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Health-related Quality of Life of Young Women Heading their Families: A Community-based Study in El-Saida Zeinab

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Abstract:
Background: Exposure of women to socioeconomic risks, as becoming the head of the family, could influence their life quality. Therefore, assessment of women's needs in families headed by women (FHW)to achieve equity regarding health-related quality of life (HRQoL) is pivotal for stakeholders involved in women's programs. **Objective**: to identify the predictors of HRQoL of young women heading their families versus young wives in families headed by men (FHM). **Methods:** A community-based cross-sectional study compared the HRQoL for two groups of women (age is 25-49 years); 200women heading their families (group 1) and 200 wives in FHM (group 2). The study was conducted in a randomly selected shiakha (El-Atrees Shiakha) in El-Saida Zeinab district in Cairo, Egypt using structured interview questionnaire form. **Results:** Women heading their families who had significantly ($p< 0.05$) lower mean HRQoL score compared to wives in FHM were those ≥35 years old, non-educated and those with history of early marriage (mean HRQoL scores ± standard deviations were 3.5±0.6, 3.5±0.56, 3.4±0.6 respectively).**Conclusion:** women having socioeconomic risks related to 'non-education, young age at marriage and working in unstable jobs" were more vulnerable to suffer from low HRQoL upon exposure to the socioeconomic crises of becoming the head of the family.

Key words: Families Headed by Women; Equity; Health Related Quality of Life; Reproductive Health; Age at Marriage; Education

INTRODUCTION

The health-related quality of life (HRQoL) represents a person's subjective evaluation of his/her level of functioning within the physical, emotional and social domains of health.(1) HRQoL measures are usually used in health fields because the individual's point of view is considered essential for assessment of health outcomes. It has been shown that women usually have a higher prevalence of medical and psychosocial problems and tend to have a lower HRQoL than men.(2) Williams provided a conceptual framework that presents factors associated with health outcomes and

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proposed that health status is determined by multiple factors. The William's model posits that socioeconomic status (SES) is a major determinant of health outcomes, whereas psychosocial factors and medical care act as mediators of the relationship between SES and health outcomes. His model also included demographic factors as determinants of health outcomes.[3]

Families headed by women (FHW) are increasing in Egypt especially in urban governorates Egyptian Demographic and Health Survey (EDHS 2005)[4]from 12% to 16% (EDHS 2008).[5]There are different studies that focus on the social context in which women come to head household such as marriage pattern (husband having more than one wife), marriage disruption and poverty.[6] and the impact on family life. Female headed households have lower incomes than male headed households.[7-9] Household context provided evidence that single women living with children were underprivileged on all health outcomes. [10] Children related to households headed by married women had stronger schooling attainment than children allied to widows.[11] Yet, there are different interventions to improve the quality of life of families headed by women such as empowering women by building their capacity in vocational and leadership skills and encouraging them to add their own savings to small loans.[12]

According to data derived from encyclopedia for nations, Egypt ranked number 71 out of 78 countries regarding the percent of households with a female head.[13] In addition, the ranking of Egypt, regarding the percentage of female headed housewives, dropped from 71st (EDHS 2005)[4] to 73rd (EDHS 2008).[5]

The Health System Reform Program (HSRP).[14,15] includes special policies for exemption of the "poor families" from payments to health services. However, the definition of 'poor" doesn't include some important variables as quality of life. Hence, the Faculty of Medicine, Cairo University-

Public Health Department and the Center for Social and Preventive Medicine (FMCU-PHD&CSPM) had conducted a research project in 2009, to identify the priority families for preventive and curative care.[16] The findings showed that families headed by women were at increased risk to high morbidity, disabilities and mortalities as compared to Families Headed by Men (FHM).

The specific research question is: What are the factors predicting quality of life of young women heading their families?

The current study was justified to provide information to policy makers involved in health and women's empowerment to develop interventions that improve the quality of life of FHW.

2- Goal and objectives

2.1. General Objectives: the goal of this study is to assess women's health and equity ensuring through identifying quality of life determinants for vulnerable women.

