A Gender Lens on Quality of Life: The Role of Sense of community, Perceived Social Support, Self-Reported Health and Income

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Abstract

Quality of life (QoL) refers to a subjective evaluation that is embedded in a cultural, social and environmental context. It is a multidimensional concept and its assessment covers four domains: physical health, psychological health, social relationships, and environment. Although many studies report on QoL, literature rarely addressed the question of the QoL predictors from a gender perspective. Present study aimed at investigating gender differences in the determinants of quality of life. Specifically, gender was considered as a moderator in the relationship between predictors of QoL (i.e. socio-demographic characteristics, perceived health, income, social support and sense of community) and each dimension of QoL. 654 Italian adults participated in the study. Results show that men outscore women on the physical, the psychological and the environmental domains of QoL. Considering determinants of QoL, sense of community and self-reported health operate in a similar fashion for both genders. On the contrary, social support is more predictive for women's QoL, whereas the income level is more significant for men's QoL. Implications are discussed.

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The past three decades have witnessed numerous changes with respect to the treatment of gender in research on health inequalities, leading to research in a more inclusive direction that focuses on the experiences of women as well as men (Read & Gorman, 2010).

In broadest terms, women have longer life expectancies than men but suffer from more illness (Read & Gorman, 2010). Women have higher rates of negative affect and depression and poorer subjective health than men (Crimmins, Kim, & Solè-Aurò, 2010; Nydegger, 2004). In most studies, women consistently report more negative emotions than men (Hansson, Hilleras, & Forsell, 2005; Tesch-Römer, Motel-Klingebiel, & Tomasik, 2008) and rate their subjective health lower than men (Prus, 2011; Tesch-Römer et al., 2008).

In sum, there is a discrepancy between epidemiological data, i.e. mortality and life expectancies, which is more encouraging for women, and the subjective perception, i.e. negative emotions and self-reported health, which is more positive for men.

Such diversity might be explained by many interrelated factors pertaining biological and socio-cultural dimensions, as well as life conditions. Much recent work in gender studies demonstrate the intrinsic interconnectedness between biological and social dimensions (Denton, Prus, & Walters, 2004; Doyal, 2000), although the extent to which each makes a contribution varies for different health condition (Emslie & Hunt, 2008). As WHO (1998) states, innate constitution seems to give women an advantage over men, at least in relation to life expectancy: when this female potential of greater longevity is not realized, it indicates serious health risks in their environment.

Basically, there are two different perspectives for explaining gender differences in health. Firstly, they could be explained by universal sex differences (Lippa, 2005), but biological explanations for women's lower well-being are not well supported empirically (Nydegger, 2004). Secondly, factors

related to the different living conditions of men and women might account for gender differences in health, as in many societies the average living situation of women is disadvantaged as compared to that of men (Tesch-Römer et al., 2008). It could be stated that women suffer from more illness as compared to men if they are disadvantaged in terms of opportunity structures and action resources (Tesch-Römer et al., 2008).

However, since gender is a measure of both biological and social differences, it is likely that the health inequalities between men and women reflect both sex-related biological and social factors, and the interplay between them (Denton et al., 2004). Indeed, beside biological differences, pathways through which structural, contextual and psychosocial forces influence health are different for men and women (Denton et al., 2004). According to the differential vulnerability hypothesis (McDonough & Walters, 2001), men and women differ in vulnerability to some of the social determinants of health. The moderating effect of gender is determinant-specific (Denton et al., 2004).

It is well documented that socio-economic status shapes men's and women's behaviours, health and well-being: persons of higher social standing have better health, because they have greater access to resources needed to prevent and cure disease, and typically can better cope with stressful life events (Fassio, Rollero, & De Piccoli, 2013; Marmot, 2004). Income is positively associated with both physical and mental health, such that those who are more advantaged economically are also better off health-wise (Ziersch, Baum, MacDougall, & Putland, 2005). However, when gender is considered, high income is more strongly related to self-reported health for men than for women (Stafford, Cummins, Macintyre, Ellaway, & Marmot, 2005).

