

# Tunisian population quality of life: a general analysis using SF-36

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## Abstract

**Background:** The SF-36 is the instrument for measuring the health related quality of life (HRQOL) of patients in many clinical and national studies to describe the health status of populations, by obtaining comparable data on health status internationally.

**Aims:** This study aimed to obtain population norms for the Tunisian version of SF-36 and to assess the association between socio HRQOL scores with the demographic characteristics of the Tunisian population.

**Methods:** Face-to-face interviews for a cross-sectional study were carried out in 2005 to collect socio demographic and environmental variables as well as self-reported quality of life. A representative sample of 6543 aged between 35 and 70 years old were selected.

**Results:** All scores had a high level of internal consistency reliability coefficient. HRQOL score levels were associated with sociodemographic characteristics and a decrease as age increased. The averages of the physical and mental component summary were 53+/-8 for males and 47.7+/-10 for females.

**Conclusions:** This study was the first to address the general Tunisian population. This study shed light on factors associated with HRQOL in the Tunisian context.

Keywords: Quality of life, SF-36, Tunisia, HRQOL, population

Citation: Salem S; Malouche D; Romdhane H. Tunisian population quality of life: a general analysis using SF-36. East Mediterr Health J. 2019;25(9):613-621 <https://doi.org/10.26719/emhj.18.030>

Received: 21/11/16; accepted: 01/10/17

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## Introduction

Since 1948, the World Health Organization (WHO) has defined health as a “state of complete physical, mental and social well-being and not merely the absence of disease or infirmity”. Beyond the indication of change in the frequency and severity of disease, the measurement of health and effect of health care must include an estimation of well-being and this can be assessed by measuring the improvement in the quality of life related to health care (1). In 1995, WHO recognized the importance of evaluating and improving people's quality of life.

WHO defined health-related quality of life (HRQOL) as individuals' perceptions of their position in life in the context of culture and value systems in which they live and in relation to their goals, expectations, standards and concerns (1). Since health is a multidimensional concept, HRQOL is also multidimensional with domains related to physical, mental and emotional, and social functioning.

In 1995, WHO recognized the importance of evaluating and improving people's quality of life. The HRQOL may be measured using several instruments such as SF-36, which was used in this study. The Medical Outcomes Study 36-Item Short Form (SF-36) is a generic measure of health status, providing scores on eight areas of functioning and well-being as well as two broad areas of subjective well-being, namely physical health and mental health. It can be used

in diseased groups as well as in general populations and it has been considered as a consistent and good measure of differences between groups defined by age, sex, socio-economic status, geographical region and clinical conditions. In response to criticism that the SF-20 was too brief to capture changes in health status, the SF-36 was designed (2,3). To obtain comparable data on health status internationally, SF-36 has been translated into various languages and adapted to different cultures (4).

Similarly, the residence area or regions may affect the quality of life of the population, such as in Lebanon, where there is a significant difference between urban and rural residential areas. Moreover, people in better social positions are expected to have a better quality of life. These hypotheses have been revealed in a number of studies from high-income countries (5) and in low- and middle-income countries (6).

The SF-36 questionnaire was the instrument for measuring the quality of life of patients in many national studies, for both healthy and unhealthy people (5-8). In Tunisia several studies covered subgroups of unhealthy people who were suffering from specific diseases (9-11). This study is the first to address the general population in Tunisia. It aims to obtain population norms for the Tunisian version of SF-36 and to assess the variation of self-reported quality of life according to different demographic and socioeconomic characteristics. A translated and validated version of SF-36 was used.

## Methods

### Study area

Tunisia is a North African country situated between Algeria and Libya. At 163 000 km<sup>2</sup>, it is the smallest country in North Africa with a population of 10 million (of which about two thirds are urban). Life expectancy at birth is 74 years for men and 78 for women. The Tunisian gross domestic product per capita (expressed as purchase parity power, [PPP]) reached US\$ 10 439.70, the highest in North Africa. The Human Development Index was estimated at 0.721 in 2014, ranking the country at 90, placing it ahead of Algeria (94) and Morocco (129) (12). SF-36 was administered in a cross-sectional study to collect sociodemographic and environmental variables as well as self-reported quality of life. A representative sample was analysed.

