RESEARCH COMMUNICATION

Psychosocial Stressors, Social Support and Socio-demographic Variables as Determinants of Quality of Life of Turkish Breast Cancer Patients

Filiz Ogce[1]*, Sevgi Ozkan[2], Bahar Baltalarli[3]

Abstract

Purpose: The aim of the present study was to investigate the effects of psychosocial stressors, social support and socio-demographic variables on quality of life of breast cancer patients. **Tools and methods**: The study was conducted between December 2004 and May 2005 and included 101 patients, treated in the Oncology Departments of Ege and Pamukkale University Hospitals and Denizli State Hospital. Patients' demographic data were collected by questionnaire. The methods used in the interviews were the Rotterdam Symptom Checklist (RSCL), and the Multidimensional Scale of Perceived Social Support (MSPSS), the Karnofsky Performance Status (KPS). Psychosocial stressors were classified according to life events using the DSM-IV multi-axial diagnostic system. **Results**: It was found that increase of cancer stage triggers a decrease in psychological quality of life ($p<0,05$); overall global life quality ($p<0,001$), perceived social support and performance status ($p<0,05$), all of these being negatively affected by family stressors. The patients with increased social support, better psychological and overall quality of life ($p<0,01$) and younger age had more physical wellness besides overall quality of life ($p<0,05$); lower incomes negatively affected overall global life quality ($p<0,01$) and working at a job decreased the psychological stressors ($p<0,05$). **Conclusion**: From these results, it can be postulated that psychosocial stressors, social support and some socio-demographic variables mostly affected quality of life of the breast cancer patients.

Key Words: Quality of life - psychosocial stressors - breast cancer - social support - chemotherapy

Introduction

Cancer is still the most common and serious health problem in the world and many researches have been continuing to find new solutions in preventing, screening and treatment. Every year 10 million new invasive cancer patients are diagnosed in both sexes. An annual 10 % increase in the breast, which makes it the second most common site of malignant neoplasms after lung (Vainio and Branchini, 2002). Today, breast cancer is the most prevalent cancer among women in the world (Parkin, 2001). This holds true for Turkey with an estimated incidence rate for breast cancer of 7.32 per hundred thousand according to hospital based data for the year 1999 (Ministry of Health of Turkey, 2002).

Generally the diagnosis of cancer elicits greater distress than any other disease; hence cancer patients have many needs. The need for fast and accurate diagnosis and timely treatment is vital, but attention to psychosocial needs and quality of life is equally important, forming an essential part of modern cancer care. An important aspect of psychosocial care and quality of life is social support which includes formal and informal relationships (Solak and Bayer, 2003; Friedman et al., 2005; Clarke et al., 2006). Although breast cancer patients want to be treated

cared in a trust, an emotionally safe and supportive environment during their treatment period, in many countries (especially in low-income countries) only physicians made all treatment decisions, with limited input from the patient (Waring, 2000). This approach works in Turkey, too. However, as social trends have changed, in high-income countries through the last two decades, the passive, subordinate observer has been replaced by the informed, educated breast cancer patient, who is no longer satisfied to sit on the sidelines of her treatment while care decisions are made without her (Waring, 2000). This new patient profile should be placed in all countries without considerations to income. The assessment of QOL can reflect insights into the patient's perception and needs, thus providing invaluable information that differs from the traditional clinical end points, such as tumor response and survival rate. Because of this, QOL outcomes have become an integral part of the modern assessment of successful cancer treatment (Cui et al., 2004). To achieve this purpose, as the health care professionals, nurses have a unique place in this arena. They could be challenged to articulate and document the quality of their contributions to the health outcomes of the patients.

During the past decade, successes in breast cancer screening and treatment have led to an increase in the

[1]*Ege University Izmir Ataturk School of Health, Izmir 35100, [2]Denizli Health Services Vocational College, [3]Faculty of Medicine, Dept. of Radiation Oncology, Pamukkale University, Turkey. For Correspondence: filiz.ogce@ege.edu.tr*

number of long-term survivors of breast cancer. With this increase in the survival rate, there has been increased interest in the research of quality of life (American Joint Committee on Cancer Breast., 2002; Casso et al., 2004; Schou et al., 2005).

Therefore, the aim of this study was to examine the effects of psychosocial stressors, social support and socio-demographic variables on quality of life of patients with breast cancer who had undergone chemotherapy.