Another determinant of health is social support. Social support help people to access better resources and act as a buffer against stressful life events (Campbell & Gillies, 2001). Women do have stronger support networks than do men, and these networks appear to enhance their well-being (Denton et al., 2004). Social support is a more important predictor of good health for women than men (Denton et al., 2004). Females are more likely than males to report feeling loved and this in

turn enhances their perceived health (Nakhaie & Arnold, 2010). However, the evidence on this point is not conclusive, as women are more involved in the health needs and behaviors of family, friends, and other social network members, and this high involvement can result in additional strains and stresses that are harmful to health (Neff & Karney, 2005).

Also the residential context is connected to well-being for both men and women (Gattino, De Piccoli, Fassio & Rollero, in press; Rollero & De Piccoli, 2010). Neighbourhood connections and a positive perception of the community increase mental health, whereas the perception of safety in the local environment leads to a better physical health (Ziersch et al., 2005). However, the specific aspects of the residential environment that are important for health vary between men and women (Stafford et al., 2005). In terms of gender differences, contextual influences may operate differently because men and women perceive their environment differently or because different levels of exposure and/or vulnerability to aspects of the local environment (Stafford et al., 2005). Empirical results suggest that the residential environment is more important for women's health than for men's health (Stafford et al., 2005). The stronger association between neighbourhood characteristics and well-being seen amongst women may be due to the fact that women spend more of their time in the neighbourhood. The social roles typically fulfilled by women, such as childrearing and maintaining the home, may be more dependent on features of the local area (Stafford et al., 2005).

One of the most used concepts to describe the relationship between individuals and their living environment is sense of community (Sarason, 1974). It refers to people's perception of interconnection and interdependence and describes experiences of geographical community in global terms as feeling of belonging, perceived influence over the community, integration and fulfilment of needs (McMillan & Chavis, 1986). To our knowledge, literature does not directly link sense of community and health, but there is empirical support for the positive role of sense of community in increasing life satisfaction (Prezza, Amici, Roberti, & Tedeschi, 2001), personal and social well-being (Cicognani, Pirini, Keyes, Joshanloo, Rostami, & Nosratabadi, 2008).

Quality of life and its determinants from a gender perspective

As above stated, individuals' health and well-being can not be conceived without considering also contextual and social dimensions. From this perspective, the concept of quality of life seems particularly promising. According to the World Health Organization, quality of life (QoL) is defined as "the individual's perception of his/her position in life in the context of his culture and the value systems of the society in which he lives compared to his objectives, expectations, standards and concerns" (WHO Quality of Life Group, 1995, p. 1405). This definition implies that QoL refers to a subjective evaluation that is embedded in a cultural, social and environmental context. As Katschnig and Krautgartner (2002) pointed out, QoL can be regarded as consisting of three components: subjective well-being or satisfaction with the actual life situation; functioning in self-care and social roles; access to environmental resources, both social (i.e. social support) and physical (i.e. standard of living). Since quality of life is a multidimensional concept (Fernández-Ballesteros, 2011), the assessment of individual QoL usually covers different domains, such as physical health, psychological health, social relationships, and environment (WHOQoL, 1998). Results concerning the impact on quality of life of gender are controversial. Men tend to report higher health-related QoL than women of the same age, despite higher mortality rates and lower life expectancy (Benyamini, Blumstein, Lusky, & Modan, 2003; Gallicchio, Hoffman, & Helzlsouer, 2007; Kirchengast & Haslinger, 2008). Gender differences for psychological and social domains have been reported in a survey of adults carried out in 23 countries (Skevington, Lofty, & O'Connell, 2004): women showed higher scores on the social domain, but lower scores on the psychological dimension. However, subsequent cross-cultural data did reveal no gender difference (Skevington, 2010).

Testing for gender differences with a sample of Kuwait University undergraduates, Abdel-Khalek (2010) found that men obtained higher mean scores than did their female counterparts on three dimensions of quality of life: physical, psychological and environmental. According to the author,

this datum should be connected to the cultural context, as the Kuwaiti society fosters a rigid development of sex role behaviours.

