Eur J Health Econ (2009) 10:93–101
DOI 10.1007/s10198-008-0106-5

ORIGINAL PAPER

The quality of life of Palestinians living in chronic conflict: assessment and determinants

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Received: 4 June 2007 / Accepted: 4 April 2008 / Published online: 25 April 2008

Abstract This study assessed the quality of life (QoL) of Palestinians living in conditions of chronic conflict and examined its determinants. An adapted World Health Organization quality of life (WHOQoL-Bref) instrument was used in a representative sample of 1,008 adults. Factor analysis and multiple regression were conducted to determine associations between demographic and socio-economic characteristics and scores of extracted principal determinants, and estimated overall and domain-specific QoL scores. Men, older persons and those less educated reported lower QoL than their counterparts. Negative associations were also found with higher distress and fear levels, and lower financial and freedom status. The chronic and entrenched conflict over generations resulted in lower QoL for the population of the Occupied Palestinian Territory.

Keywords Quality of Life · WHOQoL-Bref · Conflict · Determinants · Occupied Palestinian Territory

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JEL Classification I10 · I18

Introduction

The impact of the long-running Palestinian–Israeli conflict on the health and well-being of inhabitants and citizens of the Occupied Palestinian Territory (OPT) and Israel has been devastating [1–8]. In addition, the entrenched conflict has altered social welfare and health care delivery systems in ways that pose challenges beyond those seen in other conflict or post-conflict situations [9]. In the local context, longer-term health and development objectives need to be integrated with urgent and emergent needs during periods of intensified fighting [10]. A significant challenge for public health programs in this context is accurately to measure population health and well-being to target the limited resources at the most needy. While quality of life (QoL) and links to health have been examined in many scenarios and for survivors of conditions like cancer, the assessment of survivors—individuals and societies—of chronic exposure to violence is lacking. The challenge for researchers, planners, policymakers and health care practitioners is to improve the empirical understanding of well-being and its determinants in order to rebuild the social protection systems needed. Today, information about the well-being of persons living in this conflict zone is largely restricted to mortality and morbidity rates and access to health care services. An example of the unique characteristics of this conflict on health would be the monitoring of childbirth rates at Israeli army checkpoints for those unsuccessfully attempting to reach a health facility to give birth [11].

For the respective Palestinian and Israeli governments, the situation can only be described as a complex

emergency. Yet the chronicity of the conflict has exposed the limitations of existing public health guidelines for responding to such emergencies [12]. The Palestinian case begs a re-conceptualization of complex emergencies in more than one respect. Generations of Palestinians have lived knowing only conflict: the large majority of those living in the OPT were born during the years of Israeli military occupation, beginning in 1967. The inhabitants of the OPT have lived through calmer periods interspersed with intensification, and many continue to live in refugee camps inside and outside the OPT.

Starting in September 2000, the Israeli army instituted closures of border crossings, which are economic lifelines, enforced strict curfews, and accelerated the segregation of Palestinian land with the erection of the Separation Wall [13–15]. These events have induced a severe economic crisis and spiraling poverty levels affecting no fewer than two-thirds of the population and undoubtedly worsening the circumstances of most Palestinians [16]. In addition, civilians have been regularly exposed to violence. More recently, the cuts in humanitarian aid for the public sector as a result of the democratic election of the Hamas government in January 2006 prompted various United Nations (UN) and other bodies to warn against an impending humanitarian disaster, heightened levels of violence, and a rapid decline in the public health system towards a possible collapse [17]. A 2005 study of humanitarian workers found the OPT in the top five countries with most acute levels of violence, high prevalence and misuse of guns, and highest perception of threat [18]. Even by the end of January 2006, results of an assessment of the OPT by UN agencies had highlighted the sharp deterioration in the humanitarian situation over the short period since the January elections, in particular due to Israel's additional tightening of security procedures [19].

Despite the abilities of individuals and communities to adapt, such factors are bound to have a negative effect on civilians' health and well-being in ways that cannot be measured with more traditional public health indicators alone. General health-related quality of life (HRQoL) measures, like the Medical Outcomes Study Short Form 36 Item survey (SF-36), measure satisfaction and functioning in a number of domains, including physical, mental and social, and, often, limitations and general health [20]. The QoL results can be used as a health predictor, determinant or outcome and have been shown to be correlated with fatal and non-fatal health outcomes and health care utilization [21–25]. We believe measuring HRQoL in this context will help us to understand the impact of the conflict on health and, subsequently, to improve public health planning and programming.