### Target population and sampling

The national cross-sectional survey was carried out from April to September 2005. The target population was all Tunisian adults aged 35 to 70 years. It was based on a national stratified three stage cluster sample of subjects; the sampling frame was derived by the Tunisian Institute of Statistics from the database of the most recent census of the population carried out in 2004. Stratification was according to the seven administrative regions that divide Tunisia, and each region being a stratum. The first and second stage of random selection were performed using the national census database: in each of the seven strata, 47 census districts were randomly selected at the first stage, with a probability proportional to size in number of eligible households (i.e., featuring at least one 35–70 year old subject). At the second stage, 25 eligible households were randomly sampled in each district. The third stage of selection was performed during the implementation of the field survey: in each household one subject from the targeted age was included in the survey.

The study protocol was carried out according to the Declaration of Helsinki and was ethically approved by the Tunisian Ministry of Health and the Tunisian National Council of Statistics. All participants gave their free informed consent after being thoroughly informed of the purpose, requirements and procedures of the survey. A total of 8184 people were enrolled. Of these, 1651 individuals had missed answering the total SF-36 questionnaire or at least half. The remaining 6543 participants (2832 men and 3557 women) constituted the sample used. The mean age of the 6543 individuals (49.14 years for men, 50.26 years for women) was similar to that of the initial 8184 individuals recruited for the survey (49.6 years for men, 49.5 years for women).

### Measures

Health-related quality of life was measured by a translated and validated version of the SF-36, which contains 36 items covering eight dimensions of perceived health: general health perceptions (5 items), physical functioning (10 items), role limitations because of physical func-

tioning (4 items), bodily pain (2 items), general mental health (5 items), role limitations because of emotional problems (3 items), vitality (4 items), and social functioning (2 items). The remaining item, relating to change in health, is not scored as a separate dimension. For each dimension of the SF-36, the items were coded, aggregated, and transformed on a scale ranging from 0 (the worst health status) to 100 (the best health status), as described in the scoring manual (13). Scores were calculated whenever there was information for at least half of the items of the dimension.

The SF-36 summary is based on two components summary: mental component summary (MCS) and physical component summary (PCS), and is measured in three-steps: 1) the eight computed sub-scale scores (range 0–100) are standardized using a linear Z-score transformation. Z-scores are calculated by subtracting sub-scale means for the Tunisian population sample from each individual's sub-scale scores and dividing the difference by the standard deviation of the Tunisian sample. 2) Z-scores are multiplied by the sub-scale factor score coefficients (Tables 1–8) for PCS and MCS and summed over all eight sub-scales. These coefficients were obtained with a PCA and a varimax rotation. 3) *t*-scores are calculated by centering the obtained PCS and MCS sums to get a mean of 50 and a standard deviation equal to 10 (14).

**Table 1** Sample description

Covariates	N (%)
<b>Gender</b>	
Male	2832 (44.32)
Female	3557 (55.67)
<b>Age</b>	
35-44	2527 (39.55)
45-54	2029 (31.75)
55-64	1121 (17.54)
65-74	712 (10.88)
<b>Educational level</b>	
Illiterate	2762 (43.23)
Primary school	2150 (33.65)
Secondary school	1041 (16.29)
Short education	100 (1.56)
University	313 (4.89)
<b>Milieu</b>	
Urban	3669 (57.42)
Rural	2720 (42.57)
<b>Activity</b>	
Active	2615 (40.92)
Inactive	3650 (57.12)
<b>Economical level</b>	
Low	2369 (37.07)
Median	2147 (33.60)
High	1539 (24.08)

### Statistics analyses

All statistical analyses were conducted using R statistical software package 3.0.1. The mean and standard deviation (SD) for responses to each scale were calculated. A multiple comparison of treatments by means of Tukey was performed to test the effect of age on all domains of the SF-36. The level by alpha default is 0.05. As a first step in our analyses we described the sample by its demographic characteristics, which are age, sex, educational level, residence area and activity. The second step was to calculate the eight sub-scales and the two component summary using Tunisian coefficients and to describe the sample by their means +/- SD of the eight sub-scales and the two component summary.

A linear Bayesian regression was used to assess relation between scales and socio-demographic characteristics of individuals. Bayesian regression is more flexible when we want to use certain prior information on the process of collecting the data, in contrast to frequentist regression where there is no way to use this prior information. Since there was no reliable prior information, non-informative was used prior when performing the Bayesian regression.

