

Impact of the Blockade Concerning the Health-Related Quality of Life on Prostate Cancer Survivors Residing in Gaza Strip, Palestine

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ABSTRACT— *Prostate cancer is one of the most common cancers in males and is the second leading cause of cancer-related deaths in Palestine. Blockade imposed against Gaza Strip have affected the life of Palestinians living in Gaza Strip including those diagnosed with prostate cancer. The purpose of the study was to examine the impact of blockade imposed by the Israelis on Health-Related Quality of Life (HR-QOL) of men diagnosed with prostate cancer and reside in Gaza Strip.*

A total of a 121 men who were diagnosed with prostate cancer and live in Gaza Strip participated in this cross sectional study. The University of California at Los Angeles Prostate-Specific Index (UCLA-PCI), along with other added items, was used to assess HR-QOL of participants and how it was affected by blockade.

Results revealed that scores of HR-QOL reported by participants of this study were lower than scores reported in the literature in the majority of the UCLA-PCI sub-domains and these differences were statistically significant. Results revealed that patients who missed some of their drugs during their treatment course had lower HR-QOL scores than those who did not miss their drugs. Similarly, most of the participants who needed to travel outside Gaza and where not able to travel on time reported that delay to travel had affected negatively their HR-QOL. On the other hand, inability to have a surgery done or delaying a surgery that was supposed to be done had not affected HR-QOL of participants. Finally, the majority of participants reported that they would travel to another country to seek treatment if the borders were open and the great majority of participants mentioned that blockade had a negative impact on their HR-QOL.

In a conclusion, blockade imposed by the Israelis on Gaza Strip had affected HR-QOL level of patients who were diagnosed with prostate cancer. Patients who missed some drugs during their treatment course and those who could not travel on time to a neighboring country to receive treatment were affected more than participants who did not miss treatment or those who could travel on time to receive treatment in a neighboring country.

Keywords— Health-related quality of life, Prostate cancer, Blockade, Palestine, Gaza Strip

1. INTRODUCTION

Prostate cancer is the second most commonly diagnosed type of cancer among males in the world. It is the 6th leading cause of cancer-related deaths in men worldwide and ranked as the second most common cause of cancer-related deaths in developed countries [1]. In Palestine, prostate cancer was reported as the second most common type of cancer among Palestinian males in the year 2005 and it was the second leading cause of cancer-related deaths (9.5%) among males [2].

In spite of being one of the most common cancers among males, the survival rates of prostate cancer improved a lot in the last few decades, especially if it would be diagnosed in the early stages. The five-year relative survival rates for prostate cancer survivors in the United States (the chance of living 5 years after being diagnosed with prostate cancer) was 99.9% at all stages of cancer and 100% if the cancer was local. The 10-year survival rate reached 97.8%, while the 15-year survival

rates reaches up to 91-4% [2,3]. Therefore, more attention has been directed to improve the Health-Related Quality of Life (HR-QOL) for men diagnosed with prostate cancer.

Depending on age, stage of cancer, and other health-related conditions, treatment for prostate cancer varies. It may include surgical removal of the prostate gland (prostatectomy), radiation therapy, or watchful waiting. In some instances, hormonal or chemotherapy can be added to the treatment regimen depending on the case [2,4]. The use of each treatment modality has its own side effects and several long-lasting complications that may negatively impact the HR-QOL of prostate cancer survivors [5]. For example, the complications of radical prostatectomy include urinary symptoms and impotence due to trauma and removal of the neurovascular bundle adjacent to the gland [5]. While radiation therapy causes fewer sexual side effects, it still causes some erectile problems for men [6] and other urinary complications such as urinary incontinence and irritation [7]. Besides that, radiation causes several bowel-related complications such as frequency, urgency, diarrhea, fecal incontinence, pain during bowel movement, proctitis, and blood in stool [5]. On the other hand, hormonal therapy commonly leads to sexual problems such as impotence, decreased libido, erectile dysfunction, gynecomastia, weight gain, hot flashes, sleep disturbances, fatigue, altered mood and depression, and osteoporosis, [5,8] which may contribute to lower HR-QOL. The diagnosis of cancer, its treatment complications, and side effects related to treatment modalities can result in immeasurable suffering for the patients and affect their physical, psychological, and emotional well-being. Such alteration of patients' well-being will affect their HR-QOL [5].