2.2 Specific Objectives:

1. Identify determinants that influence health-related quality of life of young women heading their families versus young wives in families headed by men.
2. Recognize factors predicting health-related quality of life of young women.

3. METHODS

3.1. Study Design

It was a comparative cross-sectional community-based situation analysis of the health-related quality of life of young women aging 25-49 years between two groups of women: women heading their families (FHW) and wives in families headed by men (FHM).

3.2. Study Setting

The study was conducted in El-Atrees Shiakha; a well-defined urban squatter area which is considered as middle and low socio-economic setting. That shiakha was selected by simple random sampling out of the 15 shiakhas of El-Saida Zeinab district in Cairo, Egypt.

3.3. Study Population

The study included two groups of women: young women (25-49 years) heading their families andwives, 25-49 years of age, in families headed by men**.** The inclusion criteria of the FHW were: families which depend on the wife for financial /economic earning of the family due to specific reasons i.e. death of the husband, disease of the husband, who become unable to work, travel of the husband without coming back/lost contact with the family, divorce/separation, the husband is not working for cash and the husband married with another wife, with no financial support to his family

3.4. Sampling

According to 2006 census data [17], Al-Atrees Shiakha had a total population and number of families having ever-married women (25-49 years of age) of 9000 and 900 respectively. 21% (n=198) of those families have been estimated to be FHW[16].The Ministry of Social Solidarity data base and Social Affairs office records registered 200 FHW in El-Atrees Shiakha

a. FHW sample: 200 FHW. It included all registered FHW in the data base and records
b. FHM sample: 200 FHM. Visits were conducted to FHW, and selection was done to FHM from nearby residential neighbors of FHW, who are resident within the same building/house and the wife in the age group 20-49 years.

3.5. Data Collection:

According to the Ministry of Social Solidarity database 2010[18], there were 5 community-based organizations (CBOs) serving El-Atrees Shiaka. Interviews with heads of such CBOs and staff members in the Social Affairs Office/Ministry of Social Solidarity were done for orientation about study objectives, procedures and intended outcomes. Due to some security issues, a team from Social Affairs Office staff had collaboratively supported the interviewers to identify the selected families according to the inclusion criteria. An interview was scheduled

and data were collected once the targeted individual was identified and agreed to participate. The response rate was 100%.

Data collection tool: a structured questionnaire form has been designed for data collection. The English version of the WHOQOL-BREF.[19] had been revised and used as resource material while preparing the proposed study questionnaire. Accordingly, the researchers developed a questionnaire to produce a profile with four domain scores about an individual's overall perceptions of quality of life. This latter covered the socio-demographic background and Health-related quality of life (HRQoL). The four quality of life domains scores have been scaled in a positive direction, with a score range (1-5). Where necessary, we have reversed scores so that low scores consistently indicate worse outcomes. Then, raw domain scores were calculated by straightforward summative scaling of constituent items. In order to allow meaningful interpretation of final score for the total scale and for subscales, raw domain scores were transformed to a 1-5 scale, for ease of comparison with other data sets. The higher the score for the total and different items of HRQoL domains, the more is the satisfactory level of HRQoL. The four HRQoL domains included in the designed questionnaire were presented in twenty items: five items measuring physical health, five items for psychological health, two items for social domain and eight items measuring environmental health. The items were as follows:

Domains	**Items**
1- Physical health	Ability of doing daily activities, ability to walk, ability to go to work, extent of felt physical pain, amount of medical treatment
2- Psychological health	Feeling meaning for your life, feeling peaceful, ability to concentrate, enjoy life, how much satisfaction with oneself.
3- Social health	Satisfaction about relationships with others, relationships with friends
4- Environmental health	Satisfaction from house conditions, method of transportation, feeling safe in daily life, access to health services, access to needed information, living in healthy physical environment, opportunity for leisure activities, having enough money to meet needs.

The questionnaire form was tested for 15 cases (female laborers in Cairo University) and modifications had been considered in the final form.