Results are reported as posterior mean differences with 95% credible intervals (Bayesian analogue to frequentist confidence intervals). The SF-36 domain score for each subject is assumed to follow a normal distribution with mean  $\mu_i$  and variance  $\tau$  that is:

$$Y_i \sim N(\mu_i, \tau); \mu_i = \sum_{j=1}^p \beta_j X_{ij}$$

i: 1..n, n: individual number

j: 1..p, p: variable number

Y<sub>i</sub>: The health score (PCS and MCS)

X<sub>ij</sub>: Independent variables ( Age, sex, educational level, economical level)

B<sub>j</sub>: a set of coefficients, one each for each X.

Only SF-36 questionnaires with more than 50% of responses were considered as valid and investigated in our study. R software glmulti Package, which is an automated model selection and model averaging software that automatically generates all possible outcomes within the specified response and explanatory variables, and producing best models in terms of Information Criterion (AIC, AICc or BIC), was used to determine the best model with interaction between social determinants using the genetic algorithm and the AIC criteria. (15)

### Results

The mean age of the study population was 49.77 ± 9.83. Eleven percent of the study group was over 65 years old. Women were significantly older than men. Almost half of the population was illiterate and only 5% of the study population achieved higher education. 57% of the study pop-

**Table 2 Descriptive statistics for SF-36 scales in the general Tunisian population**

Scales	Mean	Standard deviation	Cronbach Alpha
PF	82.13	23.63	0.923
RP	70.65	40.67	0.917
BP	67.98	33.44	0.922
GH	56.43	20.91	0.804
VT	57.95	22.66	0.796
SF	78.74	27.86	0.805
RE	75.46	40.13	0.925
MH	65.56	21.49	0.829
PCS	50.09	9.93	-
MCS	50.07	9.95	-

PF = Physical functioning; RP = Role physical; BP = Bodily pain; GH = General health; VT = Vitality; SF = Social functioning; RE = Role emotional; MH = Mental health; PCS = Physical Component Summary; MCS = Mental Component Summary

**Table 3 Gender based comparison for each scale**

Scales	Male	Female	P value
PF	88.82 (18.77)	77.16 (25.39)	<0.001
RP	79.76 (35.93)	63.89 (42.54)	<0.001
BP	75.11 (30.96)	62.72 (34.25)	<0.001
GH	61.68 (19.82)	52.46 (20.76)	<0.001
VT	64.31 (21.79)	53.19 (21.98)	<0.001
SF	85.42 (23.87)	73.87 (29.43)	<0.001
RE	82.16 (42.39)	70.50 (42.39)	<0.001
MH	69.96 (20.24)	62.16 (21.75)	<0.001
PCS	53.06 (8.55)	47.72 (10.31)	<0.001
MCS	52.96 (8.99)	47.78 (10.08)	<0.001

ulation lived in urban areas and almost 60% were non-active. Participants that rated a high economical level were 24% while 37% rated a low economical level (Table 1). Table 2 presents descriptive statistics for SF-36 scales in the general Tunisian population, and includes the mean, the standard deviation and the Cronbach alpha test.

All scales presented in Table 2 have a high level of internal consistency reliability coefficient. PCS values ranged from 18 to 64.03 and MCS values ranged from 17.06 to 67.88 with median values 53.36 and 52.21 for PCS and MCS respectively. Figure 1 represents the mean value of eight scales. The physical functioning scale is the highest while vitality scale and general health were the lowest. Men had significantly higher scores than women for the eight domains (Table 3). Also for the components summary, men had significantly better physical and mental component summary than women (Figure 2). Scores decreased while the age increased. The difference of scores in each age group is significant for the eight domains except the mental health scale we found that there is no significant difference between the 55–64 and 65–74 age groups (Table 4).