The aim of the study was to assess the QoL of a representative sample of the general Palestinian population, using and adapting an internationally valid instrument, the World Health Organization quality of life (WHOQoL-Bref) instrument [26]. Our paper starts by describing the study instrument and the sampling procedure, followed by a presentation of the different WHOQoL-Bref domain scores. Finally, the principal determinants of Palestinian QoL are described, before we conclude with some recommendations about the potential applications of the study results.

Methods

Sampling

A multi-stage cluster sample design was used to select a household sample of 1,023 adults (18 years and older) from the general population living in the two regions of the OPT: the West Bank and Gaza Strip. Twelve households were selected in each of the pre-selected 84 enumeration areas using systematic sampling. One respondent from each household was then selected using Kish Table techniques. Face-to-face interviews were conducted over a 3-week period at the end of 2005 by the Palestinian Central Bureau of Statistics, and they were completed exactly a month before the Palestinian Legislative Council elections of 25 January 2006.

Instrument

The QoL assessment was conducted using the reduced version of the WHOQoL-Bref. This instrument was developed as a means to assess health and well-being that went beyond objective descriptions of fatal and non-fatal health outcomes, and included individuals' subjective affective and cognitive appraisals of health states [26, 27]. It facilitated cross-cultural comparisons of QoL assessments [28]. The WHOQoL-Bref instrument aims to assess individuals' perceptions in the context of their culture and value systems and their personal goals, standards and concerns [29]. The instrument consists of 26 questions measuring—through simple aggregation of respondents' answers to the different questions, with appropriate rescaling—the broad domains of physical health, psychological health, social relationships, and environment [30]. A set of questions, catering to the local context, was added to the instrument and were subjected to a validation process prior to data collection, These additional questions helped to identify main clusters of determinants and describe their impact on the QoL results.

Translation, adaptation and validation of the resulting Palestinian quality of life instrument (PQoL) were completed in 2005 [31]. This was accomplished by conducting

13 focus group discussions (FGDs) with OPT residents from a wide range of ages, socioeconomic conditions and political beliefs. In-depth discussions within the participant groups helped identify: context-specific translations of QoL items that were suitable to convey equivalent concepts to those embedded in the original WHOQoL-Bref in a manner that went beyond simplistic direct translation; in addition, potential determinants of the various QoL dimensions were introduced. These adaptations were incorporated into a final survey, without affecting its consistency and face validity, by the integration of the new questions directly after the sequence of the adapted WHOQoL-Bref questions in the PQoL instrument. The added questions were intended to identify the extent of daily anxiety and its components; satisfaction with day-to-day life activities and freedoms; levels of distress; financial status; and the degree to which individuals were affected by both the current acute conflict and the chronic complex emergency situation. These were examined for their potential role in determining QoL assessments emerging form the adapted version of the WHOQoL-Bref instrument. In addition, more detailed socioeconomic and demographic variables were collected as part of the PQoL instrument.

Ninety-six questions were added to the WHOQoL-Bref to constitute the PQoL instrument. The added questions aimed to identify potential determinants of QoL related to the specific context of chronic emergency and prolonged conflict. In addition, the respondents were requested to rank the four dimensions of the WHOQoL-Bref explicitly in order of perceived importance. Question 21 in the original WHOQoL-Bref, asking about satisfaction with sex life, was excluded from the final PQoL instrument due to explicit reservations expressed by many of the FGD participants.

Analysis

Descriptive univariate and bivariate analyses were conducted so that item distributions and inter-groups variations could be understood. Four domain-specific scores (physical, psychological, social and environmental) were estimated using the algorithm proposed by the WHOQoL team. Differences in means and analysis of variance tests were used to assess differences in distributions across socioeconomic (West Bank versus Gaza Strip; north, center and south of West Bank; urban, rural and camp) and demographic groups (age and gender specific). Results from the PQoL were compared with age- and gender-standardized data from the WHO International Field Trial (IFT) [26] after the raw data had been obtained from the authors.

