

Adaptation and translation of the menopause-specific Utian Quality of Life (UQOL) scale to Yoruba language using middle-aged women attending a clinic in Nigeria

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Abstract

Objective: The main objective of the study is to translate and adapt the menopause-specific Utian Quality of Life (UQOL) scale to Yoruba, an indigenous Nigerian language, using middle-aged women attending a Family Medicine clinic in Nigeria.

Methods: A total of 322 middle-aged Nigerian women at various menopausal stages were recruited for the study. Their menopausal status was categorized using the Monash Women's Health Program Menopausal Staging Algorithm into pre-, peri-, and postmenopausal groups. The UQOL Yoruba version (YUQOL), Menopause Rating Scale (MRS), and a semistructured sociodemographic questionnaire were interviewer-administered to the women. The collected data were analyzed using IBM SPSS version 21 software.

Results: The overall scale and the four subscales of YUQOL all had acceptable internal consistency scores; they also demonstrated good construct and criterion validities, except the YUQOL sexual subscale had poor convergent validity (average variance extracted = 0.23).

Conclusions: This study has validated the YUQOL as a psychometrically sound research instrument for measuring menopause-specific QOL among women undergoing menopausal transition. Its sexual subscale would, however, need to be further tested, preferably in sexually active menopausal women to fully confirm its true psychometric property.

Key Words: UQOL Yoruba scale – Menopause-specific Quality of Life scale – Utian Quality of Life Yoruba version – YUQOL.

Although the average age at which menopause occurs in Western countries is about 51 years, and about 48 years in Africans, the physiological changes which result in the cessation of menstruation can start several years before this. Hence, middle-aged women who are still premenopausal can experience some menopausal symptoms.¹

Common symptoms experienced by postmenopausal women include joint pains, vasomotor symptoms, urinary symptoms, and anxiety.^{2,3} Others include fatigue, dyspareunia, undue sadness, and loss of libido.³ Effects of menopausal symptoms and complications on quality of life of postmenopausal women have been demonstrated in various studies.⁴⁻⁸ The four main aspects of life affected the most are general health, sexual satisfaction, occupational satisfaction, and emotional stability.⁹

Quality of Life (QOL) is defined as an individual's perception of their position in life in the context of the culture and

value systems in which they live and in relation to their goals, expectations, standards, and concerns. It is a broad ranging concept affected in a complex way by the person's physical health, psychological state, level of independence, social relationships, personal beliefs, and their relationship to salient features of their environment.¹⁰ The importance of quality of life assessment in the management of various chronic diseases led the World Health Organization (WHO) in 1997 to develop two quality of life tools that can be used globally and generally, irrespective of the disease type or the nature of the people to be assessed.¹⁹ These tools are the WHOQOL-100, and the shorter; WHOQOL-BREF that contains only 26 items unlike the former with 100 items.¹⁹

These tools like many other QOL instruments were, however, not designed specifically for postmenopausal women such as the Utian Quality of Life scale (UQOL) and the Menopause-Specific Quality of Life Questionnaire (MEN-QOL). Other factors that might contribute to middle-aged women's QOL apart from the degree of menopausal symptoms experienced include the presence of chronic diseases, lifestyle, socioeconomic, and environmental factors.¹⁰

It has been established that a woman's culture affects her perception of her total well-being, and that there are significant differences between Western and other cultures¹¹; it is

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TABLE 1. Sociodemographic characteristics of the respondents (*N* = 322)

Variables	Frequency (<i>n</i>)	Percentage (%)
Age groups, y		
40-45	130	40.4
46-50	93	28.9
51-55	68	21.1
56-60	31	9.6
Ethnicity		
Yoruba	289	89.8
Others	20	6.2
Working		
Yes	294	91.3
No	28	8.7
Marital status		
Married	234	72.7
Widow	67	20.8
Separated	13	4.0
Divorced	7	2.2
Single	1	0.3

N = Total number of respondents.

n = Number of respondents in each group.

% = Percentage of respondents in each variable group.

therefore important to have validated instruments for specific populations to measure global QOL constructs adequately and appropriately. Therefore, this research aims to adapt and translate the UQOL to Yoruba language to enhance menopausal and QOL studies among Yoruba women of Nigeria, many of whom only understand the language. The UQOL has been adapted and translated into many modern languages since its creation but not into any Nigerian language. The Yoruba language is widely spoken in Southwestern Nigeria and in some West African communities.