**Table 4 HRQOL scores by scales and age group**

Scales	35–44 yrs	45–54 yrs	55–64 yrs	65–74 yrs
PF	90.70 (16.08) a	84.18 (20.82) b	73.50 (26.40) c	61.36 (29.13) d
RP	81.53 (44.87) a	72.80 (39.42) b	60.07 (43.65) c	44.87 (44.88) d
BP	75.08 (30.82) a	68.14 (32.63) b	60.26 (34.79) c	56.01 (35.96) d
GH	62.56 (19.04) a	56.37 (20.08) b	50.31 (21.40) c	45.51 (20.89) d
VT	63.58 (20.39) a	58.94 (21.74) b	51.89 (23.10) c	46.16 (24.55) d
SF	85.52 (22.56) a	79.49 (27.00) b	73.52 (29.91) c	62.93 (33.80) d
RE	81.57 (35.94) a	81.57 (38.85) b	69.19 (42.53) c	59.75 (46.61) d
MH	68.17 (20.44) a	65.26 (21.55) b	63.16 (22.05) c	61.49 (22.55) c
PCS	53.37 (7.76) a	50.52 (9.28) b	46.68 (10.75) c	42.53 (11.39) d
MCS	52.72 (8.56) a	50.26 (9.64) b	47.31 (10.48) c	44.47 (11.08) d

The difference between scores is statistically significant if the letters indicated in brackets (a, b, c and d) are different (Tukey test).

**Table 5 Factor loads obtained from Tunisian and US algorithms**

Scales	Factor 1 (TN)	Factor 1 (US)	Factor 2 (TN)	Factor 2 (US)
PF	0.85	0.88	0.19	0.04
RP	0.65	0.78	0.12	0.30
BP	0.29	0.77	0.25	0.24
GH	0.60	0.68	0.57	0.32
VT	0.48	0.56	0.70	0.57
SF	0.48	0.44	0.42	0.71
RE	0.23	0.19	0.26	0.81
MH	0.07	0.12	0.89	0.90

The result of varimax rotation solution for Tunisian SF-36 and US loads were presented in Table 5. Factor 1 was used to calculate PCS and factor 2 to calculate MCS. Subjects with higher educational level have higher PCS and MCS (Figure 3 and Figure 4). Bayesian regression shows that all models converged to admissible solutions and all socio-demographics characteristics are significantly associated with health scores (Table 7).

In the final models, the scores vary significantly between sex and age for all dimensions. However, the variation within education levels and economic situation levels were not significant for all dimensions. There was an interaction between education level and sex for the majority of mental health dimensions and for the physical health dimension (RP). In addition, there was an interaction between education level and age for the majority of physical health dimensions. Interaction between economic levels and education and sex exist only for BP dimension but interaction between economic level and age exists and is significant for the majority of dimensions (Table 8).

## Discussion

This is the largest study in Tunisia that aimed to assess the HRQOL of the general Tunisian population and to

establish norms for regional and international comparisons. This study provided data on the HRQOL, according to geographical, social, and economic characteristics among adult Tunisian population.

Our results show variability in the different dimensions of the SF-36 for the general population. The highest score for the Tunisian population was the physical functioning and the lowest one was the general health dimension. This result was consistent with other studies conducted in a number of high-income countries such as the United States of America (13), Switzerland (7) and the United Kingdom (2). However, it was different from other studies; for instance, in an Australian study it was found that the highest score was social functioning (16) and for the majority of previous studies in high-income and low- and middle-income countries the lowest scale was vitality (4,7,13,16).

It was observed that four out of eight of SF-36 dimensions have a Cronbach alpha coefficient up to 0.9, which is higher than that found in a Norwegian and Turkish study (the Cronbach Alpha was up to 0.9 only for two out of eight) (3,4). The Cronbach alpha coefficients that are equal to 0.9 and 0.7 are the generally accepted values for individuals and group comparisons (17).

Statistical tests confirm the significant difference of quality of life according to individuals' characteristics such as sex, educational levels and economic situation.

The present study revealed that women report significantly worse scores than men in all SF-36 scales and components summary, which is consistent with findings in other studies in high-income countries (13,16,18), and in low- and middle-income countries (4). Women's lower HQOL might be related to socio-economic situations, sexual taboos and traditional roles (6). In this study, women and illiterates have the worst HRQOL; however, there was no significant difference between secondary school level and university. These results are similar to a Spanish study showing that the level of health was higher among those with high levels of education.

