

Surgery and Care Giving: How Patients and Care Givers Cope with Loneliness

Ami Rokach, Ph.D.
[Corresponding author]
York University, Canada
Walden University, USA
Center for Academic Studies, Israel
arokach@yorku.ca

Yona Miller, Ph.D.
Center for Academic Studies, Israel

Sharon Shick
Center for Academic Studies, Israel

Idit Matot, M.D.
Tel Aviv Medical Center, Israel

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Abstract

This research, conducted on patients and caregivers, examined the manner in which they cope with loneliness. Patients were divided into those who were approached before they had surgery, and those post operatively. We collected information about their tumors, which were either benign or malignant. The patients' coping with loneliness was compared to their caregivers who were either intimate partners or 'others', i.e. family members and friends. The loneliness questionnaire, has already been extensively utilized in previous studies, and was used to explore the various aspects of loneliness of those groups. Significant differences in sub scale scores were found in patients pre and post surgery, with those who have already had surgery scoring higher. Interestingly, the only significant difference in the caregiver group was between men and women, in line with the socialization process of the genders, which makes women more open and vocal about their feelings and needs.

Keywords: Loneliness, surgery, patients, caregivers, hospitalization, coping.

Introduction

Surgery, while commonly feared, is a fact of life for many. Hospitalized patients face disruption in their daily routines and living environment, and an array of unwanted changes. While hospitalized, patients need to adapt to the hospital environment as their new home, resign themselves to the care of physicians and nurses, and get used to the unfamiliar surroundings and, often, unpleasant experiences associated with the course of treatment.

As if that is not enough upheaval in his life, the patient and his caregivers – family members and friends - often live in a state of constant worry, and all they have to help them are the medical professionals at the hospital, in whom they are forced to instill their complete faith (Paul & Rattray, 2007; Hallstrom & Elander, 2007). Consequently, the individual and his or her family are not only subject to the debilitating aspects of the physical illness, but also to the added stressors inherent in hospitalization (Williams & Irurita, 2005; Rokach & Matalon, 2007).

Illness

Illness is a major stressor in one's life (Sellick & Edwardson, 2007). That stress may be expressed through symptoms such as pain, fatigue, and in more severe cases, immobility and even loss of bodily functions and control (Rowe, 1996). In general, it is not only the physical suffering and distress that puts the body into a state of such continuous stress, but also factors that negatively affect the patient's psychological state (Rattray, Johnston, & Wildsmith, 2005). Factors such as perceived threat to one's life and the uncontrollable and unpredictable nature of one's condition, often put hospitalized individuals in a state of apprehension and hopelessness (Mishel, 1997; Raps, Peterson, Jonas, & Seligman 1982; Rokach & Rokach, 2013; Seeman & Seeman, 1983). Hospitals are not, actually, very hospitable places. Having to eat the hospital food, or having to sleep on a different bed, may bring about emotional discomfort, simply because patients can no longer "feel at home", and have minimal personal control over their choices and surrounding environment for as long as they need to stay in hospital (Williams & Irurita, 2005; Williams, Dawson, & Kristjanson 2008). Hospitalized patients' social contact is limited to interaction with the medical staff. There are the patients, quite powerless, weak and dependent due to their illness, and at the other side are the physicians, nurses, and supporting staff, who are in complete charge of almost every aspect of the patients care, with all the knowledge, authority and power that go with their positions (Attree, 2001; Hughes, 2001).

Surgery

Seventy years ago, Barker, Wright and Gonick (1946) found that the world of those scheduled for surgery undergoes a great 'reduction' in scope and their horizon becomes self centered and even egocentric. Surgery evokes fears such as the one related to anticipated pain and physical discomfort, worries concerning anesthesia and for some, even fears about cancer that may be found during surgery and which could herald their demise (see also Montgomery et al. 2004). The

majority of those admitted to hospital for elective surgery experience anxiety preoperatively, and that may adversely influence surgical procedures as well as the patient's recovery (Batner et al. 1990). It is reported that up to 60% of patients say that they are afraid of anesthesia (Moerman, 1996; see also Kagan & Bar-Tal 2008). The wait prior to surgery can be a very anxious time, since support from nurses may be limited, or absent, due to the unremitting surgical schedule (Mitchell, 2010). Apparently, the smooth operation of the surgical unit is the first priority of the nurse, and it is much more important to her than the patients' worries. Prior to surgery the patient is often without anyone to attend to his or her anxiety, questions, or concerns (Majasaari et al. 2007).

