

## QUALITY OF LIFE ASSOCIATED FACTORS IN CHILEANS HOSPITALS NURSES<sup>1</sup>

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*This study is focused on knowing the Quality of Life of hospital nurses, and associated factors. People surveyed are composed of 100 female nurses from a hospital, eighth region, Chile. The measuring method is a questionnaire – oriented to know bio-social-demographic variables that influence nurses – and the WHOQOL-BREF quality of life measuring scale, validated in Chilean population. Results show that Domain Social Relationship (mean=77,38) is perceived as the best by female nurses, and Physical as the worst (mean=54,56). Global Quality of Life is seen as “Good” (mean=3,99) and Health Quality of Life is perceived as “Conforming” (mean=3,97). Variables predicted for Quality of Life are: age, couple situation and night shifts. Given the results, being a female nurse, and her threefold role; new studies for deeper research, especially on those variables that were not statistically relevant, are suggested.*

**DESCRIPTORS:** quality of life; nurses; hospitals

## FACTORES ASOCIADOS A CALIDAD DE VIDA DE ENFERMERAS HOSPITALARIAS CHILENAS

*Estudio cuyo objetivo fue conocer la Calidad de Vida de enfermeras hospitalarias, y factores asociados. El universo, con el cual se trabajó, estuvo constituido por 100 enfermeras de un hospital, octava región, Chile. El instrumento constó de un cuestionario, cuya finalidad fue conocer variables biosociodemográficas influyentes, y, la escala de medición de Calidad de Vida WHOQOL-BREF, validada en población chilena. Los resultados indican que el Dominio Relaciones Sociales (media=77,38) es el mejor percibido por estas enfermeras y, el peor, el Físico (media=54,56). La Calidad de Vida Global, fue conceptualizada como “Buena” (media=3,99), y, la Calidad de Vida en Salud, se percibe “Conforme” (media=3,97). Las variables que resultaron predictoras para la Calidad de Vida son: edad, situación de pareja y realizar turnos de noche. Dado los resultados, la condición de mujer de las enfermeras y su triple rol, se sugieren nuevos estudios que profundicen, especialmente, en aquellas variables que no resultaron estadísticamente significativas.*

**DESCRIPTORES:** calidad de vida; enfermeras; hospitales

## FATORES ASSOCIADOS A QUALIDADE DE VIDA DE ENFERMEIRAS HOSPITALARES CHILENAS

*O presente estudo teve por objetivo conhecer a qualidade de vida de enfermeiras da área hospitalar, assim como, os fatores associados. O universo com o qual se trabalhou foi constituído por 100 enfermeiras de um hospital da oitava região do Chile. Utilizou-se, como instrumentos, um questionário cuja finalidade foi conhecer variáveis bio-sócio-demográficas influentes e a escala de medição de qualidade de vida WHOQOL-BREF, validada na população chilena. Os resultados indicam que o domínio relações sociais (média=77,38) é o melhor percebido por estas enfermeiras e o pior é o físico (média=54,56). A qualidade de vida global foi catalogada como “boa” (média=3,99) e a qualidade de vida em saúde é percebida como “dentro dos padrões”(média=3,97). As variáveis consideradas como requisitos para a qualidade de vida foram: idade, o fato de ser casada ou ter companheiro e os plantões noturnos. Considerando-se os resultados, a condição de mulher e sua tríplice jornada, são sugeridos novos estudos que aprofundem, especialmente, aquelas variáveis que não se apresentaram estatisticamente significativas.*

**DESCRITORES:** qualidade de vida; enfermeiras; hospitais

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## INTRODUCTION

Chile is a country going through a demographic transition, marked by a progressive leveling of the population pyramid and an increasing life expectancy at birth in recent decades, reaching 78.3 years for women. The improved survival turns it increasingly important to raise people's Quality of life. The WHO has defined this complex construct - Quality of life - as "an individual's perception of their position in life in the context of the culture and value systems in which they live, and in relation to their goals, expectations, standards and concerns"<sup>(1)</sup>.