Similar to other studies that have shown that health was worse in older age groups (4,7,13,16,18), these



**Table 6 Variation of scores by scales by educational level**

Scales	Illiterate	Primary school	Secondary school	Short education	University
PF	74.11 c	87.08 b	90.18 ab	91.44 ab	93.04 a
RP	59.95 c	76.26 b	82.47 a	89 a	87.17 a
BP	60.38 b	72.69 a	74.91 a	80.65 a	80.23 a
GH	49.82 c	60.56 b	62.37 ab	67.07 a	65.32 a
VT	50.67 c	62.11 b	65.83 a	69.9 a	67.06 a
SF	71.43 b	83.71 a	85.97 a	87.1 a	87.36 a
RE	68.96 b	79.6 a	81.98 a	80.66 a	85.41 a
MH	60.76 c	67.25 b	71.64 a	77.08 a	73.42 a
PCS	46.82 c	51.98 b	53.01 a	54.53 a	54.46 a
MCS	46.66 c	51.68 b	53.50 a	55.57 a	54.62 a

The difference between scores is statistically significant if the letters indicated in brackets (a, b, c and d) are different (Tukey test).

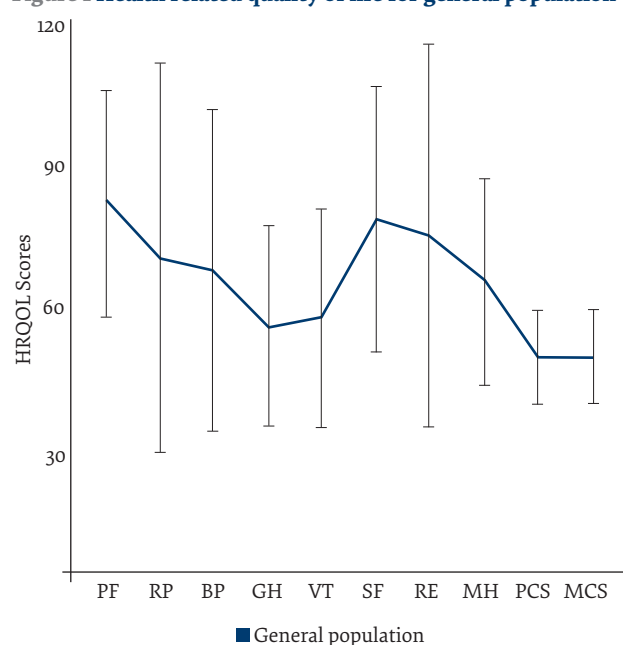
results demonstrated that HRQOL increased while age decreased, which may possibly be related to cumulative health problems.

A Bayesian multiple regression analysis was used to ascertain the relation between all socio-demographic characteristics and the dimensions of SF-36 and components summary. This multivariate analysis confirmed that sociodemographic characteristics and economic of individuals are independent factors for determining HRQOL scores. All educational levels have significantly higher scores than illiterate persons. HRQOL scores decreases while age is increasing. PCS is decreasing 0.3 with each age year increase, while MCS decreases 0.2 with each age year increase. This indicates that physical health is more affected by age than mental health.

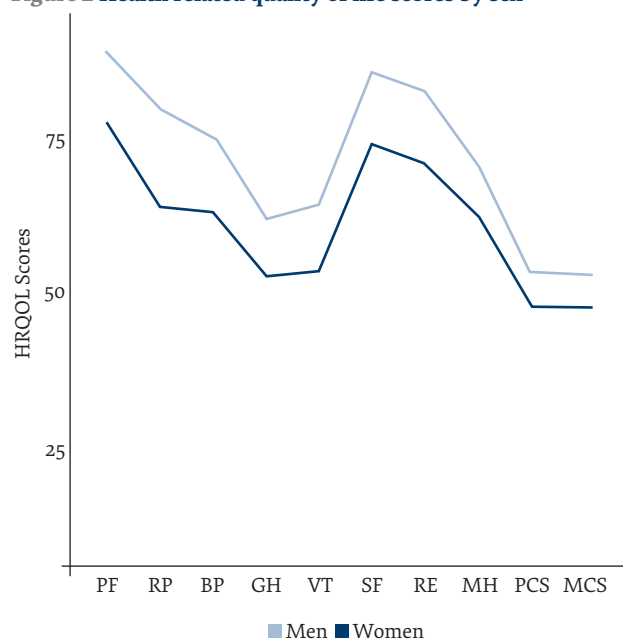
Sex is also an important factor for determining HRQOL scores. Women have lowest HRQOL mental and physical scores, but this sex-based difference is more important for physical health and may be due to the traditional roles of women of raising children and taking care of families. An inverse relation between socioeconomic level and health has been found in this study. People in lower economical level have significantly worst scores than those in higher socioeconomic levels. This has been shown in several studies and is one of the most consistent observations in the history of public health research, indicating that those in lower socioeconomic strata have higher mortality and more frequent health problems than those in higher socioeconomic strata (5).