3.6. Data Management Plan

Data entry was started in parallel to office editing of field-completed forms. Pre-coded data were entered on the computer using a database developed for data entry on Microsoft Office Excel program for windows,2007. Data were then transferred to the Statistical package of Social Science, version16 (SPSSvs.16) for quantitative data analysis. The data were normally distributed. Simple frequencies were used for data checking. Bivariate relationships were displayed in cross tabulations and graphs were used to illustrate simple data. Student t test was used to compare mean differences between two groups and ANOVA to test the differences in mean scores of three or more groups. All tests of significance were determined based on a p value ≤0.05.

3.7. Ethical Consideration

The study proposal had been approved by the Faculty of Medicine, Cairo University Ethical Review Committee. Verbal consent and active contribution of the Social Affairs Office staff representative had been documented. Verbal consent from the interviewed women had been obtained during conduction of the field survey. Referral of women contacted during field work to get the needed health services in Kasr Al Aini hospitals was done for those who were and were not included in the study.

For ethical consideration, the research team has the policy of storing the completed questionnaire forms. The policy includes: data entry using code numbers rather than names. After completing data entry, the format had been kept in the Public Health Department. After dissemination of the research findings, the completed forms will be destroyed by paper destruction machine.

4. RESULTS

Table (1) illustrates Health-related Quality of life and Socio-demographic parameters for 200 women in FHM and their counterparts in FHW. As depicted by the table, there was a tendency for families headed by women (FHW) to be in the age group 35 and above (67%) compared to 55% of women related to those families headed by men (FHM). Such findings indicated that families became headed by women when the women became relatively older in age. However, the table shows that 33% of women related to FHW were of young age (less than 35 years old). It is obvious from the table that old women (35 years old and above) related to FHW had statistically significant (P=0.01) lower mean HRQoL score(3.5±0.6) than their counterparts of women related to FHM(3.7±0.6).

The study findings disclose that more than half (57.5%) of the women related to FHW were not educated. The counterpart figure for wives related to FHM was 36%. Table (1) illustrates the mean scores of HRQoL among women with different education levels. The mean HRQo**L** scores for educated women related to FHW were (3.5±0.6) and (3.8±0.4) versus, (3.6±0.6) and(3.9±0.5) for women in FHM, categorized as primary-secondary and highly educated respectively. Non-educated women related to FHW had lower HRQoL score (3.5±0.5) than non-educated women related to FHM (3.8±0.6).

The current working status of wives allied to the two categories of the studied families showed that 65.5% of women related to FHW were working for direct payment, and more than forty percent of the working women (45.5%) had unstable job. Only 25.5% of wives allied to FHM were working for cash. Women, in FHW, who were not working or were working in unstable jobs, had significantly lower mean HRQoL scores (3.5±0.6) and (3.5±0.5) than counterpart wives in FHM(3.7±0.6) and (3.7±0.5) P=0.01 and p= 0.04 respectively. Study of the reproductive performance of the target women provided

information about reproductive health burden for women and the associated level of HRQoL in FHW versus FHM. Table (1) shows that women related to FHW had higher tendency to marry earlier(i.e. less than 20 years old)(53.5%) than women related to FHM (38.5%).The teenage married women allied to the two groups of families showed a statistically significant (P=0.03) difference regarding the mean score of HRQoL with lower level among women heading their families (3.4±0.6) than wives in FHM (3.6±0.6)**.**

Table (1)delineated that 73% of women allied to FHM had history of less than five pregnancies versus 66.5% of women allied to FHW. There was statistically significant (p=0.002)higher mean HRQoL score between wives in FHM (3.7±0.6), who had less than five pregnancies, and the counterpart women in FHW(3.5±0.5). The information apropos living environment; measured by crowding index, and HRQoL are shown in table (1). The table pointed out the lower mean HRQoL score (3.5±0.5)of women with good housing conditions(i.e. less than two persons per bed room), but affiliated to FHW than the score of wives living in similar housing conditions but allied to FHM (3.8±0.5) (p=0.001).

Table (2) and Figure (1) demonstrate that women in FHW showed a statistically significant low mean percent HRQoL scores in the all domains of quality of life: physical, psychological, social, environmental and overall scores than women related to FHM.