Factor analysis was used to reduce the 96 added variables, intended to identify potential context-specific determinants, into a parsimonious set of determinants. Variables with excessive missing values and inapplicable responses were deleted. For the remaining variables, for which the maximum missing was $< 2\%$, missing values were replaced with the median value for that variable. Variables were reverse scaled, so that all variables in a group were in the same direction. Principal component extraction with varimax rotation using Stata 9.2 on the remaining 76 variables was used to explore the data and their limitation and to ascertain the number of factors from eigenvalues. The maximum number of factors was 20 (eigenvalues greater than 1). Retention of 20 factors was not considered feasible. A scree plot was then used and revealed a five-factor solution to be appropriate. Squared multiple correlations (smcs) were used to screen for outliers among variables. Variables with low smcs and/or low loadings on all important factors were deleted. Complex variables—variables that load equally on more than one factor—were deleted. Several runs were conducted on the remaining 50 variables to obtain the optimum number of factors. The five extracted factors were used in a confirmatory factor analysis (CFA), which was conducted using MPlus software [32]. Factor scores were obtained using weighted least-squares using means and variances (WLSMV).

Four stepwise multiple regressions were performed to identify determinants of the four estimated QoL domains' scores. In view of the proven item response theory properties of the eight-item WHOQoL score as a measure of overall QoL [33], a fifth stepwise multiple regression was performed to identify the determinants of this score. Individual demographic and socioeconomic characteristics, and scores of extracted factors following CFA, were introduced in the model to assess significant associations. Analysis was conducted using Stata 9.2.

Results

Sample

A total of 1,008 adults (487 men and 521 women) consented to participate in the study: a response rate of 98.5%. Study samples comprised "healthy" participants from the general population (53%) and patients drawn from health services (47%). Respondents' ages ranged between 18 years and 86 years, with a median age of 34 years. More than half of respondents (57%) resided in urban localities, 27% in rural areas and 16% in Palestinian refugee camps—of those, 66% resided in the West Bank and 34% in Gaza Strip. Of the total, close to 14% of respondents reported needing to cross one or more Israeli army checkpoints "a lot" in order to get to work or school or to

access services, and fewer than half of the respondents (48%) reported never needing to cross checkpoints. Just fewer than 30% of respondents reported having experienced the death or imprisonment of a family member by the Israeli army. Almost 20% of the respondents living in the West Bank reported living close to the Separation Wall and 27% near an Israeli settlement—inhabitants of the Gaza Strip had, indeed, recently experienced the withdrawal of Israeli military forces and settlements from the territory.

Quality of life assessment

Estimated QoL domains scores—as per the WHOQoL-Bref proposed algorithm—were calculated and are summarized in Table 1. For all three locations the social domain scored the highest, followed by the physical, psychological and environmental domains. In contrast, 42% of respondents ranked the physical domain as the most important factor affecting their QoL compared to only 4% for the social domain.

Factor analysis

Principal component extraction with varimax rotation revealed a five-factor solution to be optimal. Following several exploratory factor analyses conducted to reduce the initial number of 96 potential determinants of QoL assessment, a CFA was conducted on a remaining 50 variables. Loadings of items on components, communalities and percents of variance and covariance are presented in Table 2. Communalities were generally low. Loadings of 0.4 or more were used for inclusion of an item in interpretation of a factor. Loadings less than 0.4 were replaced with zeros in the table. The five-factor solution accounted for 43% of the variance in the variables. The items included within each factor were found to pertain to the following list of components: level of distress; financial status; freedom of expression; fear; and anger and conflict.

A CFA was conducted using WLSMV in MPlus. The five-factor confirmatory solution was assessed for overall model fit. The main criteria used to assess model fit included Bentler's comparative fit index (CFI), the Tucker–Lewis index (TLI), and the root mean square error of approximation (RMSEA). Values of the CFI and TLI greater than 0.9 are considered good model fit, while RMSEA is expected to be less than 0.1. The five-factor model exhibited a satisfactory fit with CFI = 0.79, TLI = 0.89 and RMSEA = 0.10.

Multiple linear regression

The factor scores generated from the CFA, together with age, gender, and years of schooling, were used as predictors of the estimated overall WHOQoL score and the domain (physical, psychological, social and environmental)-specific scores, using multiple linear regressions. From Table 3, it is evident that significant differences existed between men and women for all except the physical domain ($P < 0.01$). A significant negative association existed between age and all domain scores ($P < 0.01$ for three of the domains and $P < 0.10$ for the environmental domain). Years of schooling were positively associated with the overall WHOQoL score and the physical and psychological domain scores ($P < 0.01$ for the domain-specific scores and $P < 0.10$ for the overall WHOQoL score).