A genetic algorithm with AIC criteria was used to find out the best models with interaction between social indicators. In our final models variation of scores between education levels was not significant for GH and VT dimensions, but this variation increase significantly with age. For the other dimensions difference between education levels was significant, and higher for the majority of males in the mental dimension and for the RP dimension. The difference in scores between education levels increases with age increase for the majority of those in the physical dimension and for the SF dimension. The difference of scores between primary school and illiterate, and secondary school and illiterate,

**Figure 1 Health related quality of life for general population**



**Figure 2 Health related quality of life scores by sex**



**Table 7 Bayesian linear regression of 8 scales, physical and mental component summary by social demographic determinants**

Factors	PF	RP	BP	GH	VT	SF	RE	MH	PCS	MCS
Primary school	2.8*	3*	2.9*	3.3*	3.3*	3.3*	1.8*	1.8*	1.4*	1.4*
Secondary school	3.9*	6.2*	1.2*	2.9*	2.9*	2.8*	2.0*	3.1*	1.6*	1.6*
Short education	4.8*	10.3*	5.4*	7.3*	7.3*	3.4*	1.4*	8.3*	2.9*	3.4*
University	5.4*	8.3*	3.8*	4.2*	4.2*	2.6*	4.3*	3.5*	2.1*	1.9*
Age	-0.9*	-1.1*	-0.6*	-0.5*	-0.5*	-0.6*	-0.6*	-0.1*	-0.3*	-0.2*
Women	-9.2*	-12.4*	-10.4*	-7.2*	-7.2*	-9.7*	-9.8*	-6.1*	-4.3*	-4.1*
Median economic level	1.3*	0.4*	2.2*	3.7*	3.7*	3.3*	1.2*	6.0*	1.2*	2.1*
High economic level	1.2*	3.4*	6.9*	4.7*	4.7*	4.7*	2.4*	8.2*	1.8*	3.0*
Sigma2	423.7*	1429.5*	1021.8*	373.9*	373.9*	685.3*	1525.2*	423.1*	78.0*	83.1*

Sigma2 is the variance of error term of the regression.

**Table 8 Linear regression of 8 scales, physical and mental component summary by social demographic determinants**

Factors	PF	RP	BP	GH	VT	SF	RE	MH	PCS	MCS
Primary school	-11*	-20.6*	-0.99			1.18	-13.15*	-0.05*	-3.42*	0.56
Secondary school	-20.94*	-27.98*	-4.92			0.59	-37.4*	1.06	-6.38*	0.65
Short education	-29.33*	-36.45	14.7			6.79	-48.91*	10.72*	-9.8	4.14*
University	-14.61*	-21.88	16.17			2.98	-39.26*	3.37	-6.99*	1.77
Male	-10.50*	-15.98*	-8.01*	-4.88*	-4.64	-24.4*	14.06*	-13.94*	-3.14*	-7.21
Medium economic level	1.68*		-14.03	2.64*	-0.81	-4.94				0.35
High economic level	1.5*		-24.65*	4.67*	-13.56*	-11.57*				-3.27
Age	-1.20*	-1.56*	-0.97*	-0.60*	-0.73*	-1.01*	-1.01*	-0.36*	-0.45*	-0.36
Primary school: male		6.84*				5.46*	7.69*	5.27*		2.18*
Secondary school: male		2.3				5.97*	4.06	5.27*		2.47*
Short education: male		-4.67				-0.83	4.56	-0.02		0.38
University: male		-0.47				2.76	-3.69	2.91		1.45
Primary school: age	0.26*	0.40*						0.21		0.09*
Secondary school: age	0.51*	0.70*						0.79*		0.16*
Short education: age	0.73*	1.1*						1.04*		0.27*
University: age	0.41*	0.66*						1.01*		0.19*
Primary school: medium economic level			6.73*							
Secondary school: medium economic level			7.28*							
Short education: medium economic level			-12.3							
University: medium economic level			-3.82							
Primary school: high economic level			9.18*							
Secondary school: high economic level			13.33*							
Short education: high economic level			-2.28							
University: high economic level			-7.01							
Male: medium economic level				2.85*	2.16*					
Male: high economic level				0.36	4.03*					
Age: primary school				0.06*	0.07*					
Age: secondary school				0.06*	0.09*					
Age: short education level				0.16*	0.16*					
Age: university				0.09*	0.08*					
Age: male	0.39*	0.51*	0.37*	0.22*	0.23*	0.62*	0.40*	0.33*	0.15*	0.20*
Age: medium economic level		0.02					0.03	0.12*	0.02*	
Age: high economic level		0.07*					0.06*	0.16*	0.04*	
Medium economic level: age			0.26*		0.09	0.16*				0.03*
High economic level: age			0.51*		0.36*	0.33*				0.12*
Constant	136.03*	141.21*	109.43	81.34*	86.26*	121.82*	121.87*	76.09*	69.37*	64.12*