If research has largely investigated gender differences in respect to quality of life, very few studies have deserved attention to the determinants of QoL for men and women. Li, Lin, & Chen (2011) explored gender differences in the relationship between social activity and quality of life in elderly people. They found that among men only the formal group activity positively affects QoL, whereas among women only religious activity positively affects QoL. However, social activity does not contribute much explanatory power: for both men and women self-rated health appears to be the best predictor of QoL scores (Li et al., 2011). The significant role played by perception of health was confirmed also in a study with a Brazilian sample of older adults (Trentini, Chacamovich, Peretti Wagner, Müller, Hirakata, & De Almeida Fleck, 2011): both men and women who considered themselves healthy obtained significantly higher means in all domains of QoL.

The current study

As above described, on the one hand literature has largely showed gender differences in vulnerability to some determinants of health and well-being. On the other hand, literature on quality of life reports some gender difference in the domains of QoL, but it rarely addresses the question of the QoL determinants from a gender perspective. Thus, the present study aims at providing insight into whether different determinants interact with gender in predicting quality of life. To our knowledge, this is the first attempt to investigate if predictors of QoL occur in a uniform or in a gender-specific manner. Following MacKinnon and Luecken's (2008) suggestion, health psychology should focus not only on major relations between independent variables and an outcome variable, but also on how these relations occur and for whom. From a methodological standpoint, examination of moderating factors considers the unique conditions under which two variables are related. In the current study, gender is considered a moderator, since our purpose is

investigating not only the major relation between determinants of QoL and each dimension of QoL, but also if this relation differs for men and women.

On the basis of the above described literature, about the major relations (main effects), we hypothesized that:

- Men show higher levels of QoL in the physical, psychological and environmental domains (Abdel-Khalek, 2010; Benyamini et al., 2003; Gallicchio et al., 2007; Kirchengast & Haslinger, 2008);
- Income positively predicts QoL (Fassio et al., 2013; Ziersch et al., 2005);
- Self-rated health is the best predictor of QoL scores (Li et al., 2011; Trentini et al., 2011);
- Social support positively affects QoL (Campbell & Gillies, 2001);
- Sense of community increases QoL (Rollero & De Piccoli, 2010; Ziersch et al., 2005).

Concerning the moderating effect of gender, we hypothesized that the role played by income in increasing QoL may vary according to gender, since high income is more strongly related to health for men than for women (Stafford et al., 2005). On the contrary, social support and sense of community may be more important predictors for women than for men (Denton et al., 2004; Stafford et al., 2005).

Method

Participants

654 subjects (55.5 % females) living in Italy participated in the research. They were recruited via students' assistance, according to the technique of convenience sampling. Their average age was 41.05 years (*SD*=13.67). About the education, the majority was high school (43.2%) or college graduated (36%), but there were also people with a lower level of education (19.4%). Most of the participants (72.5%) were still working, followed by students (10.8%), retired people (10%), housewives (4.6%) and a small percentage of unemployed people (2.1%). No gender difference was found concerning age, education, and employment.

The majority (54.1%) lived with the partner; the others were single (37.7%), divorced (6.4%), or widowers (1.9%). In respect to men, women were more often single (Chi square = 6.11, $p<.01$). Concerning the monthly income, 19.7% of participants declared a family income lower than 1200 Euros, 24.1% reported an income between 1200 and 2000 Euros, 30.1% obtained between 2000 and 3000 Euros, and the remaining 26.1% more than 3000 Euros. In this last category, men were significantly more present than women (Chi square = 7.77, $p<.01$).