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Table (3) illustrates the mean scores for each of the HRQoL domains for women heading their families according to socio-demographic characteristics. The table highlights five important issues of statistically significant value as being associated with HRQoL mean score

among women heading their families. Women married at age less than 20 years had lower mean score for environmental domain HRQoL (p=0.001). The duration since women became responsible for their families and their current HRQoL provided interesting information**.** Those who carried the families' economic and social responsibility for more than 5 years became more adaptable to life and recorded higher mean score for psychological (2.7±0.5) and social (3.6±0.9) domains of the HRQoL than those who were in their recent (5 years and less) situation of family responsibility (p= 0.01 for psychological domain and p= 0.02 for social domain).

Table (1): Mean of Health-related Quality of life and Socio-demographic parameters for 200 FHM and 200 FHW

Socio-demographic Parameters	% of Families Headed By Men	Women's Quality of life (*Mean*±SD)	% of Families Headed By Women	Women's Quality of life (Mean±SD)	P value (t test)
Women's age					
< 35 years old	45%	3.8±0.5	33.0%	3.6±0.5	0.08
35 and above	55%	3.7±0.6	67.0%	3.5±0.6	0.01
Education of wife					
Non-educated	36.0%	3.8±0.6	57.5%	3.5±0.5	0.001
Primary- Secondary	46.5%	3.6±0.5	33.5%	3.5±0.6	0.5
High Education	17.5%	3.9±0.5	9.0%	3.8±0.4	0.5
Occupation of wives					
Not working	74.5%	3.7±0.6	34.5%	3.5±0.6	0.01
Unstable job	12.5%	3.7±0.5	45.5%	3.5±0.5	0.04
Others	13.0%	3.7±0.5	20.0%	3.7±0.6	0.9
Reproductive performance of wives: Age at first marriage					
< 20 Years old	38.5%	3.6±0.6	53.5%	3.4±0.6	0.03
≥ 20 years old	61.5%	3.7±0.5	46.5%	3.6±0.5	0.05
Reproductive performance of wives: Number of pregnancies					
< 5	73.0%	3.7±0.6	66.5%	3.5±0.5	0.002
5 and more	27.0%	3.6±0.5	33.5%	3.5±0.6	0.3
Crowdedness index					
≤ 2 persons /bed room	47.0%	3.8±0.5	39.5%	3.5±0.5	0.001
More than 2 persons /bed room	53.0%	3.5±0.5	60.5%	3.5±0.6	0.3

ǂOthers (governmental employee, worker…)

Table (2): Mean Percent score of Health-related Quality of life domains and Gender of Family's Head

Quality of life parameters	Families Headed By Men (200 Families) Mean±SD	Families Headed by Women (200 Families) Mean±SD	*P value (t test)*
Physical	66±17.2	62±18.5	0.05
Psychological	55±10.8	53±10.5	0.04
Social	76±20.8	70±20.9	0.009
Environment	49±15.3	46±13.3	0.03
Overall Quality of life scores	74±11.2	70±11.1	0.001