increases with the economic level. The difference in scores between gender increases in favour of males with age. Scores decrease while age decreases and this variation is more important for high economic level for several dimensions such as RP, RE, MH and PCS. Health scores vary among social determinants and is not stable, being different for the various social determinants of individual.

### Conclusion

This is a large and national study with a representative sample. The general population provided a detailed description of the quality of life of the different groups described by their demographic characteristics, and allowed for a comparison between them. Similar to a large number of studies, the HRQOL was measured through the SF-36 questionnaire. We have avoided over analysing the data and presented the population norms of SF-36 and the association of SF-36 domains with demographic and socio-economic variables only.

Our study highlighted a variety of HRQOL results among the different demographic characteristics of the Tunisian population. Our findings were promising for research on inequalities in health in Tunisia, since they showed a clear association between primary social variables (age and sex) and health. These findings may also be valid for other low- and middle-income countries. Our study provided population norms of SF-36 that could be used for comparisons.

Quality of life differs with demographic characteristics in several countries in addition to regional differences within the country (6). This heterogeneity has been attributed to several factors such as gender inequality, aging and social inequality between regions. Efforts need to be made to reduce this inequality in regard to social and geographic factors (2,5-7). Such studies should be repeated many times with a fixed interval in order to provide the possibility to focus on the progression of the quality of life across time.

**Funding:** None.

**Competing interests:** None declared.

## Qualité de vie de la population tunisienne : analyse générale à l'aide du questionnaire SF-36

### Résumé

**Contexte :** Le questionnaire SF-36 est l'instrument utilisé pour mesurer la qualité de vie des patients dans de nombreuses études cliniques nationales afin de décrire l'état de santé des populations et d'obtenir des données comparables dans ce domaine au niveau international.

**Objectifs :** La présente étude vise à obtenir des normes de population au moyen de la version tunisienne du questionnaire SF-36 et à évaluer le lien entre les scores correspondant à la qualité de vie liée à la santé et les caractéristiques démographiques de la population tunisienne.

**Méthodes :** Des entretiens en présentiel ont été menés dans le cadre d'une étude transversale en 2005 afin de recueillir des variables socio-démographiques et environnementales ainsi que des données auto-déclarées sur la qualité de vie. Un échantillon représentatif de 6543 participants âgés de 35 à 70 ans a été sélectionné.