As a result of women's proximity to nature, due to their reproductive function, they have been historically attributed with the care giving function and their gender socialization centers on this conduct, which has entailed an additional work load. Moreover, the sociocultural barriers that take the form of unequal opportunities in the political, social, cultural and economic areas not only impede them from fully participating, but also affect their Quality of life and turn into an obstacle that limits their human development. As Nursing is a "feminized" profession, its development experiences the same obstacles as women in general. On the other hand, the demands posed by work can suppose a lack of attention for family responsibilities, with severe repercussions for these professionals' private life<sup>(2)</sup>. The possibility of harmonizing family and job responsibilities constitutes a factor that needs to be considered when analyzing Quality of life. Also, these professionals represent a group with risks that emerge both from their condition as woman, mother, wife and/or housewife and from their professional condition. These risks derive not only from the interaction between both roles, but also from interpersonal relationships at work and at home, from their personal resources and from the general context of their professional exercise.

In Chile, the social and cultural changes needed to modify historical standards of gender behavior have not occurred yet. Hence, nurses need to perform their role as health professionals and, at the same time, cannot ignore the care for their family's health, socialization and education of their children, administration of family resources, realization of feeding and hygiene-related tasks and regulation of their partners' and their families' affection, among others.

As conformism is not a female characteristic, if necessary, an evaluation of Quality of Life in nurses

should generate a change. Changes are based on dissatisfaction, which drives the human being to act and look for the concrete and intangible elements to transform this feeling. The authors consider that it is important to study whether nurses leave enough room and time to<sup>(3)</sup> "cultivate" their own Quality of Life. To the extent that these professionals feel satisfied with their own Quality of Life, they will be capable of transmitting to their own category and others the need to use physical, psychological, social, spiritual and environmental resources to live life fully.

Considering that nurses represent a group of female health agents whose image of Quality of Life goes beyond that of other women, and are vulnerable in their Quality of Life as, most of the time, their efforts to achieve well-being are given to others, postponing their own physical, psychological, social and spiritual care, the researchers considered this group as an important focus of study.

This motivated the authors to get to know nurses' Quality of Life and the factors that can be associated with this assessment.

## MATERIAL AND METHODS

This is a descriptive and cross-sectional study, whose universe consisted of 126 nursing professionals hired at a public hospital of high complexity, located in the region of Bio Bio in Chile. As 11 were men and the study focused on women, the universe included the 115 female professionals. After obtaining approval from the Hospital's Review Board and considering the feasibility of working with the whole universe, the authors decided to perform a census among the study participants. One hundred professionals voluntarily accepted to participate and gave their Informed Consent.

The data collection instrument, which was self-applied on the job, consisted of two parts. A semistructured questionnaire was elaborated by the author, which contained 18 questions that explored the biosociodemographic variables that could influence the Quality of life of the nurses under study. These included: age, partner situation, number of children under the nurse's care, presence of other family members under their care, work system with night shifts, hospital service performed, work at more than one institution, housework support, chronic disease, family head and experience of severe disease or death

of a close relative. These variables allowed the authors to establish the participating nurses' profile. The second part consisted of the Quality of Life scale WHOQOL-BREF, derived from the WHOQOL – 100, issued by the WHO.

With respect to the quality control of data, the instrument's validity was corroborated in the Chilean population, showing that it is apt for application, while the reliability calculation produced a Cronbach's alpha coefficient of .901.

This instrument contains 24 items or facets, corresponding to four Domains that intervene in the perception of Quality of Life, besides two items that are separately examined and specifically correspond to the individual's perception of his/her Global Quality of Life and Health-Related Quality of Life. The 4 Domains that are assessed, each with its own facets, are: Physical (Pain, energy, fatigue, mobility, activities, medication and work) Psychological (Positive feelings, cognition, esteem, body, negative feelings and spirituality), Social Relationships (social relationships, social support and sexuality) and Environment (Security, home, finance, services, information, leisure, environment and transport). The scores of the Domains are ranked in a rising scale, that is, higher scores indicate a better Quality of Life perception. The reference time for the personal perception of the different items is two weeks. The mean scores of items in each Domain are used to calculate the Domain score. Then, the mean scores are multiplied by four, so as to turn these values comparable with the scores used in the WHOQOL-100, and finally transformed to a scale from 0 – 100, with 0 as the worst and 100 as the best score. To assess questions 1 and 2, Global Quality of Life and Health-Related Quality of Life, respectively, a five-point Likert scale is used, in which 1 indicates the worst and 5 the best perception.