Materials and Methods

Participants

The study was carried out in Ege University Medical School Hospital, and Oncology Departments of Pamukkale University Medical School Hospital and Denizli State Hospital in Denizli. A total of 101 breast cancer patients, who have started or continued chemotherapy were randomly assigned into study population. Ethics approval was obtained from all departments and patients.

Breast cancer stage was classified using the American Joint Committee on Cancer (AJCC) TNM Staging System for Breast Cancer and SEER summary data (American Psychiatric Association, 1994). In this study one woman with stage 0 was excluded because of lack of other cases, and one patient belonging to stage I was added to stage II for the same reason.

Instruments

Patients' socio-demographic and medical data were collected via face to face interview and from medical chart abstraction using structured questionnaires. In addition, Multidimensional Scale of Perceived Social Support was used for evaluating patient social support level; existing symptoms and QOL were assessed using the Rotterdam Symptom Checklist (RSCL); the Karnofski Performance Status was used to assess activity level in patient receiving chemotherapy treatment in breast cancer patients. In evaluating the stress factors, a period of 1 year before the interview was taken into consideration. Psychosocial stressors that had clearly contributed to the development of the psychiatric disorder but happened earlier were also accepted as stress factors in Structured Clinical Interview for DSM-IV—Clinical Version (SCID-I/CV) (American Psychiatric Association, 1994).

a) Multidimensional Scale of Perceived Social Support (MSPSS): It is a tool that was developed by Zimet et al in 1988 to measure the perceived social support of the patients. The MSPSS assesses perceptions of social support adequacy from family, friends and a significant other (special person). The 12 – item scale uses a 7 – point Likert-type response format (1= very strongly disagree; 7= very strongly agree). Each of the three subscales is assessed with four items. Higher score indicates better perceived social support (Zimet et al., 1988). In our country MSPSS was found to be a reliable and valid instrument in studies made with different patient groups, university students and a normal population (Eker and Arkar, 1995).

b) Rotterdam Symptom Control List (RSCL): RSCL is a quality of life instrument which is developed as a tool to measure the symptoms reported by cancer patients

participating in clinical research by De Haes et al in 1983. The RSCL was originally designed to cover 4 domains: physical symptom distress (23 items), psychological distress (7 items), activity level (8 items) and overall global life quality (1 item). In scoring the physical symptom distress, and psychological distress domains the level of burden or impairment on the QOL item increased as the score increased. However, the activity level domain negatively related to the score: the higher the score, the better the function (De Haes et al., 1996). Validation studies have substantiated the reliability and validity of the RSCL in Turkey (Can et al., 2004).

c) Karnofski Performance Status Scale (KPSS): KPSS is used to measure performance of which the patient is capable. In this scale 0 implies the worst level of activity, 100 implies a good level of activity. In other words; the higher the score, the higher the level of activity (Can et al., 2004).

d) Psychosocial and environmental stressors Psychosocial and environmental stressors were classified according to life events using the DSM-IV multi-axial diagnostic system (American Psychiatric Association, 1994). In evaluating the stress factors, a period of 1 year before the interview was taken into consideration. However, psychosocial stressors that had clearly contributed to the development of the psychiatric disorder but happened earlier were also accepted as stress factors. Psychosocial stressors were grouped as; the problems related to primary support group (family stressors); social environmental problems; educational problems; work problems; accommodation problems; economical problems; transportation difficulties; problems due to governmental rules and regulations (such as commit a crime); and the other psychosocial and environmental problems (American Psychiatric Association, 1994).

e) Survey sheet for socio-demographic and ill related features: Demographic evaluation included indicators (age, marrying age, body mass index, age of first delivery, number of living birth, education level, performance status, marital status and income level) and ill related characteristics (breast cancer stage, surgery type, radiotherapy, hormone therapy, antiemetic usage after chemotherapy, diagnosis year) that were gathered from standard survey instruments.

Analysis

The Statistical Package for Social Sciences (SPSS) 11.0 software was used for statistical analysis. The significance level for all analyses was set at 5 %. Chi-square test was used to compare categorical variables; t-test was used to compare means of continuous variables for two groups; one-way analysis of variance (Anova) was used to compare means of continuous variables for three or more groups; Pearson Correlation Analysis was used to compare the relations between quality of life and social support - performance statue.