Social Support & Surgery

Even what we think of as "minor" surgery is a threatening experience accompanied by multiple stressful concerns about one's physical condition, anticipation of painful procedures, worries about survival and recovery, and separation from family and friends (Kiecolt-Glaser et al., 1998). Psychoneuroimmunology [PNI] research has provided evidence that stress and anxiety delay wound repair (Marucha, Kiecolt-Glaser & Favagehi, 1998; Padgett, Marucha & Sheridan, 1998). The PNI model postulated by Kiecolt-Glaser et al (1998) suggests that psychological variables could influence wound healing. That could be caused by (1) Emotions which may affect the production of "stress hormones", and which in turn affect the immune function and one's healing trajectory (see Glaser & Kiecolt-Glaser, 1994), and (2) The patient's preoperative emotional state which may affect the type and amount of anesthetics given and that, in turn, could affect the immune and endocrine systems (Kiecolt-Glaser et al (1998).

The neuroendocrine and immune functioning following painful and tissue-damaging events, as surgery certainly is, have been well documented (Salomaki, Leppalutto, Laitinen, Vuolteenaho & Nuutinen, 1993). Research demonstrated that the greater the stress and anxiety pre operatively, the slower and more complicated the post operative recovery (Johnston & Wallace, 1990). And inversely, when psychosocial interventions were employed before surgery, they were shown to have positive physical and psychological effects post surgically (see reviews by Contrada, Leventhal & Anderson, 1994; Devine, 1992). Social support, on the other hand, has been repeatedly demonstrated to reduce pre and post operative anxiety, lower loneliness, and hasten the patient's recovery (Rokach & Sha'ked, 2013).

Loneliness

Loneliness is a universal experience that does not respect the boundaries of age, gender, race, marital or socio economic status and it may be either persistent and continuous or short lived (Neto & Barros, 2000; Heinrich & Gullone, 2006). Social alienation is, unfortunately, a common experience in the beginning of the 21st century. As Pappano (2001) so clearly observed, we are losing touch and we are oblivious to it. Stivers (2004) echoed this view, and suggested that people's desire to talk to people they hardly know, baring all on TV shows, and seeking crowds in shopping malls just so they are

not alone, is a clear indication that the fear of being alone is terrifying to those who are lonely.

Humans are fundamentally social creatures. Our quality of life depends on others. We thrive on social intercourse and consequently, when we become socially disconnected our psychological, physiological and even spiritual well-being may be negatively affected (Pond, Brey & DeWall, 2011). Medical research has demonstrated that social connection is good and important to our health, or put even more poignantly "Human beings, both as a species and as individuals, survive only through attachment to one another... we are designed to become attached to one another" (Olds & Schwartz, 2009; p. 57).

Loneliness was found to be negatively correlated with happiness (Booth, Bartlett & Bohnsack, 1992) and life satisfaction (Riggio, Watring & Throckmorton, 1993). It has been linked to such maladies as depression, hostility, alcoholism, poor self-concept, and psychosomatic illnesses (McWhirter, 1990). Recent studies suggest that a large proportion of the population feel lonely frequently (Rokach & Brock, 1997), and as was previously pointed, loneliness affects our immune system, our health and healing should we require surgery.

Caregivers

In any given year caregivers, or unpaid caretakers that is, number about 67 million in the U.S (Novotney, 2009). These caregivers are tending to children, spouses, ailing and old parents, and other loved ones who may have disabling or incapacitating illnesses. In addition to tending caregivers also, very often, need to work, attend school, or fulfill responsibilities. They may spend as many as 20 weekly hours on the duties related to caregiving, which may include ensuring that their loved ones take their medicines appropriately and on time, helping them bath and clothing them, and even helping to pay their medical bills. Considerable strain is thus created for caregivers which may affect their working schedule, family life, and social relationships.