Measures

Data were gathered by a self-reported questionnaire which took about 20 min to be filled in. Participants were asked to complete the following scales:

- The WHO Quality of Life brief Scale (WHOQOL Group 1998; for Italian validation see De Girolamo, 2001). This 24 items scale includes four dimensions: Physical Health (7 items, i.e. “To what extent do you feel that physical pain prevents you from doing what you need to do?”, Cronbach’s alpha =.70), Psychological Status (6 items, i.e. “To what extent do you feel that physical pain prevents you from doing what you need to do?”, Cronbach’s alpha =.79), Social Relationships (3 items, i.e. “How satisfied are you with your personal relationships?”, Cronbach’s alpha =.66), and Environment (8 items, i.e.“To what extent do you have the opportunity for leisure activities?”, Cronbach’s alpha =.73). Items were scored on a five-point scale from (1) not at all, to (5) an extreme amount.
- The Multidimensional Scale of Perceived Social Support (Zimet, Dahlem, Zimet, & Farley, 1988; Italian validation by Prezza & Principato, 2002), which includes three dimensions: support given by a special person (4 items, i.e. “There is a special person in my life who cares about my feelings”, Cronbach’s alpha =.91), support given by family (4 items, i.e. “My family really tries to help me”, Cronbach’s alpha =.82), and support given by friends (4 items, i.e. “I can count on my friends when things go wrong”, Cronbach’s alpha =.94).

Items were scored on a seven-point scale from (1) completely untrue for me, to (7) completely true for me.

- The Sense of Community Scale (Davidson & Cotter, 1986; Italian validation by Prezza, Costantini, Chiarolanza, & Di Marco, 1999). This 15 items scale measures the relationship with the residential context (i.e. “I like the neighbourhood in which I live”; “If I need help, this neighbourhood has many excellent services available to meet my needs”; “I do not like my neighbours”) (Cronbach’s alpha = .85*).* Items were scored on a four-point scale from (1) completely untrue for me, to (4) completely true for me.

Participants were also asked to rate their perceived health from (1) very bad, to (10) excellent. Finally, they were given a socio-demographic section containing items on age, educational level, marital status, profession and income.

Data analyses

To test our hypotheses we performed four regression models (stepwise method) in which each dimension of QoL was regressed onto demographic variables (gender, age, educational level, marital status, income), psychosocial variables (perceived social support and sense of community), and self-reported health. Moreover, since gender was considered as a moderator, it was included in the regression models as an interaction term. Specifically, we included the interaction between: gender and each demographic variable, gender and sense of community, gender and perceived social support, gender and self-reported health.

Results

No significant gender difference was found concerning the Multidimensional Scale of Perceived Social Support and the Sense of Community Scale, whereas men reported higher scores (M = 7.57, SD = 1.54) than women (M = 7.09, SD = 1.73) on perceived health (T = 3.80, p<.01).

Then, we tested if men and women obtained different scores on each domain of quality of life. As seen in Table 1, men outscored women in the physical, the psychological and the environmental domains. Men and women were similar only concerning the perceived quality of their social relationships.

In the first regression model the dependent variable was the physical dimension of QoL (Table 2). Self-reported health was the strongest predictor. Among psychosocial variables, a key role was played by sense of community and by support received from family and friends. Income increased physical QoL and its effect is more relevant for men, being the interaction between gender and income significant.

When the Psychological domain was considered (Table 3), self-reported health was again the most important predictor. Even sense of community positively affected psychological QoL, as well as social support given by friends. The support received by a significant other was instead significant only for women. Among socio-demographic variables, income enhanced psychological QoL.

About Social Relationships (Table 4), all the sources of support contributed to QoL. Moreover, income, sense of community and self-reported health significantly predict also this domain of QoL. In this case, the effect of predictors does not vary according to gender.

Finally, sense of community was the strongest predictor of the perceived QoL in the environmental (Table 5). Physical health and social support by family and friends enhanced environmental QoL as well. A difference between men and women was found in relation to income: although income played a significant role, in the case of men it contribution is much stronger.