Results

According to the illness-related characteristics, most of the patients (89.2 %) had had a previous operation,

Table 1. Distributions of the Patients' Demographic, other Characteristics and Quality of Life Scores According to Cancer Progression

	Stage II n=51	Stage III n=35	Stage IV n=15	p value
Mean age[a]	48.5±19.9	52.9±10.7	46.2±12.4	NS
Marriage years[a]	26.6±13.2	26.7±12.9	25.2±11.6	NS
BMI*	27.5± 4.8	26.6± 4.2	27.5± 3.8	NS
Primipare age[a]	19.2± 7.0	18.5± 9.5	20.5± 6.5	NS
Live births[a]	2.2± 1.0	2.3± 1.6	2.5± 1.2	NS
Karnofski Performance Status[a]				
	77.5±14.0	76.0±12.2	74.0±12.4	NS
Social support[a]	72.4±15.8	68.6±15.1	71.5±19.0	NS
Psychosocial stressors[b]				
Stress-free	20 (39.2)	15 (42.9)	5 (33.3)	NS
Primary support	24 (27.5)	10 (28.6)	8 (55.3)	NS
Economical and transportation difficulties				
	27 (33.3)	10 (28.6)	2 (13.3)	
Education level[b]				
< 8 years	39 (76.5)	26 (74.3)	10 (66,7)	NS
>12 years	12 (23.5)	9 (25.7)	5 (33.3)	
Quality of life[a]				
Psychological	4.20 (3.37)	5.05 (4.07)	7.72 (6.05)	0.029
Activity	14.2 (5.46)	13.5 (4.82)	14.0 (7.18)	NS
Physical	11.6 (8.24)	13.9 (8.21)	17.7 (8.60)	NS
Overall QOL	3.29 (1.14)	3.51 (0.91)	3.35 (1.16)	NS

*Body Mass Index, [a]Statistical analysis was performed using One-way Anova, [b]Statistical analysis using Chi-square test

nearly half of them had received radiation therapy (43,8 %), 93.1 % had not used any hormone therapy, and 40.2% had received an antiemetic agent after chemotherapy. Karnofsky performance score of the study population was 76.43. According to MSPSS; the total score of women's social support was 70.94±16.01; social support of a special person subgroup score was 25±4.96, social support of a family subgroup score was 24±5.43, and social support

Table 2. Effects of Psychosocial Stressors on Quality of Life, Social Support and Performance Status

	Stress-free n=40	Family stress n=32	Economical* n=29	p value
Social support	75.7 ±13.8	63.5±18.3	72.7±13.4	0.004
Family support	25.92±4,62	23.4±5,83	25.5±4.01	0.082
Special person	26.02±4,16	22.2±6,92	25.7±4.21	0.005
Friends support	23.70±7,11	17.9±8,79	21.6±8.51	0.012
Quality of life				
Psychological	4.02±3,74	5.40±4,53	5.48±3.89	0.233
Activity	14.6±5,44	13.2±5,63	13.8±5.20	0.559
Physical	12.5±7,79	14.8±8,10	12.0±9.53	0.370
Overall QOL	2.90±1,21	3.50±0,98	3.82±0.65	0.001
Karnofski Performance Status				
	80.5±14.0	71.9±11.5	75.9±12.1	0.019

* Economical and transportation difficulties, Statistical analysis was performed using One-way Anova

Table 3. Association between QoL and Total Social Support and Performance Status

Variable	Psychological	Activity	Physical	Overall Global QOL
Social support	-0.31*	0.15	-0.14	0.27*
Performance status	-0.18	0.35*	-0.36*	-0.14

QoL, Quality of Life * P<0.01

of a friend subgroup score was 21±8.37.

The socio-demographic features of the 101 breast cancer patients are listed in Table 1. The mean age of study participants was 49.8 years. Most of the study group (74.3%) had graduated from primary school (8 years). Study participants had 2.26 living children and their primipare age was 19.1 years. No statistically significant associations were observed among age, length of marriage, BMI, primipare age, number of live births, social support, psychosocial stressors, Karnofski Performance Status Scale nor education level.

The quality of life scores according to tumoral stage are presented in Table 1. The advanced stage group was more likely to have higher psychological distress than the early-stage group (p= 0.023). Although there was no significant difference in the activity level, the physical distress or the overall QOL (p>0.05), stage IV had more physical distress than the others.

Table 2 shows that there was a significant correlation between psychosocial stressors and total social support scores (p=0.004). Further analysis demonstrated that patients who had experienced stress from family had less social support than stress-free patients, with statistical significance (p=0.003).