Consequently, caregiving is frequently associated with significant physical and psychological vulnerability. Caregivers report that they suffer from depression, anxiety, anger, health problems, and loneliness (Rainer & McMurry, 2002). Alarming, 14% of caregivers admitted entertaining suicidal thoughts (Chentsova-Dutton, et al, 2002). Seeing the suffering of a loved one without being able to ease the pain or prevent death, may result in loneliness and alienation from the rest of the healthy and bustling society. A positive correlation was found between caregiver anxiety and a negative correlation between social support and loneliness (Chio et al., 2005; Gauthier et al, 2007; Pagnini et al., 2010).

It is clear that perceived social support is an important predictor of carers' distress (Goldstein, Atkins, Landau, Brown, & Leigh, 2006), their marital relationship satisfaction (O'connor, McCabe, & Firth, 2008) and patients' and caregivers' quality of life (Chio et al., 2004). However, maintaining a social support network may not be easily

achieved, as friends and acquaintances often stop visiting or do visit but behave awkwardly due to increased severity of the patient's symptoms (Cobb & Hamera, 1986).

The Present Study

Since loneliness is such a pervasive experience, and hospitalization and surgery arouse such anxiety, it stands to reason that hospitalized people, and especially those scheduled for surgery, will experience loneliness. While they may be surrounded and supported by family and friends, they are the ones who have to undergo whatever procedures that await them. We, consequently explored the manner in which, both, patients and caregivers cope with loneliness prior to, and post surgery [see explanation in the Methods section].

Method

Participants

Four hundred and twenty one participants volunteered to take part in our study. A total of 210 men and 211 women comprised the sample. Participants were divided into three groups: 1) Ear, Nose and Throat (ENT) Patients [representing hospitalized patients] prior to surgery 2) ENT patients post surgery, and 3) caregivers. The average age of all participants was 44 years with ages ranging between 16-88. The mean level of education (i.e. last grade completed) was 13.5 years with a range of 1-23. Thirty five percent of the participants were not married or not lived with partner, 65% were married or lived with partner. No significant differences were found between gender, age, education, and marital status between the three groups. Significant age differences were found between benign and cancer patients in each group. Cancer patients were significantly older than benign patients. Age was covaried in further analyses.

Procedure

The ill patients and their caregivers were recruited in an Ear, Nose and Throat department in a major hospital in central Israel. Each patient and each caregiver were approached by the attending nurses on the floor, and asked to participate in this study anonymously. Participants were asked to reflect on their loneliness experience and to endorse those items which described it. Those patients unable to read or write were assisted by a researcher. Questions that the patients, or their families, may have had were answered while the participants were answering the questionnaire. They took approximately 15 minutes to answer the questionnaire. Caregivers provided demographic data which included their degree of closeness to the patient.

The Coping with Loneliness Questionnaire

All items for the questionnaire were written by the senior author and were based on Rokach's previous research on

loneliness (Rokach, 1990; Rokach & Brock, 1998). The questionnaire is composed of six factors, each being a subscale. Factor 1, Reflection and acceptance (accounted for 14% of the variance) described being by one's self to become acquainted with one's fears, wishes and needs; and consequently, accepting one's loneliness and its resultant pain ["I came to accept how I felt" "I turned loneliness into a time for reflection"]; Factor 2, Self-development and understanding (5%) – the increased self-intimacy, renewal, and growth which are often the results of active participation in organized focused groups or of receiving professional help and support ["I sought professional help" "I enrolled in personal development seminars"]; Factor 3, Social support network (4%) – the re-establishing of social support network which can help one feel connected to and valued by others ["I renewed old friendships" "I spent time at places where I knew there would be a lot of people"]; Factor 4, Distancing and denial (3%) – denial of the experience and pain of loneliness by alcoholism, drug abuse, and other deviant behaviors ["I purposely built walls around myself" "I avoided social functions"]; Factor 5, Religion and faith (3%) – the need to connect to and worship a divine entity.

