group (Years)</b>								
< 30 (n=26)	35.4	21.1	2.6	0.5	62.2	10.2	6.2	0.1
30 – 39 (n=37)	36.6	20.7			66.2	14.3		
40 – 49 (n=45)	36.3	20.2			66.3	15.3		
50-59 (n=35)	41.7	5.2			68.5	10.1		
60-69 (n=32)	42.6	8.3			69.5	7.6		
>70 (n=16)	46.5	4.6			72.4	8.1		
<b>Occupational Status</b>								
Professional (n=73)	35.4	23.1	2.5	0.5	62.2	13.1	6.1	0.1
Skilled (n=59)	42.0	5.2			67.3	9.1		
Semi-skilled (n=39)	42.3	5.3			68.5	11.6		
Non-skilled (n=21)	46.6	9.6			71.3	3.1		
<b>Educational Attainment</b>								
Post Graduate (n=59)	36.8	20.1	2.2	0.6	63.2	12.1	6.4	0.2
University (n=72)	43.5	5.4			68.1	10.1		
Tertiary (Non-University (n=34)	41.7	5.2			67.8	12.1		
Secondary (n=16)	45.8	9.8			72.1		3.3	
Primary (n=10)	47.5	9.6			73.4	13.1		
<b>Marital Status</b>								
Single (n=53)	36.4	20.1	2.5	0.5	64.2	10.1		
Married (n=102)	43.1	6.2			68.3		8.1	
Separated (n=18)	43.4	5.3			66.5	12.6		
Widowed (n=19)	47.7	8.6			70.3		4.1	

p<0.05p

**Table 2: Correlation between the Objective and Subjective Quality Of Life (QoL) Scores of Participants.**

DOMAIN	OBJECTIVE QoL		SUBJECTIVE QoL		p-VALUE
	Mean	SD	Mean	SD	
MATERIAL	41.2	19.7	72.0	17.4	0.32
HEALTH	38.9	18.2	50.4	27.1	0.41
PRODUCTION	38.23	16.3	68.5	17.0	0.54
INTIMACY	70.52	22.0	71.9	19.6	0.44
SAFETY	68.7	13.4	69.8	19.9	0.33
COMMUNITY	26.1	19.2	58.0	20.2	0.43
EMOTION	19.8	13.4	67.0	23.3	0.52
TOTAL QoL	42.0	12.9	67.8	10.6	0.14

**Table 3: Comparison of Subjective Quality of Life (QoL) Scores between Stroke Survivors and Apparently Healthy Individuals.**

Domain	Females		Males		U-Value	Z-Score	p-Value
	Mean	SD	Mean	SD			
Material	72.0	16.4	74.1	8.2	675.5	-1.61	0.11
Health	80.4	24.1	85.8	11.8	712.5	-1.80	0.12
Productivity	68.5	16.0	70.3	12.1	2634.0	-1.79	0.10
Intimacy	71.9	12.2	74.7	7.3	314.0	-1.69	0.09
Safety	69.7	16.9	70.6	12.6	175.5	-1.51	0.13
Community	61.0	10.2	65.7	14.7	157.5	-1.70	0.11
Emotion	67.7	19.3	69.7	8.9	555.0	-1.65	0.11
Spiritual	77.3	13.6	76.9	11.4	435.0	-1.53	0.08
Total QoL	72.8	11.6	74.2	7.4	156.0	-1.73	0.11

corresponding domain of the subjective axis (Table 2). The participants' total axis and domain specific scores in the subjective axis were significantly higher than their scores in the objective axis ( $p < 0.05$ ). Gender has no significant influence on quality of life rating (Table 3).

**Discussion**

In this study no significant correlation between the objective and subjective quality of life rating was found and revealed that one may rate himself/herself high in quality of life spectrum despite living a lower life quality relative to his/her environment. This finding corroborates that of previous authors that an individual's own perception of quality of life (subjective well-being), may differ from the societal expectation (objective measure or social indicator) (Astrom, et al, 1993; Duncan, et al, 1997; Angeleri et al, 1993; Kwa et al, 1996; Sacco, 1997; Wyller et al, 1998), who have reported This may however be culturally dependent

as quality of life of an individual depends external factors such as culture, environment and belief system (WHO Group, 1999). In Nigeria, people may decline negative confession about themselves for reasons varying from religion belief to expectation and myth (Akinpelu & Gbiri, 2009). Studies have shown that religiously (spiritual) inclined people may continue to confess positive even when things are not favourable (Akinpelu & Gbiri 2009). This may have informed the difference in the objective and subjective quality of life ratings.

The result of this study may have showed that people's feelings cannot be judged by external factors which the objective quality of life measures. It also showed that people's perception might not reveal the true state of the individual. This finding corroborates previous reports by Wilk (1999) who concluded that quality of life cannot be measured from external factors because it is all about individual experience. It also supports the

summation of Diener and Suh (1997) that objective quality may not be reflective of people's experience of well being; therefore, it should be assessed separately from subjective quality of life. The result of this study also may infer that a person may be living in an affluent community and still be expressing an experience of abject poverty. Likewise, a person may express high quality of life despite living in stinking poverty.

Subjective measurement has been said to focus on the key aspects of life that can be improved upon such as the degree to which basic needs are met, and the degree of materials and social attainment (Schalock et al, 2002). This can only be deduced if researchers and policy makers recognize the importance of subjective assessment in their measurements and planning. It is therefore important for researchers to recognize individuals own internal judgment of life rather than making an inaccurate conclusion of life experienced through societal num-referenced measures (objective quality of life). Researchers, professionals and clinicians involved in rehabilitation of patients/clients and policy makers should see the need to hear from the person directly involved during their assessment or measurement of life experiences. It may be very interesting to know how an individual lived within a community. This may afford researchers and clinicians the opportunity to set patient/client oriented goals during rehabilitation programme planning. It may also help policy makers to provide programme that are suitable for the end users.

That the participants had significantly lower total quality of life scores in the objective than in the subjective axes shows that there is no objectivity in objective indicators as it is based on the subjective opinion of those observers or researchers and not on the life experience of an individual in a given setting. Therefore it is an individual that knows how he/she feels and reserves the absolute right to express it. This has been previously noted (Carr, 2001; Claussen, 2004). Quality of life may be difficult to judge externally or in reference to the society as the objective measures do. This finding is in agreement with previously published studies (Cummins, 1997; Allison et al, 1997; Wyller et al, 1998; Daltroy et al, 1999; Ahmed, 2004; Akinpelu and Gbiri, 2009) that concluded people scored

higher in subjective quality of life. That none of age, gender, occupational status, marital status or educational attainment had any significant effect on quality of life ratings shows that quality rating is an individualized perception. This has been previously reported (Cummins, 1997; Allison et al, 1997; Wyller et al, 1998; Akinpelu & Gbiri, 2009). This shows that there is no inference in quality of life, however it can be projected.

## Conclusion

This study has been able to substantiate that there is no relationship between objective and subjective quality of life ratings. Hence, they measure different aspects of life of an individual. Quality rating is an individualized perception and is not affected by socio-demographic factors.

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