The information was processed with the help of SPSS (Statistical Software for Social Sciences) version 12.0 and included a uni and bivariate descriptive analysis and contingency tables. To compare the mean scores, Student's t-test or variance analysis (ANOVA) was used, as appropriate.

## RESULTS

The obtained results allowed the authors to establish the profile of the 100 nurses under study:

79% are younger than 50 and 21% older; 70% has a relation with a fixed partner; 51% take care of one, two or three children; 20% take care of other relatives; 50% work night shifts; 39% work in critical care and 55% in general care; 9% work a double journey; 72% have housework support; 33% declare that they suffer from a chronic disease; 32% are family heads and 45% experiences or has experienced a disease or death of a close relative. In accordance with the study questions, the following results were obtained:

Table 1 – Nurses' Quality of life according to Domains, Concepción, Chile. December 2005

Domains	N	Mean	Standard Error	Minimum	Maximum
<b>Physical</b>	98	54.56	12.04	21.43	79.17
<b>Psychological</b>	98	66.62	11.78	29.17	91.67
<b>Social relationships</b>	98	77.38	17.62	25.00	100.00
<b>Environment</b>	99	71.93	12.40	43.75	96.88

As to Quality of Life (QoL) assessed per Domain (Table 1), the Physical Domain received the worst evaluation, mean = 54.56 (interval from 0 to 100), and Social Relationships the best one, with a mean score = 77.38. It is highlighted that the Environment Domain received the highest minimum evaluation of the four Domains.

As suggested by the WHOQOL Group, Global Quality of life (GQoL) and Health-Related Quality of life (HRQoL), shown in Table 2, were analyzed independently (Questions 1 and 2, respectively, of the WHOQOL-BREF instrument).

Table 2 – Nurses' Global Quality of Life and Health-Related Quality of Life. Concepción, Chile. December 2005

Quality of life	N	Mean	Minimum	Maximum
<b>Global quality of life</b>	97	3.99	2	5
<b>Health-related quality of life</b>	98	3.97	3	5

For GQoL, these professionals obtained a mean score of 3.99 (interval from 1 to 5), with 80.4% assessing it as "Good" or "Very Good". As to HRQoL, the mean score was 3.97, that is, the nurses in the study were "Satisfied" with their health condition. Among the professionals, 79.8% "Satisfied" or "Very Satisfied" with their health condition, while the remaining 20.2% declare that they feel "More or Less", that is, they are neither "Satisfied" nor "Dissatisfied" with their health.

With respect to the analysis of the association between the studied variables and QoL, the results evidenced that the variables: number of children under the nurse's care, presence of other family members under their care, hospital service performed, work at more than one institution, housework support, chronic disease, family head and experience of severe disease or death of a close relative do not influence the studied professionals QoL.

When relating QoL with the Age variable, a statistically significant difference only appeared in the Physical Domain ( $p = .005$ ), among the four age groups, as shown in Table 3 below.