Through affiliation with a religious group and practicing its faith one can gain strength, inner peace, and a sense of community and belonging ["My attendance at religious services increased" "I felt strengthened and comforted by my faith in God"]; and Factor 6, Increased activity (3%) – active pursuit of daily responsibilities as well as fun-filled solitary or group activities, thus maximizing one's social contacts ["I got a part-time job" "I took up a new sport"]. Each of the six factors comprised a subscale and participants' scores are the sum of items which they endorsed in each subscale. The questionnaire included a total of 34 items (factor 3 includes only 4 items). Each factor was a subscale in the questionnaire and participants' scores are the sum of items they endorsed in each subscale. Kuder-Richardson internal consistency reliabilities were calculated and yielded the following alpha values: Reflection and acceptance = .73; Self-development and understanding = .52; Social support network = .58; Distancing and denial = .56; Religion and faith = .65; Increased activity = .60 K-R alpha for the 34 item questionnaire was .84.

Results

Results indicated that the manner in which patients who were before surgery, coped with loneliness was significantly different than those who have already had surgery, regardless of whether they had a benign or malignant growth. Similarly, the closeness of their caregiver, whether a partner or a somewhat more distanced family member/ friend, did not affect their coping strategies. Interestingly, similar differences were not observed in the caregivers. What made a difference in that group is their gender, rather than their closeness to the patient, or whether he was before or after surgery. Table 1 reviews and compares the demographic data of the various groups.

Table 2: Comparing mean scores of Coping with loneliness (Patients)

Population	N ¹	Reflection & acceptance		Self-development & understanding		Social support network		Distancing & denial		Religion & faith		Increased activity	
		M	SD	M	SD	M	SD	M	SD	M	SD	M	SD
Before (total)	151	1.46	1.66	0.29	0.58	1.18	1.47	0.17	0.50	0.35	0.78	1.04	1.29
Benign	105	1.36	1.59	0.29	1.36	1.31	1.51	0.19	0.53	0.33	0.72	1.06	1.29
Cancer	38	1.74	1.83	0.92	0.56	0.82	1.31	0.13	0.41	0.42	0.94	1.00	1.27
MANCOVA² F_(6,135)=0.90													
After (total)	165	1.84	1.78	0.54	0.96	1.23	1.34	0.22	0.52	0.52	0.94	1.36	1.34
Benign	123	1.82	1.74	0.54	0.96	1.31	1.36	0.20	0.49	0.46	0.94	1.33	1.21
Cancer	42	1.90	1.91	0.55	0.97	1.00	1.28	0.31	0.60	0.69	0.95	1.48	1.70
MANCOVA² F_(6,157)=1.20													
Total	318	1.65	1.74	0.42		1.19	1.41	0.20	0.52	0.45	0.88	1.22	1.35
Total MANCOVA² F_(6,310)=2.50*η^2=0.04		F _(1,315) =4.97* η^2 =.02		F _(1,315) =8.58** η^2 =.03								F _(1,315) =5.94* η^2 =.02	
Main support - partner	212	1.58	1.74	0.42	0.88	1.06	1.31	0.16	0.44	0.48	0.92	1.11	1.29
Main support - other	102	1.80	1.77	0.42	0.66	1.46	1.58	0.31	0.64	0.39	0.81	1.43	1.44
MANCOVA² F_(6,306)=2.06													
Benign before Vs. Benign after													
F_(6,234)=1.55													
Cancer before Vs. Cancer after													
F_(6,74)=0.83													

*p<.05 **p<.01 ***p<.001 0.01< η^2 <0.06 – small effect size; 0.06< η^2 <0.14 – medium effect size ¹Frequencies might not add up due to missing data²age was covaried

Table 3: Comparing mean scores of coping with loneliness (Caregivers)

Population	N ¹	Reflection & acceptance		Self-development & understanding		Social support network		Distancing & denial		Religion & faith		Increased activity	
		M	SD	M	SD	M	SD	M	SD	M	SD	M	SD
Total	71	1.82	1.76	0.66	1.12	1.37	1.55	0.14	0.48	0.59	0.96	1.25	1.47
Benign	53	1.96	1.39	0.62	1.14	1.53	1.67	0.13	0.52	0.57	0.93	1.38	1.52
Cancer	18	1.39	1.33	0.78	1.06	0.89	1.02	0.17	0.38	0.67	1.08	0.89	1.28
MANCOVA² F_(6,63)=0.71													
Partner	51	1.57	1.78	0.57	0.98	1.16	1.41	0.10	0.45	0.61	1.00	1.18	1.46
Other	24	1.96	1.51	0.75	1.32	1.67	1.88	0.21	0.50	0.50	0.88	1.29	1.45
MANCOVA² F_(6,67)=0.40													
Male	34	1.26	1.58	0.17	0.58	1.35	1.47	0.06	0.34	0.41	0.89	0.94	1.25
Female	51	2.12	1.78	0.82	1.21	1.39	1.65	0.15	0.50	0.63	0.95	1.41	1.50
MANCOVA² F_(6,77)=2.70*		F _(1,82) =4.72* η^2 =0.05		F _(1,82) =8.31** η^2 =0.09									