METHODS

Participants

The study is a hospital-based cross-sectional study. The sample size was calculated using a Leslie Kish's statistical formula for estimating the minimum sample size in health studies that was popularized by Fisher et al.¹² Using the formula, a sample size of 322 women was calculated.

A total of 322 middle-aged women between 40 and 60 years old were recruited using systematic random sampling while attending the general outpatient clinic of the Family Medicine Department of the University of Ilorin Teaching Hospital (UITH), Ilorin, Kwara, Nigeria. The majority of the participants (289) were native speakers of the Yoruba language. The inclusion criteria were as follows: women between 40 and 60 years who speak both English and the Yoruba language, and who gave a written informed consent to participate. The exclusion criteria were as follows: women who were too ill to participate, pregnant women, women on hormonal contraceptives or hormone therapy, and women who had undergone surgical menopause. Ethical approval was received from the Ethical Review Committee of the UITH before commencement of the study. The sociodemographic characteristics of the participants are presented in Table 1, whereas their menopausal characteristics are presented in Table 2.

Instruments

Utian Quality of Life Scale

This is a research and clinical tool developed by Prof. Wulf Utian and his team in 2002. It is specially designed to assess the perception of well-being among women experiencing menopausal symptoms. The scale has been demonstrated as a practical and psychometrically sound instrument for measuring global QOL worldwide among women during menopause.¹³⁻¹⁶ It is a 23-item questionnaire, each with a 5-point Likert scale that ranges from "not true of me" (1) to "very true of me" (5). It has a stable factor structure and internal consistency.¹⁷ Also, it has high stability and scale validity. The tool demonstrates four separate, intercorrelated domains: occupational QOL (eg, "I feel challenged by my work"), health QOL (eg, "My diet is not nutritionally sound"), sexual QOL (eg "I am content with my romantic life"), and emotional QOL (eg, "My mood is generally depressed"). UQOL has revolutionized quality of life studies among postmenopausal women by assessing perceptions of their total well-being, not just as determined by menopausal symptoms like other tools, for example, the Menopause Rating Scale.¹⁸ It also has scoring summary and validated cutoff scores for categorization of the QOL scores.¹⁷ Permission to use the tool and to translate it to Yoruba language was sought and received from Prof. Utian.

Menopause Rating Scale

This 11-item questionnaire is designed for assessing menopausal symptoms and to rate the level of severity of the symptoms in peri- or postmenopausal women. It can also be used to assess health-related QOL in menopausal women. It was developed by researchers at the Berlin Centre for Epidemiology and Health Research (ZEG).¹⁸ The tool has strong psychometric characteristics and has been validated for use worldwide.¹⁸ It is currently available in 25 languages, including Afrikaans of South Africa.¹⁸ The English version has been used in a Nigerian study with good result.¹⁹ The 11 items are divided into 3 subscales: (1) somatic and vasomotor

TABLE 2. Age at menarche, age at menopause, and menopausal status

Variables	Frequency (<i>n</i>)	Percentage (%)
Age at menarche, y		
10-11	0	0.0
12-13	35	10.2
14-15	181	55.9
16-17	58	18.0
≥18	48	14.9
Mean = 15.4 ± 2		
Age at menopause, y		
40-44	23	12.3
45-49	116	62.0
50-54	38	20.4
55-60	10	5.3
Mean = 48.2 ± 3.2		
Menopausal status		
Postmenopausal	187	58.1
Premenopausal	86	26.7
Perimenopausal	49	15.2

symptoms, for example, palpitations, musculoskeletal problems, sleeping problems, and hot flushes and night sweats. (2) Psychological and depressive symptoms, for example, anxiety. (3) Urogenital–sexual symptoms, for example, vaginal dryness. Each of the 11 symptoms assessed in the Menopause Rating Scale (MRS) is linked with a 5-point Likert scale to assess severity, ranging from 0 (no complaints) to 4 (very severe).

Sociodemographic Questionnaire

This is a semistructured questionnaire developed by the authors. The following information were collected with the Sociodemographic Questionnaire (SDQ): present age, age at menarche, last menstrual period, menopausal status, age and duration of menopause for those who are postmenopausal, ethnicity, religion, educational status, occupation, monthly income, marital status, marriage type, family type, gravidity, parity, number of living children, and number living in the household.