Figure 3 Health related quality of life scores by age groups

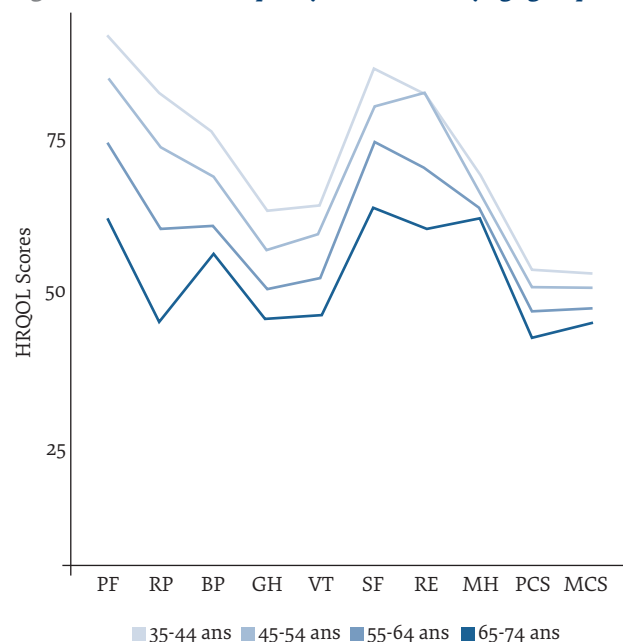
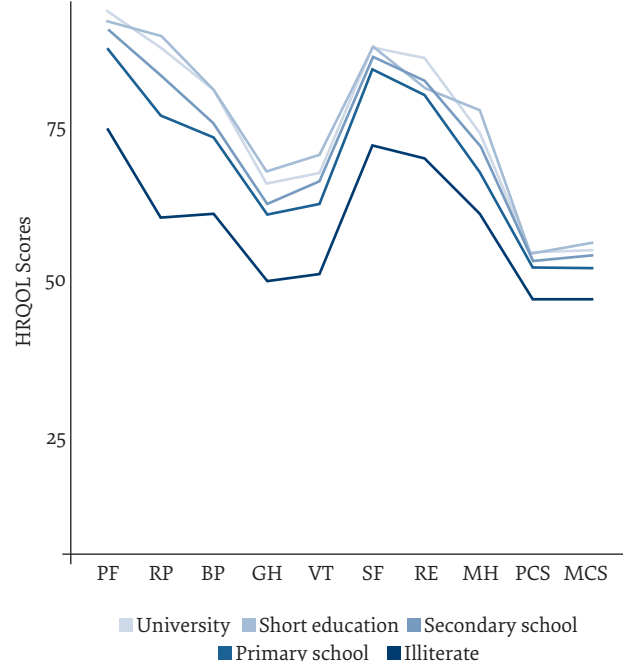


Figure 4 Health related quality of life scores by educational level



**Résultats :** Tous les scores présentent un niveau de cohérence interne et un coefficient de fiabilité élevés. Les niveaux des scores de la qualité de vie liée à la santé étaient associés aux caractéristiques socio-démographiques. Nous avons observé que ceux-ci diminuaient lorsque l'âge augmentait. Les moyennes pour les résumés des composantes physique et mentale étaient de 53+/-8 pour les hommes et de 47,7+/-10 pour les femmes respectivement.

**Conclusion :** La présente étude est la première à s'intéresser à la population tunisienne générale et à mettre en lumière les facteurs associés à la qualité de vie liée à la santé dans le contexte tunisien.

## نوعية حياة السكان في تونس: تحليل عام باستخدام المسح الصحي القصير

صفاء سالم، ظافر ملوش، حبيبة بن رمضان

### الخلاصة

**الخلفية:** المسح الصحي القصير المكوّن من 36 بنداً (SF-36) هو أداة تُستخدم لقياس نوعية حياة المرضى في كثير من الدراسات السريرية والوطنية من أجل وصف الحالة الصحية للسكان، وللحصول على بيانات قابلة للمقارنة بشأن الحالة الصحية للسكان على الصعيد الدولي.

**الأهداف:** هدفت هذه الدراسة إلى الحصول على الأعراف السكانية باستخدام النسخة التونسية من المسح الصحي القصير المكوّن من 36 بنداً، وإلى تقييم العلاقة بين درجات نوعية الحياة فيما يتصل بالصحة والخصائص السكانية لسكان تونس.

**طرق البحث:** عُقدت مقابلات شخصية وجهاً لوجه من أجل إجراء دراسة شاملة لقطاعات متعددة في عام 2005 بهدف جمع المتغيرات الاجتماعية السكانية والمتغيرات البيئية، فضلاً عن بيانات نوعية الحياة المبلغ عنها ذاتياً. وجرى اختيار عينة ممثلة تتألف من 6543 مشاركاً تتراوح أعمارهم بين 35 و 70 سنة.

**النتائج:** تتسم جميع الدرجات بمستوى عالٍ من مُعامل الثبات والاتساق الداخلي. وكانت مستويات درجات نوعية الحياة فيما يتصل بالصحة ترتبط بالخصائص الاجتماعية السكانية، وتنخفض مع زيادة الأعمار. وتبلغ متوسطات تجميع المكون البدني والعقلي ما يقرب من -8/+53 للذكور و -10/+47 للإناث.

**الاستنتاج:** هذه الدراسة هي أول دراسة تتناول سكان تونس بوجه عام وتسلط الضوء على العوامل المرتبطة بنوعية الحياة فيما يتصل بالصحة في السياق التونسي.

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