Table 3 – Physical Domain of Nurses' Quality of life according to Age. Concepción, Chile. December 2005

Quality of Life	Age	N	Mean	Standard Error	Minimum	Maximum	P Value
Physical Domain	20-30 years	27	50.53	11.24	28.57	75.00	.005
	31-40 years	32	52.12	12.98	21.43	71.43	
	41-50 years	19	56.77	10.57	35.71	71.43	
	51 years and +	20	61.82	9.62	46.43	79.17	
<b>Total</b>	<b>98</b>	<b>54.56</b>	<b>12.04</b>	<b>21.43</b>	<b>79.17</b>		

The worst perception was found in the group between 20 and 30 years old, with a mean score = 50.53. The group of 51 years and older gave the best evaluation of this Domain, with a mean = 61.82. No significant evidence was found for GQoL, although the eldest group gave the best evaluation, while the worst assessment was found in the youngest group. However, the results obtained in the different age groups indicated that GQoL was "Good", as most mean scores were about 4, which corresponds to this evaluation, given in response to the question "How is your Quality of Life?" when applying the WHOQOL-BREF. It should be highlighted that, in all age groups, GQoL was at the least assessed as "More or Less", answered by 18 nurses (18.4%), while the maximum assessment was "Very Good", also given by 18 professionals (18.4%). As to the evaluation of HRQoL in the different age groups, no significant evidence was found either, with all mean scores lying close to 4, which means that these nurses feel "Satisfied" when they are asked ¿To what extent are you satisfied with your health status? Nurses between 31 and 40 gave the best evaluation. As opposed to what the researchers might expect, professionals between 21 and 30 gave the worst evaluation. Across all age groups, the minimum evaluation of HRQoL was "More or Less", answered by 20 nurses (20.2%), while the maximum was "Very Satisfied", by 17 professionals

(17.2%). Most professionals, that is, 62 (62.2%) declared feeling "Satisfied" with their HRQoL.

Table 4 shows the perception of each of the Quality of Life Domains in relation with the variable of the nurses' Partner Situation.

Table 4 – Nurses' Quality of life Domain according to Partner Situation. Concepción, Chile. December 2005

Quality of life Dimensions	Partner Situation	N	Mean	Standard Error	Sig (bilateral)
Physical Domain	No Partner	28	52.44	12.91	.280
	Partner	68	55.41	11.83	
Psychological Domain	No Partner	28	61.76	13.75	.013
	Partner	68	68.25	10.34	
Social Relationships Domain	No Partner	27	66.05	20.24	.000
	Partner	69	81.76	14.52	
Environmental Domain	No Partner	28	67.52	10.25	.032
	Partner	69	73.41	12.75	

The results demonstrate that whether these professionals have a stable relationship with a partner was not relevant for the Physical Domain only. Professionals with a partner better assessed the Psychological ( $p = .013$ ), Social Relationships ( $p=.000$ ) and Environmental Domains ( $p=.032$ ). For GQoL, in percentage terms, "Good" (64.7%) and "Very Good" (19.1%) were more frequent in professionals with a fixed partner. Among nurses without a partner, 57.1% perceived their GQoL as "Good" and only 14.3% as "Very Good". HRQoL was better assessed by nurses with a partner relationship. Thus, professionals who declared that they did not have a partner relationship obtained a mean score of 3.79, that is, they felt between "More or Less" and "Satisfied" with their HRQoL, while nurses with a partner obtained a mean score of 4.03, feeling between "Satisfied" and "Very Satisfied" with their HRQoL. No difference was found in the assessment "Satisfied" between nurses who declared they did or did not have a stable partner. Among professionals who did not have a partner, 64.3% gave this assessment, against 62.3% among those with a partner relationship. This was not the case for "Very Satisfied", replied by only 7.1% of professionals without a partner, but by 20.3% of those with a partner. The same was true for "More or Less", answered by 28.6% of professionals without a partner, but 17.4% of those with a partner.

With respect to QoL and whether the nurses worked night shifts, we found statistically significant differences for the Physical ( $p = .001$ ) and Social Relationships Domains ( $p=.013$ ), as shown in Table 5.