When examining the interaction between social support subscales and having psychosocial stressors; there was no significant correlation with family support subscale (p= 0.082), was there was a statistically significant correlation with a special person support (p=0.005), and friends support (p=0.012) subscales. In advanced analysis (post hoc test), social support score was found significantly higher in stress-free patients (p=0.007) and patients who had economical and transportation difficulties (p=0.29) than patients who had family stressors. In friends support subscale, stress-free patients had high social support (p=0,008) than patient who had family stressor.

The effects of psychosocial stressors on QoL in Table 2 shows that overall quality of life was found significant (p=0.001). Further post hoc analysis demonstrated that overall quality of life score was found low in stress-free patients than patients who had family stressors (p=0.036) and economical or accession problems (p=0.001), with statistical significance.

Psychosocial stressors were significantly associated with performance status of patients (p=0.019). Further post hoc analysis, shown in Table 2, demonstrated that performance points of patients who had family stressors lower than stress-free patients, with statistical significance (p=0.014).

The correlation analysis among four dimensions of QoL, total social support and performance status (p< 0.01), given in Table 3, shows that total social support associated with psychological and overall global QoL, while performance status was associated with activity and physical QoL. Results for socio-demographic and the other characteristics on the quality of life are shown in Table 4.

When examining the relationship of age to QOL, a statistically significant differences were found in physical symptom distress (p= 0.049) and overall quality of life (p=0.023) subscales. In comparing the groups using advanced analysis, we found a statistically significant

Table 4. Effects of the Socio-demographic and Other Characteristics on Quality Of Life

		N	Psychological	Activity	Physical	Overall Global QOL
Age[b] (years)	≥ 40	24	4.04 (4.92)	15.8 (5.12)	9.5 (8.18)	2.87 (1.32)
	41-50	31	5.09 (3.67)	13.9 (4.77)	13.5 (5,59)	3.35 (1.05)
	> 50	46	5.17 (3.87)	13.0 (5.81)	14.7 (9,64)	3.60 (0.85)
	p-value		NS	NS	0.049	0.023
Education level[a]						
	< 8 years	75	4.48 (4.27)	13.5 (5.43)	13.7 (8.56)	3.44 (1.02)
	12 years or university	26	4.57 (3.47)	15.2 (5.25)	11.2 (8.46)	3.11 (1.17)
	p-value		NS	NS	NS	NS
Employment Status[a]						
	Unemployed	60	5.66 (4.23)	13.9 (5.32)	13.9 (8.41)	3.60 (0.94)
	Employed	41	3.73 (3.56)	14.0 (5.60)	12.0 (8.40)	3.00 (1.16)
	p-value		0.015	NS	NS	0.005
Marital Status[a]						
	Married	80	5.03 (4.15)	13.9 (5.55)	13.3 (8.69)	3.28 (1.11)
	Not Married*	21	4.28 (3.78)	13.9 (4.94)	12.1 (7.41)	3.61 (0.86)
	p-value		NS	NS	NS	NS
Income[a]						
	Lower income	43	5.27 (4.06)	13.5 (5.25)	13.7 (7.70)	3.67 (0.89)
	Middle Income	58	4.58 (4.08)	14.2 (5.55)	12.7 (8.95)	3.12 (1.14)
	p-value		NS	NS	NS	0,01
Time since diagnosis[a]						
	< 1 year	55	4.63 (4.04)	14.1 (4,41)	14.0 (8.31)	3.16 (1.15)
	> 1 year	46	5.17 (4.12)	13,7 (6,45)	12.0 (8.51)	3.58 (0.93)
	p-value		NS	NS	NS	0.048

[a]Statistical analysis was performed using the Independent sample t-test. [b]Statistical analysis using One-way Anova * Divorced/ separated/widowed

difference between those groups who were in the 40 - below age group and 50 - over age group. The physical symptom distress (p=0.040) was lower, and the overall quality of life (p= 0.017) scores were higher in the 40 and below aged comparing to the 50 and above aged group.

Regarding the relationship of education level and marital status to QOL, no significant differences were found (p>0.05).

Unemployed women significantly had more psychological distress (p= 0.015), than employed women. Their overall quality of life (p=0.005) was also lower. There were no differences between employment status and the other subscales of QOL.The relationship between economical status and QOL, showed that the women who had lower income had a lower overall quality of life than the high income group (p=0.01). There were no differences between economical status and the other subscales of QOL. Time since diagnosis was found significant with QOL outcomes. Women, who had been diagnosed less than a year, had a higher overall quality of life than women who had more than a year since diagnosis (p= 0.048).