Looking at the factor scores, one can see that there is a significant positive association between distress levels and the overall WHOQoL score and all four-domain scores, indicating that low distress levels are associated with a better QoL. Variables were reverse scaled; therefore, a high distress score is synonymous with low distress levels. Better financial status correlated with higher domain scores for all except the social domain ($P < 0.01$ for the overall WHOQoL score and the physical and environment specific domains scores; $P < 0.10$ for the psychological domain score). In addition, higher levels of freedom of expression were associated with higher scores for all domains except the environmental domain ($P < 0.01$). Finally, fear level was significantly associated only with the environment-specific domain score ($P < 0.01$). R^2 values ranged between 0.18 and 0.50 for the domain-specific scores and attained 0.57 for the overall WHOQoL score.

Table 1 Summary of average domain scores by location (*SD* standard deviation)

Parameter	West Bank		Gaza Strip		OPT		P^b
	Mean[a]	SD	Mean[a]	SD	Mean[a]	SD	
Physical domain	62.0	20.8	65.5	19.3	63.2	20.3	0.1072
Psychological domain	56.9	15.9	59.0	15.3	57.6	15.7	0.0289*
Social domain	66.7	18.9	68.4	19.3	67.3	19.1	0.1851
Environmental domain	43.9	15.3	47.0	13.2	45.0	14.6	0.0011*
No. of observations	660		348		1,008		

* Significant difference at 5% level of significance

[a] Scores are transformed into a [0–100] scale where 0 represents the worst case scenario and 100 represents the best case scenario on the specific domain subscale

[b] *P* value of the difference between the West Bank and Gaza Strip with regard to each of the QoL specific domains scores

Table 2 Items, factor loadings, communalities, percents of variance and covariance for principal component extraction and varimax rotation

Question	F1	F2	F3	F4	F5	h2
How much bodily pain do you have?	**0.42**	0.00	0.00	0.00	0.00	0.22
To what extent do you feel emotionally safe in your daily life?	**0.48**	0.00	0.00	0.00	0.00	0.31
To what extent do you feel bored?	**0.50**	0.00	0.00	0.00	0.00	0.35
To what extent is suffering part of your life?	**0.47**	0.00	0.00	0.00	0.00	0.43
To what extent are you satisfied with your ability to plan for your daily life?	**0.46**	0.00	0.00	0.00	0.00	0.33
To what extent are you satisfied with your ability to plan for the future?	**0.45**	0.00	0.00	0.00	0.00	0.30
To what extent did you feel unable to control the important things in your life?	**0.55**	0.00	0.00	0.00	0.00	0.35
To what extent did you feel unable to cope with all the things that you had to do?	**0.54**	0.00	0.00	0.00	0.00	0.34
To what extent did you feel worried?	**0.70**	0.00	0.00	0.00	0.00	0.55
To what extent did you feel frustrated?	**0.75**	0.00	0.00	0.00	0.00	0.60
To what extent did you feel incapacitated?	**0.72**	0.00	0.00	0.00	0.00	0.57
To what extent did you feel humiliated?	**0.54**	0.00	0.00	0.00	0.00	0.40
To what extent did you feel lonely?	**0.62**	0.00	0.00	0.00	0.00	0.45
To what extent did you feel anxious?	**0.74**	0.00	0.00	0.00	0.00	0.58
To what extent did you feel sad?	**0.74**	0.00	0.00	0.00	0.00	0.57
To what extent did you feel angry?	**0.62**	0.00	0.00	0.00	0.00	0.42
To what extent did you feel fed up with life?	**0.63**	0.00	0.00	0.00	0.00	0.45
To what extent are you able to receive medical treatment that you need?	0.00	**0.40**	0.00	0.00	0.00	0.19
Does your household have enough money to meet your and your family's needs?	0.00	**0.75**	0.00	0.00	0.00	0.63
Does your household borrow money to fulfill your or your family's needs?	0.00	**0.53**	0.00	0.00	0.00	0.33
Are you or your household in debt now?	0.00	**0.67**	0.00	0.00	0.00	0.47
To what extent does your household postpone paying bills to manage your and your family's needs?	0.00	**0.60**	0.00	0.00	0.00	0.37
Is the food that you desire easily available to you?	0.00	**0.68**	0.00	0.00	0.00	0.50
To what extent are you satisfied with your/your family's earnings?	0.00	**0.69**	0.00	0.00	0.00	0.56
To what extent are you satisfied with the crowding level in your home?	0.00	**0.46**	0.00	0.00	0.00	0.28
To what extent are you satisfied with your capacity to bear sudden medical expenses?	0.00	**0.63**	0.00	0.00	0.00	0.46
To what extent are entertainment facilities available to you?	0.00	**0.51**	0.00	0.00	0.00	0.34
To what extent are you able physically to access health care services?	0.00	**0.39**	0.00	0.00	0.00	0.25
To what extent are you able financially to access health care services?	0.00	**0.61**	0.00	0.00	0.00	0.44
To what extent are you satisfied with your family?	0.00	0.00	**0.44**	0.00	0.00	0.32
To what extent are you satisfied with the freedom afforded to you by your family?	0.00	0.00	**0.61**	0.00	0.00	0.43
To what extent are you satisfied with the possibility of expressing your opinion at home?	0.00	0.00	**0.67**	0.00	0.00	0.46
To what extent do you feel appreciated and respected by the others right now?	0.00	0.00	**0.65**	0.00	0.00	0.44
To what extent do you feel loved right now?	0.00	0.00	**0.65**	0.00	0.00	0.44
To what extent do you feel freedom at home?	0.00	0.00	**0.69**	0.00	0.00	0.50
To what extent do you feel freedom in the street?	0.00	0.00	**0.45**	0.00	0.00	0.24