Translation of UQOL to Yoruba UQOL

The translation/back-translation process was used in translating the original English version of the UQOL to Yoruba, similar to the ones described by Chen et al and Koundi et al in translating UQOL to Chinese and Greek, respectively.^{16,20} The translation/back-translation process involved the following three steps: (1) two bilingual experts translated the English UQOL into Yoruba; (2) another two bilingual experts who had not seen the English UQOL before, translated the UQOL Yoruba version (YUQOL) back into English; and (3) the two second English versions of the UQOL were compared with the original English version by the two back-translation bilingual experts to assess semantic and conceptual equivalence. The two versions were reviewed with the translators and a consultant gynecologist, and an agreement was reached for a prefinal Yoruba version of the questionnaire.

The Yoruba version of the questionnaire was then pretested before the study at the General Outpatient Department of Sobi Specialist Hospital, Ilorin. This hospital is located within Ilorin and attends to patients of similar sociodemographic qualities as those attending the Family Medicine clinic in UITH, Ilorin. A total of 32 (10% of the sample size) questionnaires were administered during the pretest. The pretesting revealed the need to use interviewer-administration of the questionnaire to ensure proper understanding because some of the women were not good readers of Yoruba words. It also revealed that there was a need for local adaptation of some of the words in items 10 and 21 in the questionnaire for the study population because of the absence of perfect Yoruba words for both physical exercise and physical fitness, respectively.

Data collection and analysis

Two family medicine resident doctors who were properly trained and supervised by the researchers administered the

YUQOL, MRS, and the SDQ. The collected data was analyzed by IBM SPSS version 21 software. Statistical significance was established at $P < 0.05$. Descriptive statistics were used to describe the participant's sociodemographic characteristics, their menopausal symptoms, and their QOL. The reliability of the scale was assessed using the Cronbach's α statistic, with a value equal or higher than 0.70 (but not >0.95) considered adequate for internal consistency.²¹ The convergent validity of the instruments was analyzed through the average variance extracted (AVE). An adequate value should be higher than 0.5 to demonstrate good convergent validity.²¹ Discriminant validity was explored by comparing interfactors squared correlation with the AVE of each individual factor. The squared correlation between factors should be smaller than the AVE of each individual factor to demonstrate good discriminant validity.²¹ Concurrent criterion validity was assessed by finding significant correlations between YUQOL emotional subscale and MRS psychological subscale, YUQOL sexual and MRS urogenital subscale, and YUQOL health and MRS somatovegetative subscale.

RESULTS

Sociodemographic characteristics

A total of 322 middle-aged women between the ages of 40 to 60 years participated in the study. The mean age of the participants was 51 ± 5 years, and most of the respondents (40.4%) were aged 46 to 50 years. Expectedly, the majority of the respondents were Yoruba tribe and native speakers of the Yoruba language: 289 (89.8%), and 33 (10.2%) were non-native speakers of the Yoruba language from other ethnic groups found in Nigeria. Almost all the respondents were married at one time in their lives: 321 (99.7%), and only one of the respondents had never being married (0.3%). The results are presented in Table 1.

Menopause-related characteristics of the respondents

The largest percentage of participants (55.9%) attained menarche between 14 and 15 years. Similarly the mean age at menarche was 15.4 ± 2 years. Also, the majority of the participants (62%) attained menopause between 45 and 49 years. The mean age at menopause was 48.2 ± 3.2 years, whereas the prevalence of menopause among them was 58.1% (187/322). The results are presented in Table 2.

TABLE 3. Cronbach's alpha reliability and convergent validity of YUQOL

YUQOL Scales	α Score	Reliability	AVE	Convergent validity
Health	0.677	Good	0.71	Good
Emotional	0.699	Good	0.60	Good
Sexual	0.626	Fair	0.23	Poor
Occupational	0.724	Good	0.66	Good
Overall	0.822	Very good	0.55	Good

α = Cronbach's alpha.

AVE, average variance extracted; YUQOL, UQOL Yoruba version.