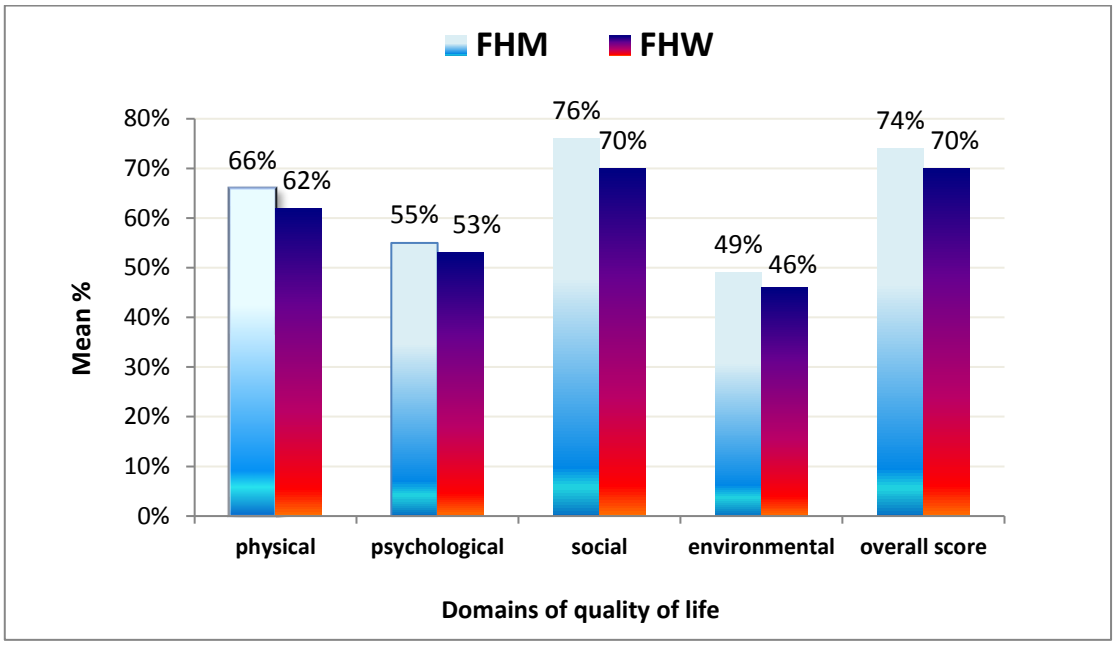

Figure (1): ***Mean Percent Score of Health-related Quality of life domains and Gender of Family's Head***

Education was an enabling key for improved HRQoL of women exposed to socio-economic crisis that enforced them to be the head of the family. Table (3) delineates that women with high school and university education had statistically higher mean HRQoL scores compared with all other educational levels. This

observation is more evident in specific HRQoL domains; the environmental (2.8±0.6 p=0.005) and the physical domain (3.6± p=0.02).In addition, Women at the age of 35 years and above had lower mean score for all domains of HRQoL.

Table (3): Mean Score of Quality of Life by Domain in Women Heading their Families According to socio-demographic characteristics.

Socio-demographic Parameters	Physical	Psychological	Social	Environment
Age at marriage				
Less than 20	**3.0±0.9**	**2.5±0.5**	**3.6±1**	**2.2±0.7**
20 and more	**3.1±0.9**	**2.7±0.5**	**3.7±1**	**2.5±0.7**
P value (t test)	**0.8**	**0.1**	**0.06**	**0.001**
Current age				
Less than 35	**3.1±0.9**	**2.7±0.5**	**3.7±1.1**	**2.4±0.8**
35 and more	**2.9±0.7**	**2.6±0.5**	**3.6±1.0**	**2.3±0.6**
P value (t test)	**0.06**	**0.2**	**0.3**	**0.06**
Duration of responsibility towards the family				
Less or equal 5	**3.3±0.9**	**2.5±0.5**	**3.3±1.2**	**2.3±0.7**
More than 5	**2.9±0.8**	**2.7±0.5**	**3.6±0.9**	**2.3±0.6**
P value(t test)	**0.04**	**0.01**	**0.02**	**0.8**
Education				
Illiterate	**3.2±0.9**	**2.7±0.5**	**3.5±1**	**2.2±0.6ǂ**
Primary-secondary	**2.9±0.8ǂ**	**2.6±0.5**	**3.5±1**	**2.3±0.7**
High	**3.6±0.7ǂ**	**2.8±0.4**	**3.7±1**	**2.8±0.6ǂ**
P value (Anova)	**0.02**	**0.4**	**0.8**	**0.005**
Occupation				
housewife	**2.9±0.9**	**2.6±0.5**	**3.6±1.1**	**3.6±0.7**
Unstable jobs	**3.1±0.9**	**2.6±0.5**	**3.5±1**	**3.5±0.6**
Others	**3.3±0.9**	**2.8±0.5**	**3.5±0.9**	**3.5±0.5**
P value (Anova)	**0.08**	**0.2**	**0.7**	**0.6**

ǂ P≤ 0.05

DISCUSSION

The current study addresses the HRQoL among women who became vulnerable to different health and health-related risks due to their exposure to socioeconomic crises that made them heading their families. The implications of the information derived from such a study could guide different stakeholders involved in families' and women's health.