Table 2 continued

Question	F1	F2	F3	F4	F5	h2
To what extent do you feel able to express your opinion at home?	0.00	0.00	**0.72**	0.00	0.00	0.52
To what extent do you feel fear for yourself in your daily life?	0.00	0.00	0.00	**0.52**	0.00	0.32
To what extent do you feel fear for your family in your daily life?	0.00	0.00	0.00	**0.63**	0.00	0.45
To what extent do you currently feel worry/afraid (threatened) of losing your home?	0.00	0.00	0.00	**0.55**	0.00	0.41
To what extent do you currently feel worry/afraid (threatened) of displacement or uprooting?	0.00	0.00	0.00	**0.57**	0.00	0.45
To what extent do you feel worry/afraid (threatened) about your future and the future of your family?	0.00	0.00	0.00	**0.58**	0.00	0.45
To what extent do you feel fear for your safety?	0.00	0.00	0.00	**0.66**	0.00	0.48
To what extent do you feel fear for the safety of your family?	0.00	0.00	0.00	**0.75**	0.00	0.58
To what extent does your family feel fear for your safety?	0.00	0.00	0.00	**0.60**	0.00	0.41
How often do you feel angry over what occupation does to you?	0.00	0.00	0.00	0.00	**0.78**	0.62
How often do you feel angry over what occupation does to your family?	0.00	0.00	0.00	0.00	**0.77**	0.65
How often do you feel humiliation by military occupation actions?	0.00	0.00	0.00	0.00	**0.69**	0.51
To what extent are you affected by closures and siege?	0.00	0.00	0.00	0.00	**0.59**	0.44
To what extent are you negatively affected by the ongoing conflict and the military occupation?	0.00	0.00	0.00	0.00	**0.61**	0.46
Sum of Squared Loadings (SSL)	6.68	4.89	3.88	3.39	2.80	
Percent of variance	13.36	9.77	7.76	6.78	5.59	
Percent of covariance	30.87	22.58	17.93	15.68	12.93	

Factors: *F1* distress, *F2* financial, *F3* freedom, *F4* fear, *F5* anger/conflict, *h2* communalities

Bold values represent factor loadings of 0.4 or more

Table 3 Regression results for selected determinants of QoL domain scores and WHOQoL score (*SE* standard error)

Parameter	Domain									
	WHOQoL		Physical		Psychological		Social		Environmental	
	Coefficient	SE	Coefficient	SE	Coefficient	SE	Coefficient	SE	Coefficient	SE
Constant	64.24	1.63	77.37	2.40	60.20	1.95	71.39	2.88	46.75	1.75
Age	−0.19*	0.03	−0.47*	0.04	−0.16*	0.03	−0.10*	0.04	−0.05**	0.03
Gender (reference male)	1.20**	0.65	−1.19	0.95	1.55*	0.77	3.13*	1.14	1.39*	0.69
Education	0.16**	0.09	0.42*	0.13	0.27*	0.11	−0.19	0.15	−0.08	0.09
Distress	8.09*	0.57	11.66*	0.84	9.90*	0.68	6.61*	1.00	4.56*	0.61
Financial	6.25*	0.55	2.83*	0.80	1.23**	0.65	−0.36	0.96	9.43*	0.59
Freedom	2.92*	0.55	1.99*	0.81	4.70*	0.65	7.62*	0.96	0.86	0.59
Fear	0.35	0.61	0.95	0.89	0.16	0.72	1.09	1.07	1.93*	0.65
Anger	−0.67	0.53	−1.09	0.77	−0.82	0.63	−0.45	0.93	0.56	0.57
R^2	0.57		0.50		0.44		0.18		0.48	