Table 5 - Domains of Nurses' Quality of life according to Night Shifts. Concepción, Chile. December 2005

	Night Shifts	N	Mean	Standard Error	Sig. (bilateral)
Physical Domain	No night shift	48	58.72	11.41	.001
	Night shift	50	50.57	11.35	
Psychological Domain	No night shift	48	67.52	11.31	.461
	Night shift	50	65.75	12.27	
Social Relationships Domain	No night shift	48	81.86	15.32	.013
	Night shift	50	73.08	18.73	
Environmental Domain	No night shift	49	73.88	12.76	.123
	Night shift	50	70.03	11.85	

Nurses who do not work night shifts gave the best assessment of both Domains. For the Psychological and Environmental Domains, however, no significant evidence was found, and the same nurses gave the best assessment of these Domains. For GQoL, no statistical significance was observed, but nurses who do not work night shifts gave the best evaluation. Nurses who do not work these shifts assessed their GQoL practically in the same way as those working night shifts, with 60% replying "Good" and "Very Good", against 64.6% of nurses working night shifts replying "More or Less" and "Good". Nevertheless, for "Very Good", an important difference was found between both groups, with 24% of those not working night shifts against a mere 12.5% of those working at night. The lowest score on GQoL among nurses who do not work night shifts was found for "More or Less", replied by 16%, while 20.8% of nurses working at night gave the same reply. As to HRQoL, like GQoL, no statistical significance was found either, with similar behavior, that is, HRQoL was better assessed by professionals who do not work night shifts. It is highlighted that almost 90% of the nurses who do not work night shifts felt "Satisfied" and "Very Satisfied" with their HRQoL. On the other hand, almost 90% of professionals who do work night shifts feel between "More or Less" and "Satisfied" with their HRQoL.

## DISCUSSION

Assessing Quality of life (QoL) according to Domains offers the possibility to get to know what aspects are missing in the lives of specific people or groups, so that, by modifying their coping mechanisms, the adaptation processes reduce the gap between personal expectations and reality. With respect to the Physical Domain of QoL, according to

the authors and as this aspect received the worst assessment by the nurses in this study, it are factors inherent in their quality of being woman, mother, nurse, wife and housewife that influence this assessment, as complying with all these roles provoke fatigue, pains, lack of sleep, among others. A similar study<sup>(4)</sup> found more encouraging results in this Domain. The nursing profession interferes in the woman's life, mainly do to the type of work journey<sup>(2)</sup>. This means that nurses, in their multiple roles, often feel an overload. Research has demonstrated that nurses who work shifts assess their work as more stressing than nurses working during the day, and more frequently think that their work is physically and mentally exhausting. As to the Psychological Domain, some authors<sup>(5)</sup> conclude that, in women, the work demands could suppose a lack of attention for family responsibilities, entailing repercussions for their private life. According to the researchers, this could reflect in feelings of guilt, which are assessed within this Domain. These results coincided with other studies<sup>(4)</sup>. For Social Relationships, sharing the pain and the resulting successes and failures with colleagues strengthen friendship bonds, which are then translated into social support networks, whose presence, according to some authors<sup>(6)</sup>, strengthens interpersonal relations and private matters. For some researchers<sup>(7)</sup>, social interaction is inherent to women's nature, which is why she is oriented towards others and considers support networks important. In a study<sup>(8)</sup>, interpersonal support obtained important scores in the perception of women's health state. For the Environment, which assesses facets like security, transport, home and finance, among others, the authors suppose that these nurses feel well in their environment. These results do not coincide with similar studies<sup>(4)</sup>, which found the worst assessment of QoL on this Domain. With respect to GQoL, which was assessed as "Good", the results coincide with other studies<sup>(4)</sup> and, for HRQoL, these professionals feel "Satisfied" with their Health, although the National Health Survey (2003) concluded that women's health is at a disadvantage in comparison with men, with higher prevalence levels of health problems for different pathologies. This study found different results from other similar studies<sup>(4,8-9)</sup>. In a comparative study<sup>(10)</sup>, statistically significant differences were found between men and women in terms of physical and mental health, with worse results for women. What health and women's work is concerned, it should be