*p<.05 **p<.01 ***p<.001

¹Frequencies might not add up due to missing data

²age was covaried

0.01< η^2 <0.06 – small effect size

0.06< η^2 <0.14 – medium effect size

Table 2 compared the mean subscale scores on each of the six factors of coping with loneliness between patients before and after surgery, between benign and cancer patients, and between patients with different main supporters using a MANCOVA (age was covaried). Significant differences were found between patients before and after surgery ($F_{(6,310)}=2.50$, $p<.05$). Consequently, univariate ANCOVAs for each of the subscales were conducted. Patients after surgery had higher subscale scores on three factors: Reflection and acceptance ($F_{(1,315)}=4.97$, $p<.05$), self-development and understanding ($F_{(1,315)}=8.58$, $p<.01$), increased activity ($F_{(1,315)}=5.94$, $p<.05$). No significant differences were found in the average scores of the subscales between benign and cancer patients before surgery ($F_{(6,135)}=.90$, n.s.) and after surgery ($F_{(6,157)}=1.20$, n.s.). No significant differences were found in the average scores of the subscales between patients whose supporter is his/her partner and those whose supporter is other person ($F_{(6,306)}=2.06$, n.s.). No significant differences were found between benign patients before and after surgery ($F_{(6,234)}=1.55$, n.s.). No significant difference were found between cancer patients before and after surgery ($F_{(6,74)}=0.83$, n.s.).

Table 3 compared the mean subscale scores on each of the six factors of coping with loneliness among caregivers of benign and cancer patients, among caregivers who are the patient partner or other patient relative, among male or female caregivers using a MANCOVA (age was covaried). No significant differences were found between caregivers of benign patients and caregivers of cancer patients ($F_{(6,63)}=0.71$, n.s.). No significant differences were found between caregivers who are the patient's partner or those who are 'other' relative ($F_{(6,67)}=0.40$, n.s.). Significant differences were found between male and female caregivers ($F_{(6,77)}=2.70$, $p<.05$). Consequently, univariate ANCOVAs for each of the subscales were conducted. Females had higher subscale scores on two factors. Reflection and acceptance ($F_{(1,82)}=4.72$, $p<.05$), self-development and understanding ($F_{(1,82)}=8.31$, $p<.01$).

Discussion

The present study demonstrated that coping with loneliness was indeed affected by surgery. It appears that surgery and hospitalization are so stressful and significantly contribute to loneliness, that the kind of tumour that had to be operated on – cancerous or benign – did not significantly affect the manner of coping. When we examined the loneliness of caregivers, it was found that no variables affected the coping with loneliness, except that males coped significantly differently from the way females did.

Illness is a major stressor in one's life (Sellick & Edwardson, 2007). Various symptoms and effects of the illness put the body into a state of continuous stress, including pain, fatigue, and in more severe cases, immobility and even loss of bodily functions and control (Rowe, 1996). It is known that the physical suffering and distress puts the body into a state of continuous stress, but additionally, it negatively affects the patient's psychological state (Ratray, Johnston, & Wildsmith, 2005). Those factors may include the uncontrollable and

unpredictable nature of one's condition, and the person's state of apprehension and hopelessness which is particularly felt prior to surgery. Such turmoil can have a considerable effect on a patient's thoughts, emotions, and subsequent behaviours (Mishel, 1997; Raps, Peterson, Jonas, & Seligman 1982; Rokach & Rokach, 2013; Seeman & Seeman, 1983). While awaiting surgery may be more anxiety arousing than the time after surgery, it may be that only once that anxiety is lowered, after surgery, that patients can experience more sharply the loneliness that hospitalization and surgery are known to foster and then cope with it more effectively than they could have prior to surgery when the main concern was the anticipated meeting with the surgeon's knife (see also Williams & Irurita, 2005; Williams, Dawson, & Kristjanson 2008).