The conduction of a community-based study was the only approach to access the target women related to FHW and semi-equivalent group of women in FHM. Thus, the current study is considered part of initial series of studies that started by community- based survey to identify the at-risk families using the Family Health Status Index, then a process of in-depth analysis to find out and define the priority at-risk families.[16]The published findings of the survey on 5400 families had pointed to the FHW as at-risk for high morbidity and mortality.[16] Guided by such information, the design of the current study had considered two issues: first the target group of FHW is considered as group that is not well defined at the programmatic and service level. Second: it was necessary to design the study based on having enough number of FHW and semi-equivalent group of FHM who are resident in the same area, to control for the confounding variables related to socioeconomic background.

Several studies had approved the close relationship between age and HRQoL. Some research results suggest that the status of HRQoL declines with age[20.21.22.23], as aging is accompanied with the degeneration of multiple organs and the onset of chronic diseases [24.25]. Generally, after the age of 65 years, health conditions are largely influenced by age.[26]Old women (35 years and above) were found to be susceptible to low score of HRQoL than young women with history of exposure to the same risk. However, it

was the issue of exposure to socioeconomic crises of FHW that constitute a risk that could influence HRQoL. The exposure of women to the socioeconomic crisis becoming the head of the family while having three articulated socioeconomic characteristics (illiteracy, young age at marriage, and working in low wage unstable job) leads to magnification of negative reaction towards life expressed as lower scores for different domains of HRQoL.

The current study showed that more than 53% of women in FHW had an age less than 20 years at first marriage. They had lower HRQoL scores in all domains than those married at age 20 years or more. Early marriage in developing countries is due to various factors: looking for economic survival, socio-cultural and religious value. Early marriage is linked to low levels of education, high levels of violence and abuse, severe health risks. As well, it is a barrier to girl's education because young girls, usually, drop out from school to get married which negatively affects the community as a whole and the future generation. This practice contradicts the objectives of the Millennium Development Goals (MDGs); such as the promotion of basic education, fight against poverty, and reduction of maternal mortality rate[27].

We found that quality of life scores in women with high school or university education were higher than women who had lower educational levels. Educational level had a significant effect on all QOL domains.[28,29] In another study in which the majority of the women had 12 or less years of education, it was demonstrated that those with a lower educational level had a low score of HRQoL for psychosocial domain. Higher educational level was associated with better health and more opportunities in women's social and working status.[29]

The association between involvement

of women in FHW in the workforce and the HRQoL was considered in the current study. Working females had higher scores in physical and psychological domains of HRQoL and lower scores in social and environmental domains of HRQoL. Williams et al., 2009 and Fallahzadeh et al., 2010found that being employed had a significant effect on physical and psychosocial HRQoL domains.[27, 28] Blumel et al., 2000 found that housewives had higher score of HRQoL in all domains. In our study, housewives had higher scores in social and environmental domains only.[29]Kakkar et al., 2007 found that working women seemed to suffer more from psychological symptoms whereas non-working women showed a greater incidence of somatic symptoms. [30]

6. CONCLUSION

The general findings of the study provided evidence that HRQoL status of women in FHW was significantly lower than those in FHM across all dimensions**.** The study concluded that women having socioeconomic risks related to 'non-education, young age at marriage and working in unstable jobs' are vulnerable to suffer from low HRQoL scores when they are exposed to the socioeconomic crises of becoming the head of the family. Those socio-demographic parameters are controllable by programmatic interventions. For that, the study recommends advocacy for investment in women's education for their empowerment, improving awareness about marital life and family responsibilities.

List of Abbreviations

- **HRQoL**: Health-Related Quality of Life
- **SES**: Socioeconomic Status
- **FHW**: Families Headed by Women
- **FHM**: Families Headed by Men
- **HSRP**: Health Sector Reform Program
- **FMCU-PHD &CSPM**: the Faculty of Medicine, Cairo University- Public

Health Department and the Center for Social and Preventive Medicine

- **CBOs**: Community Building Organizations
- **HSR:** Health system research

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