highlighted that they suffer more accidents on the way from home to work and back and are more affected by occupational illnesses. However, on the average, their leaves of absence caused by accidents are shorter than men's (OPS, 2004). As to the Physical Domain and the nurses' age groups – the only Domain of Quality of Life with statistically significant results – it was the group between 21 and 30 years that gave the worst assessment. This could be due to the fact that these professionals are in a stage of raising children, seeking and/or establishing a stable relation with a partner, personal development and growth, search for a stable job, etc., which makes them play a double or triple role as women and professionals. This gives rise to a work overload, fatigue, lack of sleep, physical pains (in the lower limbs, back, etc.), all of which are facets assessed in this Domain. Due to these factors, women feel physically more worn out. Experts indicate<sup>(11)</sup> that raising children is a very valuable activity for women and that it continues affecting their decision making about the direction they give to their lives. The need to take care of their children or work to maintain them prevents them from dedicating time to themselves. On the opposite, the group that made the best assessment of this Domain was the eldest group. According to the authors, these women have reached a calmer stage in their life, in which many concerns are solved, sometimes grandchildren are present, with personal and job stability. As a result, they have to spend less energy on daily living, have more possibilities of a reparatory sleep, among others.

With respect to the association between the Physical Domain and the partner situation, the results are different from similar studies<sup>(2)</sup> that highlighted the partner's support, mainly in the children's education and housework. On the other hand, the fact that these professionals have a stable relationship makes them perceive a better Quality of life in the Psychological Domain. Although maintaining a partner relation reveals to be quite complex on some occasions, it generally means a gratification in life. Affection in the couple generates positive feelings and thoughts, higher self-esteem and, in general, life problems are often faced better if shared with the partner. A stable couple is an important social support element. The absence of social support, generated by absolute individualism<sup>(6)</sup>, affects the sphere of interpersonal relations and private matters themselves. Another research<sup>(12)</sup>, in turn, concluded

that "human relations" mean possible conditioners of Quality of Life, specifically from the perspective of work. On the other hand, maintaining a partner relationship allows them to live and enjoy sexuality in a more stable way.

With respect to Environment, the authors think that, for women, sharing their life with a partner often means a feeling of security, at home as well as in the personal and economic spheres. As to the association between Night Shifts and the Physical Domain, although nurses permanently and continuously deliver care to hospitalized patients, for them, night shifts represent an anti-natural state. Staying awake during the night means an effort for these professionals, which is undoubtedly translated into fatigue; pain, especially in the lower limbs and back, lack of energy and sleep that is never recovered. On the other hand, after the night shift, these nurses frequently continue performing their double or triple role. Thus, possibilities to relax are scarce, increasing their fatigue.

Research<sup>(13-14)</sup> supports that night shifts negatively affect work, changing the biological equilibrium due to the lag in body rhythms and due to changes in eating, resting and sleeping habits, among others.

Experts<sup>(15)</sup> found that nurses working at night presented higher stress levels than nurses who only worked during the day. Chile is still a very patriarchal country. Consequently, the full extent of child care and housework are not equally shared by the couple and are thus mainly performed by women.

On the other hand, although the health sector absorbs an important part of the female work force, most women work during the day. Nurses' work system, including night shifts, is often incompatible with the possibility of sharing moments of fun with their groups of friends, who represent their support networks. During the days before and after the night shifts, the nurses prioritize their role as mother, housewife and even professional, attending training courses and, thus, pass over themselves as persons and as women. A research<sup>(16)</sup> on the impact of work hours on people found that the difficulties faced by shift workers are basically concentrated in three areas: the adaptation of biological rhythms to the changes in the activity and rest phases; sleep disturbances and domestic and social factors. Authors conclude that nurses who work night shifts perceive feelings of guilt about not being able to follow their

children's growth and development<sup>(1)</sup>. A collection of articles by the Epidemiology section of the Institute of Cancer Research stands out, which establishes a probable causal relation between shift work and breast cancer. This relation could be established through changes in certain hormonal levels, due to the lack of exposure to daylight.

In view of these results, and considering that

only age, partner relation and night shifts predicted Quality of Life in the nurses under study, the authors suggest further studies to analyze especially those variables that did not appear to be predictors, and that these professionals' triple role could influence their perception of their Quality of Life. Likewise, comparative gender studies could provide greater knowledge about this construct.

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