TABLE 4. Divergent validity of YUQOL

YUQOL subscales association	AVE	Square correlation	Divergent validity
Health↔Emotional	0.66	0.28	Good
Health↔Sexual	0.47	0.06	Good
Health↔Occupation	0.69	0.34	Good
Emotional↔Occupational	0.63	0.22	Good
Emotional↔Sexual	0.42	0.04	Good
Occupation↔Sexual	0.45	0.06	Good

AVE, average variance extracted; YUQOL, UQOL Yoruba version.

Reliability and validity testing of the YUQOL

Internal consistency of YUQOL

The internal consistency of the overall scale and the four subscales were assessed using Cronbach's alpha statistic function in SPSS. The overall scale and the four subscales all had acceptable scores (Table 3).

Construct validity

The construct validity of the instrument was determined by analyzing both convergent and divergent validities using the AVE and interconstruct correlation methods. Only the sexual subscale of YUQOL failed to demonstrate good convergent validity with AVE of 0.23 (<0.5) as shown in Table 3. The divergent validities estimated from the square of the interconstruct correlations and the AVE are also shown in Table 4.

Criterion validity

Criterion validity of YUQOL was established by correlating the overall and subscales of YUQOL and MRS; YUQOL emotional to MRS psychological, YUQOL health to MRS somatovegetative, YUQOL sexual to MRS urogenital, and YUQOL overall to MRS overall. Negative significant correlations were expected among the pairs to prove criterion validity. Table 5 shows the correlation matrix.

Sensitivity analysis

A post hoc sensitivity analysis was done to examine the performance of YUQOL overall scale in the native Yoruba ethnic group and in the non-native speakers of Yoruba language that participated in the study. The results (Table 6) revealed that there was no statically significant difference in the performance of YUQOL in both groups ($X^2 = 0.168$, $P = 0.83$).

In addition, the performance of the YUQOL sexual subscale was examined among women who were actively

TABLE 5. Criterion validity of YUQOL (correlation matrix)

YUQOL scales	MRS scales			Overall
	Psychological	Somatovegetative	Urogenital	
Emotional	−0.614 ^a			
Health		−0.321 ^a		
Sexual			−0.17 ^b	
Overall				−0.456 ^a

MRS, menopause rating scale; YUQOL, UQOL Yoruba version.

^a $P < 0.001$.

^b $P = 0.01$.

TABLE 6. YUQOL overall score against ethnicity of respondents

Ethnicity of respondents	YUQOL Overall Score					
	Low (n)	High (n)	Total	df	X^2	P
Non-native	9	24	33	1	0.168	0.831
Native	71	218	289			
Total	80	242	322			

df = Degree of freedom.

X^2 = Pearson's X^2 .

P = P value.

YUQOL, UQOL Yoruba version.

married and with living husbands compared to other women. The results (Table 7) revealed that those who were actively married had higher YUQOL sexual scores, and the finding was found to be statistically significant ($X^2 = 34.91$, $P < 0.0001$).

DISCUSSION

This research was undertaken to translate and validate the popular UQOL English version to Yoruba language. A total of 322 middle-aged women were recruited out of which 289 (89.9%) were native speakers, whereas the rest were nonnative speakers of the Yoruba language. The inclusion of the non-native speakers was to broaden the scope of the validated YUQOL to be useful in assessing global QOL among Yoruba-speaking women generally, irrespective of their ethnicity. In addition, all the women studied except one (99.1%), were married once in their lifetime while 72.7% of them were actively married at the time of assessment, making it easier to assess the sexual domain of YUQOL. It also mitigates to some extent, the impact of marriage on QOL. Marital satisfaction has been significantly associated with sexual satisfaction, and sexual satisfaction has been shown to be an important component of the overall QOL.²² Furthermore, 91.3% of the respondents were actively working at the time of assessment, ensuring the occupation domain of the YUQOL can be adequately tested.

The categorization of the respondents based on their menopausal status was done by using the Monash Women's Health Program Menopausal Staging Algorithm,²³ which classified them as premenopausal (having regular menses), perimenopausal (>3 mo of amenorrhoea or lesser but having vasomotor symptoms), and postmenopausal (>12 mo of amenorrhoea). Using this tool, most of the respondents were postmenopausal (58.1%), whereas the rest were either premenopausal (26.7%) or perimenopausal (15.2%). This

TABLE 7. YUQOL sexual scores against marital status of respondents

Marital status	YUQOL sexual scores					
	Low (n)	High (n)	Total	df	X^2	P
Currently married	83	151	234	1	34.91	<0.0001
Others	63	25	88			
Total	146	176	322			

df = Degree of freedom.