Discussion

The present study aimed at investigating whether gender differences in the determinants of QoL occur in a uniform (i.e., the same determinants operate in a similar fashion across all the domains of quality of life) or in a specific manner. In other words, our purpose was investigating not only the

major relation between determinants of QoL and each dimension of QoL, but also if this relation differs for men and women. Being our sample large but not representative, we are aware that generalization of present results needs caution. Moreover, since the study was conducted in Italy, it should be interesting replicating the same study in other countries, in order to investigate the external validity of results.

As seen, in previous studies (Abdel-Khalek, 2010; Benyamini et al., 2003; Gallicchio et al., 2007; Kirchengast & Haslinger, 2008), men show higher levels of quality of life concerning the physical, the psychological and the environmental domains. However, in present study gender *per se* does not affect QoL. This could be due to the specific context, i.e. Italy, where the study was conducted: as seen, cross-cultural data do not always reveal gender differences (Skevington, 2010). Another possible explanation pertains to methodology, as to our knowledge this is the first attempt to consider gender as a moderator. As above argued, health psychology should focus not only on major relations between independent variables and an outcome variable, but also for whom these relations occur (MacKinnon & Luecken's, 2008). Specifically, our findings reveal that QoL does not change according to gender, but that the effect of other predictors of QoL may be pronounced or diminished according to gender. This is in line with a growing literature that underlines pathways through which structural, contextual and psychosocial forces influence health, beside biological differences (Denton et al., 2004; McDonough & Walters, 2001), since gender does interact with other socio-cultural variables.

Considering such determinants of QoL, results show both similarities and differences between man and women. For both genders, self-reported health is the best predictor of physical and psychological QoL, and positively affects also the environmental and the relational domain. This is in line with literature (Li et al., 2011; Trentini et al., 2011): regardless gender, self-rated health is the most powerful factor affecting quality of life.

Moreover, sense of community increases all the domains of QoL in a similar fashion for men and women. As seen, recent studies on well-being show similar patterns between men and women, as a

positive relationship with the living place directly increases both genders' well-being (Rollero & De Piccoli, 2010).

The last similarity between genders pertains to social support given by family and friends, which enhances the quality of all dimensions of QoL for both men and women. However, only for women social support given by a special person increases the psychological domain. This is in line with traditional literature on gender differences, which has largely demonstrated that gender stereotypes define women as interdependent/communal and men as independent/agentic (De Piccoli & Rollero, 2010; Eagly & Karau, 2002; Parson & Bales, 1955; Spence & Buckner, 2000). Men are socialized to perceive their self-concept through the lens of independence and autonomy from others, whereas women are more likely to define themselves in terms of relationships with close others (Cross, Bacon, & Morris, 2000). As a consequence, men may tend to maintain less emotional relationships, may be less embedded in their social networks, and, therefore, may require social support (Gallicchio et al., 2007; Kawachi & Berkman, 2001). Women, on the contrary, may show a greater tendency to form emotionally close, mutually self-disclosing and supportive relationships (Fehr, 2004). In sum, social relationships with close others may be more determinant for women's quality of life than for men's.

The opposite pattern has been shown for the income level, although income per se affects all the dimensions of QoL. In line with literature (Stafford et al., 2005) high income is more strongly related to physical and environmental QoL for men than for women. Although in present study we referred to family and not to personal income, we can again hypothesize that men and women are differently socialized to the meaning of earn money. If traditional gender roles prescribe men to work outside home to earn money and provide women's needs (Glick & Fiske, 1996; 1999; 2001), it is not surprising that men emphasize the importance of income in affecting quality of life. As such, the income is a status symbol, meaning achievement and success in the fieldwork, and thus is more congruent with traditional male roles (Eagly & Karau, 2002).

To sum up, some factor increasing quality of life is gender-specific, whereas other determinants are similarly shared by men and women. Previous research on the gender-QoL relationship has usually revolved around identifying individual-level factors that differently outline outcomes for men and women (i.e. socioeconomic position and health-related behaviors) (Read & Gorman, 2010). The problem with such focus is that individuals are situated within social, cultural, and political contexts that also condition their health status (Dodoo & Frost, 2008). Present study can be conceived as a first attempt to consider not only individual factors, but also contextual and psychosocial variables (i.e. social support and sense of community) from a gender perspective.