Patients

Kiecolt-Glaser et al. (1998) observed that surgery is a threatening experience with multiple stressful components, i.e. admission to the hospital, concern about painful procedures, worries about survival and recovery, and separation from family, and worries concerning anesthesia and fears about having cancer or dying (see also Montgomery et al. 2004). And so, in such a highly stressful time, what may have been, prior to surgery, highly important may now be viewed quite differently, and only a select number of people or events could be seen as truly important (Gardner et al. 2005). It consequently stands to reason that regardless of whether their surgery involved malignant or benign tumors, the overriding stressor was the actual surgery, anesthesia, and expected pain, and as such loneliness following surgery was experienced more acutely than it was preoperatively. And so our results indicated that there were significant differences in the utilization of three out of the four coping strategies, with the post operative group scoring significantly higher than the pre operative group on: Reflection and acceptance, Self-development and understanding, and Increased activity. It is suggested that the stress and anxiety prior to surgery are so overwhelming, that coping with loneliness is of a lesser concern for patients. However, following surgery with its consequent pain, discomfort and the commonly required dependence on others for help, patients will be more tuned to their loneliness and the feelings of isolation that hospitalization fosters and that may affect their coping strategies (Hughes, 2001; Moerman, 1996). It is postulated that while prior to surgery, coping with loneliness may have taken a 'back seat' to preparing for the operation, following surgery the person has the time and resources to reflect on the illness, hospitalization, and the loneliness experienced, to plan engagements for when it will be possible to do so in the future, and that may include attending social functions, work, leisure courses, and the like – all activities that the three coping strategies involve.

When comparing the coping with loneliness subscale scores of patients with benign and malignant tumors prior to surgery, and then those two groups post operatively, no significant difference in loneliness subscale scores was reported. The literature suggested that cancer patients, due to constraints and restrictions of the illness often experience difficulties in interpersonal relationships and increased loneliness (Dunkel-

Schetter, 1984; Revenson, Wollman, & Felton, 1983; Rollins, 2004; Williams et al., 2008). Interestingly, when we examined the coping of patients pre and post surgery, there was no significant difference in the subscale scores for the two groups: those with benign or malignant tumours pre and post operatively. Surgery is seen to pose an overwhelming threat to one's existence. A threat that may minimize, at that point, all other concerns (see also Polimeni and Moore, 2002). However, post surgery, once the pain and discomfort may be attended to medically and there is a need for constant care together with, at times, severe pain and discomfort, that may render patients immobilized, confined to bed and as such may distract the patient from the loneliness that he may be experiencing. Our results indicate that both groups cope with loneliness that they may experience similarly (see Baker, 1984; Rokach & Parvini, 2011). We compared the subscale scores of patients, according to the level of closeness of their caregiver: intimate partner vs. a family member or friend. No significant difference was found in the manner patients coped with loneliness, regardless of who was caring and attending to them. Singer (1983) asserted that because it is part of human nature to avoid pain, surgical cancer and even non cancer patients and their families often experience difficulty relating to each other and working with the problem at hand in a constructive way (see also Brown et al., 2006). It may serve as an indication that a close intimate partner's support may not influence the manner in which loneliness is handled or addressed (see Kawachi and Berkman, 2001).

Caregivers

We examined the manner in which caregivers who were attending to the ill cope with loneliness. Results indicated that it mattered not who were the patients or the degree of closeness between caregivers and the sick. The only significant difference was found when comparing the genders in this group.

Informal caregiving is often a mentally, socially, and emotionally overwhelming experience that can engender a profound sense of loneliness (Wittenberg-Lyles, Demiris, Oliver, & Burt, 2011). Even if caregivers are able to find time to engage in social activities, they may be less able to derive concomitant psychological benefits if they feel guilty and anxious seeing that they are "giving up temporarily" their caregiving responsibilities. Caregiving being so very demanding can disrupt one's working schedule, family life, and social relationships, thus making it difficult to maintain desired levels of social involvement (Rokach, Findler et al. 2013; Wittenberg-Lyles, Demiris, Oliver, & Burt, 2011). Caregivers who must helplessly witness the suffering of a loved one, while simultaneously facing their own mortality, may result in loneliness and alienation from the rest of the healthy and bustling society, loneliness that is addressed possibly in a limited manner, regardless of their closeness to the patient, but maybe depending on the time that they devote to caring for the ill person – a variable that the present study did not explore, and which it is hoped that future research will address (Chentsova-Dutton et al., 2002).