X^2 = Pearson's X^2 .

P = P value.

YUQOL, UQOL Yoruba version.

ensured that YUQOL can be tested across all middle-aged women undergoing menopausal transition as desired by the original UQOL English version.

The internal consistency of the test item scores was assessed using Cronbach's α statistics. The YUQOL overall recorded a score of 0.82 which is above the 0.7 threshold, and less than the 0.9 cutoff for adequate internal consistency. The value also compares favorably with 0.83 reported for the UQOL original version by Utian et al, proving its reliability beyond doubt. The three subscales of YUQOL (health, emotional, and occupational) also performed satisfactorily with scores approximately equal to 0.7. Only the sexual subscale of YUQOL recorded a less than satisfactory score of 0.63. This value is significantly lower than the 0.79 Cronbach's α score reported for the sexual subscale of the UQOL original version by Utian et al.²⁴ In a similar study by Chen et al among Taiwanese women, they also reported a lower Cronbach's score of 0.61 for the sexual domain of UQOL-C (Chinese version of UQOL). Some of the reasons they adduced for it were that the sexual subscale included only three items, compared to seven for both the health and occupational subscales, and six for the emotional subscale.¹⁶ They also stated the fact that about 18.2% of their respondents were single, and considerable ethnocultural differences to sexual activities among Taiwanese and American women, as possible reasons for the low Cronbach's score for the sexual subscale of UQOL-C.

The above reasons can also explain why the YUQOL sexual subscale performed less satisfactorily. Although only one woman (0.3%) in our respondents was single and had never been married, about 27% of the respondents were not currently married, and therefore might not be sexually active. It is also considered a taboo in some Yoruba communities for a postmenopausal women to be sexually active.²⁵

YUQOL overall, and its three subscales (health, occupation, emotional) demonstrated good convergent validity with AVE above 0.5 while the YUQOL sexual subscale recorded poor convergent validity with AVE of 0.23. This once again depicted poor psychometric performance of the sexual domain of the YUQOL suggesting that the items in the construct might not be related. The YUQOL convergent validity scores are significantly better than that reported for the UQOL Portuguese version by Pimenta et al where all its reported AVE were less than 0.45.¹⁵ Divergent validity tested for all six possible associations among the four subscales revealed that the interdomain AVE were all greater than the respective squared interdomain correlations revealing there are significant differences among the domains. Overall the research proved the construct validity of YUQOL.

Criterion validity of YUQOL was demonstrated by comparing with another tool of similar but opposite construct, the MRS. To prove concurrent criterion validity of the tools, statistically negative correlations were expected between the various pairings. All the correlations were negative and statistically significant as hypothesized, the highest recorded was that between the YUQOL emotional and MRS

psychological scales ($r = -0.64$, $P = <0.001$), whereas the lowest was that between YUQOL sexual and MRS urogenital subscales ($r = -0.17$, $P = 0.01$).

Although YUQOL was interviewer-administered in this study, it can also be self-administered among women with good reading skills of the Yoruba language. Furthermore, it is advisable to encourage Yoruba women who were afraid of sexual intercourse in the menopausal transition period to be sexually active to have better sexual QOL, and there might be a need for serial administration of YUQOL in these women to truly determine their sexual QOL. It is also important to know that there may be limitations in the generalizability of the results given that the study was a hospital-based cross-sectional study and not a population-based study and therefore it is possible that the women who participated in the study were different from the general population of women not seeking out-patient care.

CONCLUSIONS

Research on menopause and its impact on QOL of women in Nigeria, like in other parts of the Sub-Saharan Africa, is seriously lagging behind that in other parts of the world. It is hoped that having a validated menopause-specific tool in local language would stimulate more research on the subject. The YUQOL has been shown to have good and reliable psychometric properties; however, great caution should be taken when using and interpreting the findings from the YUQOL sexual domain. More studies, preferably in sexually active women undergoing menopausal transition, would definitely be needed to fully test the sexual domain of YUQOL to confirm its true psychometric property.

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