Discussion

In this study, it was found that the women with high social support scores had assistance provided by family, a special person or a friend. Additionally, tumour stage was not related with social support in these survivors. In a study carried out by Cui et al (2004), it was found that the survivors with more advanced disease had worse QOL only in the social well-being domain, due mainly to more problems in marriage and family issues. One of the reasons why the study population have high social support may be related with the sociocultural structure of Turkish families; as people might feel responsible for looking after their relatives.

In a study performed by Janz et al (2005), it has been reported that there was no relation between cancer stage and QOL. In general, patient with advanced cancer have more difficulty in adjusting and they experience grater distress than those with early-stage disease (Bull et al., 1999; Cui et al., 2004). Similarly, our findings indicated that psychological distress had more severely affected quality of life subscale than the other subscales in the advanced stage group. One of the reasons for the higher psychological distress in advanced stage may be due to the fact that the patients in this study are mainly in the advanced stage (stage III-IV), whereas Janz et al have studied mainly with early stage cancer patients (stage 0-II). Cancer and related stress during the treatment and anxiety about future hopes negatively affect the patients (Ganz et al., 1990; McElroy and McCorkle, 1990; Northouse and Laten, 1995; Solak and Bayer, 2003; Casso et al., 2004). The more advanced stage of cancer cause a decrease in the ability to cope with illness and body resistance thus, generally the physical symptom distress is increased. It also might cause the increase of psychological distress especially in metastatic group, too. In related literatures, although most of the breast cancer women have high QOL, their psychological distress was more than their physical symptom distress.

In contrast to past findings, there was no significant association between psychosocial stressors and different breast cancer stages. Similarly, Price et al found no evidence of an independent association between life stressors and the development of breast carcinoma (Price et al., 2001). On the other hand, Kissane et al mentioned that psychosocial distress was high in breast cancer

patients in either early or advanced stages (Kissane et al., 2004). In our study, effects of psychosocial stressors might be limitedly analysed since we had just malignant patients who had received chemotherapy without benign controls.

Breast cancer patients usually suffer incredible stress while under active treatment, with greater social and interpersonal distress, and concern with physical symptoms and recurrence (Ozkan and Turgay, 1992; Northouse and Laten, 1995; Atesci et al., 2004; Yen et al., 2006). In a study carried out by Yen et al. it has been reported that the stress from health, family, and interpersonal relationships were higher in the malignant cancer patients, compared with the benign cancer patients (Yen et al., 2006). And for the malignant group, the stress from health problems was the most significant predictor for QoL. However, in our study results demonstrated those family stressors have played important role on overall global QoL, perceived social support and performance status than the other stressors. It might be explained that the family structure is of a vital value in Turkish society. In addition, our study population has included breast cancer patients in different stages, so there was not any association between psychosocial stressors and cancer stages. For that reason, during treatment period, family stressors should be considered and available resource should be provided for both these patients and their family members.

It has been determined that as the social support score was increased, the psychological and overall global QoL scores of patients were raised. These findings demonstrated that social support plays a vital role in promoting overall QOL in breast cancer survivors. Friedman and et al (2005) mentioned that the more social support the better emotional and functional status. In similar, as the performance status of patients was increased, the activity dimension of QoL score was higher meanwhile, physical symptom domain was decreased. The activity and physical dimensions of QoL were positively affected since the performance scale is one of the instruments to measure of activity level. The development of supportive behaviours by healthcare providers and reach for recovery volunteers is essential in providing this social support for breast cancer survivors. Previous studies suggested that elderly women are suffering from more persistent problems with physical function after treatment for breast cancer (Eker and Arkar, 1995; Price et al., 2001). On the other hand, bachelor and younger breast cancer patients had more persistent depressive symptoms (Ganz and Shag, 1990; Janz et al., 2005). The findings in this study indicated that the 40 and below aged group has lower physical symptom distress accompanying with higher overall quality of life compared to the 50 and over aged group. Physical symptom distress and overall quality of life might be affected by the physical resistance of younger patients.

Many studies have searched the relationship between socio-demographic factors and QOL among breast cancer women. However, the results have been inconclusive (Price et al., 2001; Clarke et al., 2006). Schou et al (2005), reported negative association between marital status and QOL as well as employment status but not the education

level. Cui et al. (2004) identified that marital status, income, and education level were all associated with QOL ratings among Chinese women with breast cancer. In this study, it has been identified that employment status and income were associated with QOL, whereas marital status and education level had a null association.