* Significant at the 1% level

** Significant at the 10% level

Discussion

A PQoL instrument that incorporated an adapted version of the internationally developed WHOQoL-Bref instrument was developed to assess the QoL and its determinants of Palestinian people in the context of a recently intensified chronic political conflict. The instrument was initially based on the WHOQoL-Bref, which was validated using a series of FGDs and refined to incorporate potential determinants as related to the local Palestinian context. Results obtained from the study in the OPT were presented, and QoL determinants were then assessed by factor analyses.

When compared with the pooled results obtained from the WHO International Field Trial of the WHOQoL-Bref [26], results from the Palestinian study clearly indicate a lower QoL for Palestinians residing in the OPT.[1] Interestingly, the latter result was obtained in spite of the differences in the study populations: general and clinical populations for the WHO IFT [26] versus respondents from the general population in the OPT. In a population that has endured generations of war-like conditions and chronic exposure to violence, the results potentially point to the influence of the political context in explaining QoL differences. A deeper understanding of QoL determinants is needed to fully delineate the impact of entrenched conflict on the well-being of people in the OPT.

Indeed, when the WHOQoL-Bref mean domain scores are compared, the OPT population ranks significantly lower than those of the 17 pooled WHO IFT countries (at the 5% significance level), except for the social domain. Here, it is important to note again the omission of the question asking about satisfaction with sex life (which falls into the social domain) in the PQoL instrument. Even with the physical domain, and considering that the WHO IFT respondents included a large proportion of patients while the OPT sampled persons from the general population, PQoL responses were significantly worse than those of the WHO IFT pooled results. If the OPT was compared with the 17 individual countries, it ranked better than only Argentina in the environmental domain, better than Argentina and Bulgaria in the psychological domain and was tied 13th out of 18 countries for the physical domain. Here, again, it is worth noting that the samples for Argentina and Bulgaria were very small: 106 and 216, respectively.

Comparison of QoL and health satisfaction responses with self-rated global health results from the WHO IFT and PQoL revealed that the OPT population reported significantly worse QoL than the WHO IFT pooled population (all countries). Almost 11% of the WHO IFT population reported "poor" or "very poor" QoL, compared with almost 26% for the OPT population ($P < 0.01$). Because the WHO IFT respondents were taken from populations with known conditions, it was expected that respondents selected from the general population for the PQoL would, on average, be healthier. This was reflected in the results for health assessment, with OPT respondents reporting better satisfaction with health than WHO IFT populations. Almost 23% of the WHO IFT population reported being "dissatisfied" or "very dissatisfied" with their health, compared with about 14% in the OPT population ($P < 0.01$).

In line with findings elsewhere [35], physical QoL declined with age ($P < 0.01$). As we know, ageing constitutes a myriad of interacting factors, including biological and social vulnerabilities, resulting in a particular health status at older ages. The case of inhabitants in the OPT demonstrates the additional negative impact of exposure to life-long conflict, violence and insecurity [36]. The interacting dynamics of these issues is manifested by the significantly lower QoL scores (overall and domain specific scores) for older adults in the sample. It is suggested that the somatization of accumulated psychological and physical distress results in tangible declines in well-being and QoL on top of "normal" aging processes.

Men and women reported differences in their overall and domain specific QoL scores, and there was a significant trend for higher QoL domain scores for women in the sample. These results are, perhaps, surprising, given that Palestinian women—as is the case elsewhere—are generally disadvantaged in comparison with men, due to sociocultural norms embedded in a patriarchal social order that discriminates against them and restricts their freedoms. However, our results suggest a paradoxical protective effect of the public/private divide, restricting women's abilities to move outside the home, and pushing men to move beyond the domestic sphere in search of family livelihood. These days, the men's world beyond the home is fraught with daily threats of violation and distress when they are crossing checkpoints, being held, stripped, detained, not allowed to cross, and humiliated [37]. If we combine men's daily life events with the frustration and despair they must feel for not being able to find work in conditions of spiraling poverty, these results can become understandable and suggest that there is a need to pay more attention to men's life quality, well-being and health—an