Caring for the seriously ill person creates considerable strain for caregivers and may affect their working schedule, family

life, and social relationships. It is, therefore, obvious why caregiving is frequently associated with significant psychological and physical vulnerability. That may include depression, anxiety, anger, health problems, loneliness (Rainer & McMurphy, 2002), and suicidality. Consequently, it was found in the present study that the patient's diagnosis or even stress and anxiety related to surgery do not affect the manner in which the caregivers cope with loneliness. What does seem to make a difference is the caregivers' gender. Women had higher subscale scores than men on Reflection and acceptance and on Self-development and understanding.

Rokach and Brock (1997, 1998) found consistent differences in the reported experiences of loneliness between North American men and women. The present result is in line with previous research that highlighted women's socialization in the Western world. Women are adept at self-reflection, expressing their emotions, and being tuned into what they feel and how they act, as well they are the ones who commonly are more outgoing than men tend to be, in terms of developing social engagements (see for example Rokach, Orzeck, Moya, and Exposito, 2001; Rokach and Sharma, 1996). Riches (2002) described the loneliness that is commonly experienced by the ill and by their caregivers. During this period of illness, treatments and questions about the patient's future, we would intuitively expect that caregivers will engage in reflection about their situation, coping with it, and its ramification on their own future. It may help explain the higher scores that *women* caregivers received on the Acceptance & reflection subscale, since men are culturally not trained, or encouraged, to reflect and attend to their emotions and when in couples, they rely on women to arrange social engagements, or any leisure courses that they or the couple may plan to attend (Rokach and Sharma, 1996; Rokach & Rokach, 2013).

Limitations of the Study

The present study has several limitations which future research may address. Firstly, while we researched and collected data from patients who were scheduled or had already undergone surgery, we did not inquire about their experience with prior surgeries, which may influence significantly their anxiety and view of their present situation. We also did not differentiate the type of surgery the patients have undergone, aside from noting whether they were treated for malignant or benign conditions, and only in the ENT department. Future research will, hopefully collect data from patients of other departments, and cover all kinds of surgical interventions. Croog et al. (1995) maintained that "such characteristics as pre-operative fear, anxiety, depression, low self-esteem, an external locus of control... are associated with a negative past surgical experience" (p.40). None of these variables were examined, and they could, indeed, affect pre and post surgical experiences.

Montgomery et al (2004) indicated that "Pre surgery distress contributes to variability in patients' post surgery outcome [e.g. pain]" (p. 382). We have not examined the level of pre surgery distress, or the patients' level of pain and discomfort post surgery, nor have we inquired about the manner in which participants [patients and caregivers alike] addressed loneliness prior to surgery or illness. These variables, as well,

could have affected the manner that patients and their caregivers coped with loneliness.

Korporaal, Broese van Groenou, & van Tilburg (2008) noted that one's own and one's partner's disabling health problems can negatively influence someone's well-being. Additionally, they observed, that caring for a disabled spouse is a risk factor for one's own health. Our study did not explore either the severity of the disability that the illness may have caused, nor the effect it had on married/common-law couples.

To conclude, patients and their caregivers experience loneliness when one is hospitalized, and has to undergo surgery. Being such a stress inducing and threatening experience, surgery once it is over, allows the patient to more acutely experience loneliness, and not just the fear, stress, and even existential anxiety that may have been previously experienced. Loneliness, as research repeatedly demonstrated, is part and parcel of the process of being hospitalized and operated on (Rokach & Sha'ked, 2013). It is more acutely experienced after surgery, when the anticipatory anxiety gives way to one's discomfort and dependence on others, and thus to reflection on how one feels and his experience in hospital. Future research needs to replicate the present study in other departments, and not just ENT, and explore the approach that patients and caregivers take to coping with loneliness.

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