Our study has shown that psychological distress was lower and overall quality of life was higher in breast cancer patients who have a job. The reasons for high overall quality of life might be related to the employed women overcome heaps better because of having a wider social environment and more self confidence. In a study carried out by Casso et al (2004), it has been reported that socio-economic status, as measured by annual family income, may also play an important role in determining QOL among younger long term survivors. And also socioeconomic status has been found to be an important correlate of QOL in the general population in a study performed by Berkman et al (1998). Similarly, in our study, it has been seen that patients with low-level incomes had lowest overall quality of life than those with high and middle-level incomes.

In this study women who had one year or less time since diagnosis had higher overall quality of life than women who had more than a year since diagnosis, in line with results of a study carried out by Solak and Bayer (2003). In contrast, no association was found between time since diagnosis and QOL outcomes in the study by Casso et al (2004). Schou at al reported that receiving a breast cancer diagnosis has an impact on patient's emotional, cognitive and social functioning, and that cognitive and social functioning have the slowest recovery. In contrast, general health/ QOL and particularly physical functioning were stable throughout the post-diagnosis period and similar to the general population. Furthermore, at diagnosis and three months patients reported significantly more insomnia, appetite loss and diarrhoea than the general population. However, the symptoms declined between three- and 12-months, to such a degree that patients reported similar or fewer symptoms than the general population at 12-months (Schou et al., 2005). Although the first year after diagnosis is difficult period due to the applied surgical or medical procedures, the overall global QoL might be affected by the patients' wishes for wellbeing and dealing with cancer.

In conclusion, the results of this research indicate that breast cancer patients experience problems in multiple quality of life domains while undergoing adjuvant chemotherapy. There were important effects of psychosocial stressors, social support and some socio-demographic variables on QoL of breast cancer patients. This implies that health care professionals must recognize and take into consideration the importance of psychosocial factors, besides medical treatment, in order to improve QoL of breast cancer patients. The results of this study should help to fill gaps in the limited knowledge, and identify the areas in which the patients need extra support.

Future research is needed to determine which psychosocial factors are most effective in order to improve the health level in breast cancer patients during treatment and subsequent care.

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Introduction. Good quality of life has different aspects which include physical, social, psychological aspects which has individual effect on quality of life. Such as in some of the variables like; sexual support and social environment were in a negative value because the value of coefficient of correlation (r) varies from -1 to +1. According to the result the calculation was done and means were compared by two tailed test hence the p-value less than 0.05 shows the positive association between the various factors. under study. Quality of life is a significant part of patient care among cancer patients. Toxicities and adverse impacts of chemotherapy in patient personal satisfaction in disease patients, and it likewise makes challenges in satisfying family and social jobs. Hence the study aimed to assess the quality of life of cancer patients receiving chemotherapy. Demographic variables data were collected by using a structured questionnaire followed by assessing the quality of life by using the EORTC QLQ-C30 questionnaire. The changes' analysis of the psychosocial pathway of breast cancer, illustrated the slight impact of breast cancer as a negative life event. These results show a good adjustment at all levels (emotional, social and physically). P. Lueboonthavatchai, "Prevalence and Psychosocial Factors of Anxiety and Depression in Breast Cancer Patients," Journal of Medical Association of Thailand, Vol. 90, No. 10, 2007, pp. 2164-2174. [24]. F. C. Atesci, B. Baltalarli, N. K. Oguzhanoglu, F. Karadag, O. Ozdel and N. Karagoz, "Psychiatric Morbidity among Cancer Patients and Awareness of Illness," Support Care Cancer, Vol. 12, No. 3, 2004, pp. 161-167.doi:10.1007/s00520-003-0585-y. [25]. F. Ogce, S. Ozkan and B. Baltalarli, "Psychosocial Stressors, Social Support and Socio-Demographic Variables as Determinants of Quality of Life of Turkish Breast Cancer Patients," Asian Pacific Journal of Cancer Prevention, Vol. 8, No. 1, 2007, pp. 77-82. comments powered by Disqus. — Open Special Issues. Social determinants of health operate through a range of social pathways, including social integration, social structure, neighborhood characteristics, and the division of labor [1–6]. From: Women and Health, 2000. Related terms These factors—early life experiences, social support, work, and food, for example—are encountered by all humans (Fig. 2.1). However, their relevance to the health of people with intellectual disabilities has yet to be fully understood (Emerson, Felce, McConkey, & Walsh, 2008). Although socioeconomic position is the core determinant of health, a priority for researchers is to unify evidence in this domain with knowledge about the health of people with intellectual disabilities (Graham, 2005).