[1] For comparison purposes, data from Portugal were added to the WHO IFT countries; centers with small sample sizes were omitted, and the three centers in India were pooled together. In addition, cases in the WHO IFT where age or gender was missing and where the age was less than 15 years were also deleted. The resultant sample size from the remaining 17 countries was 11,049 respondents. Finally, given the differences in age and gender distributions between the PQoL study sample and samples used in the WHO IFT, the WHOQoL-Bref mean domain scores were based on age- and gender-adjusted estimates—the WHO Standard [34] was used as reference population.

orientation that is sometimes missing from the classical gender relations paradigm.

Education was important in determining physical and psychological QoL scores, with better QoL reports with increasing education—a finding comparable to the findings of the WHO IFT study [27]. These results are likely due to education improving a person's ability to rationalize and problem solve and, therefore, potentially to take better care of their health and to cope better with external stressors.

Finally, the factors from the CFA were found to be very significantly associated with the different QoL scores. Lower distress levels had a positive impact on all the estimated QoL domains scores. Better financial status had a positive impact on all except the social domain, while greater societal and familial freedom impacted positively on all except the environmental domain. Although the anger component did not reveal significant associations with the different QoL domain scores, a general negative trend was suggested by the results from the regression analysis.

Many of the patterns expected in QoL reporting were validated by this survey. However, the unique aspects of the conflict and the importance of the political context in determining QoL of Palestinians indicate the need for a separate political domain to be developed for QoL assessments in the OPT and, possibly, in other conflict and post-conflict zones. This study corroborated the view that conventional explanations of "poor" health need to include aspects that are often ignored, such as the way society is organized as a causal framework [38]. The consequences of social, economic and political exclusion in the OPT (including the lack of basic freedoms, disempowerment, fear and distress) are part of our conception of a causal framework for "poor" health and well-being. While it is true that this was a cross-sectional study, and, as such, it is not possible to determine the direction of causality, the low QoL and "poor" health are strongly suggested to be the consequences of social inequalities stemming from political and physical violence.

Conclusions

This study clearly indicated that Palestinian QoL is "very poor". If one also considers the timing of the fieldwork (December 2005), the worsening economic and security situation as a result of the international and Israeli response to Hamas' victory in the January 2006 general elections intimates the magnitude of the imminent social tragedy.

These results are an indication of the need for a more contextually and culturally appropriate model of QoL for the social, environmental and psychological domains for the OPT. This may well be achieved through the introduction of a new political domain, entailing an assessment of its effect on the model as well as possible cross-correlations with other domains.

The strength of this study was the validation of the survey instruments in the OPT, but, more importantly, the study offers new perspectives on how to assess comprehensively the human costs of chronic conflicts. Though still incomplete, the tool provides concrete elements for public health responses in entrenched conflict situations by eliciting the determinants of health status as well as the mechanisms created (individually an collectively) to manage suffering and to ensure survival. What the PQoL aims to measure is not simply an individual's QoL but also the social quality or, more appropriately, the "social suffering" as a dynamic concept that integrates the multiple determinants (economic, social, political, and cultural) of health and well-being of a society. The Palestinian people provide a valuable public health lesson with respect to the broader understanding of health and the problem of "medicalization" of health.

This study may be seen as an example of how treating a conflict as a broad public health problem may lead to a change in the conceptualization of the outcomes to be explained (i.e., from body count and medical indicators to social suffering due to violation of basic rights) as well as the international response to be undertaken (from humanitarian/medical aid to political conflict resolution and realization of human rights laws). Attempts to measure the social suffering of populations stricken by complex emergencies are, therefore, part of an overall approach that places the demand for rights and justice at the center of public health.

Acknowledgments The authors would like to thank the World Health Organization–Eastern Mediterranean Regional Office (WHO-EMRO), for funding the study and providing the technical assistance needed. Thanks are also due to the two anonymous referees, for their comments that very much improved the quality of the paper, and to the Palestinian Central Bureau of Statistics (PCBS), for conducting the fieldwork. The analyses and ideas presented in the paper are the responsibility of the authors and do not necessarily reflect the position of the WHO or the PCBS. The paper was presented at the 6th international Health Economics Association congress in Copenhagen, Denmark, and at the 14th Economic Research Forum Conference in Cairo, Egypt.

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