We think that understanding factors contributing to quality of life is critical for developing the most appropriate interventions for improving or preserving quality of life. Being aware that quality of life's determinants operate in complex and intertwined layers, with behavioural and psychosocial factors growing out of the social context of people, can contribute to develop more effective interventions. Since we consider quality of life one's perception of the position in life in the context of culture, as WHO (1998) pointed out, study on QoL should consider the role of cultural and social contexts the subjects live in. Indeed, cultural values may influence not only the meaning, interpretation, knowledge and potential determinants of health and QoL, but also the manner of perceiving them. Moreover, if we aim at improving individuals' quality of life, we have to consider the role played by gender, as men and women do not give importance to the same aspect in similar ways. As Eckermann (2000) pointed out, we still know little about women's well-being, and the knowledge of subjective experiences of QoL can inform the lack of major improvements in objective measures of health. More generally, for prevention and intervention programs, understanding critical moderators has the potential to help direct limited resources to those who are most likely to benefit for them. In other words, specifying what distinguishes men and women could suggest policy makers specific actions which can increase people well-being, considering at the same time that different social categories give diverse meanings to their social and relational

contexts. This is an issue theoretically known, but it is not always enough considered in social, cultural, and welfare policies.

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Table 1. Gender differences on each domain of QoL.

	Men: *M* (*SD*)	Women: *M* (*SD*)	*T* value	Sig.
Physical dimension	3.91 (.54)	3.71 (.59)	4.56	<.001
Psychological status	3.54 (.62)	3.36 (.60)	3.77	<.001
Social Relationships	3.82 (.73)	3.73 (.73)	1.52	n.s.
Environment	3.29 (.57)	3.16 (.55)	2.94	<.005

Table 2. Multiple regression analyses (stepwise method) predicting QoL: Physical domain.

Predictor	Standardized beta	t	VIF
Age	-.11**	-3.25	1.16
Income	.19***	4.20	2.16
Gender*income (1=female)	-.09*	-1.97	2.14
Support: family	.10**	2.72	1.25
Support: friends	.07*	2.11	1.29
Sense of community	.07*	2.19	1.10
Self-reported health	.53***	15.86	1.17

* p<.05 **p<.01 ***p<.001 R^2 adj. = .46 F (7, 553)= 68.08 p<.001

Table 3. Multiple regression analyses (stepwise method) predicting QoL: Psychological domain.

Predictor	Standardized beta	t	VIF

Income	.10**	2.78	1.06
Support: friends	.08*	2.12	1.22
Gender*support: other (1=female)	.32***	5.64	2.80
Sense of community	.19***	5.40	1.06
Self-reported health	.64***	12.98	2.15
Gender*self-reported health (1=female)	-.40***	-6.48	3.44

* p<.05 **p<.01 ***p<.001 R^2 adj. = .36 F (6, 560)= 54.19 p<.001

Table 4. Multiple regression analyses (stepwise method) predicting QoL: Social Relationships.

Predictor	Standardized beta	t	VIF
Income	.11**	3.23	1.04
Support: family	.36***	8.39	1.68
Support: friends	.14***	3.82	1.24
Support: other	.13**	3.22	1.61
Sense of community	.07*	2.05	1.08
Self-reported health	.15***	4.37	1.08

* p<.05 **p<.01 ***p<.001 R^2 adj. = .38 F (6, 563)= 60.31 p<.001

Table 5. Multiple regression analyses (stepwise method) predicting QoL: Environment.

Predictor	Standardized beta	t	VIF

Income	.31***	6.22	2.17
Gender*income (1=female)	-.17**	-3.37	2.15
Support: family	.11**	2.83	1.24
Support: friends	.13**	3.39	1.18
Sense of community	.35***	9.87	1.09
Self-reported health	.18***	5.05	1.12

* p<.05 **p<.01 ***p<.001 R^2 adj. = .34 F (6, 557)= 50.14 p<.001