Men diagnosed with prostate cancer who reside in Gaza Strip do not have the privilege of radiation therapy and other advanced modalities for treatment as their counterparts in other parts of the world. Usually, they used to travel to neighboring countries to receive such treatments. Due to the blockade imposed against Gaza Strip, they can't travel outside Gaza Strip to receive such treatment which may impact their HR-QOL.

The blockade, which was imposed by the Israelis against Gaza Strip after the Palestinian elections in 2006, has affected many aspects of the Palestinians lives including health care. Since that time, Israel limited the number and quantity of items that enter Gaza including food, fuel and medical supplies. Besides that, Israel restricted the movement of people living in Gaza to leave Gaza Strip hindering their ability to receive adequate medical care. As a result, the majority of patients who cannot get treatment in the Gaza Strip and are referred for treatment in hospitals in other countries have been prohibited from leaving the country. The categories of patients most affected by this blockade are those who have cardiology and oncology problems [9].

Israelis issue a small number of permissions to patients that allow them to utilize the referrals to hospitals outside Gaza Strip. According to the fact sheet issued by the World Health Organization: West bank & Gaza; [10] many patients were denied permission to cross Israeli borders to receive treatment. For example, in December 2009, 1103 patients applied to get permission to cross the border for treatment in an Israeli hospital or a Palestinian hospital in the West Bank. Of these patients 21% were denied the needed permission, or permissions were delayed resulting in patients missing their appointment times and having to start the referral process completely over. New appointments had to be set and the process to get permission to cross the Israeli borders had to be initiated once again. Several patients died, unnecessarily, while waiting to get permission to leave, or because they were denied being allowed to travel at all so they could receive the badly needed treatment outside Gaza Strip. On the other hand, patients who were referred to receive treatment in Egypt needed to wait until the Gazan-Egyptian borders opened. This was not a guarantee either of reaching their destination. They were one of the lucky ones if they were able to pass at the first attempt. Very few travelers are allowed to pass through on the occasion when the border opens.

The blockade restricts patients' movement along with hindering efforts to receive medical supplies, including drugs, equipment, and medical disposables [9,10]. Before the blockade was imposed against Gaza Strip, medical supplies were delivered to the stores of the Ministry of Health from Ramallah, West Bank or from Egypt. During the blockade, the importation of the medical supplies became contingent on the permission of the Israelis to let the supplies from West Bank enter into Gaza. A permission was also needed from the Egyptians to open the borders between Gaza and Egypt, which would be opened for very limited times. They were opened for only a few hours per day in two or three days succession, every one to three months. This does not allow a sufficient amount of medical supplies to be imported.

Furthermore, certain types of medical equipment, for instance those needed for x-ray and other electronic devices, were very difficult to bring into the Gaza Strip, and in many incidences some equipments was either broken and spare parts were not available and medications were out of date [9,10]. Such shortages of equipment and drug supplies hamper the quality of providing health care services to patients living in Gaza Strip, especially patients diagnosed with prostate cancer, which decreases their HR-QOL. Therefore, the purpose of this study was to examine the impact of the blockade imposed by the

Israelis on the HR-QOL of men diagnosed with prostate cancer who reside in Gaza Strip. For the purpose of this study, quality of life was defined as “a person’s sense of well-being that stems from satisfaction or dissatisfaction with the areas of life that are important to him/her” [11, p.296].

2. METHODOLOGY

2.1 Design, Participants, and Sampling

The design for this study was a cross-sectional, descriptive design. All patients diagnosed with prostate cancer who live in Gaza Strip were targeted to participate in this study. After signing a consent paper, participants were interviewed privately between July 2010 and January 2011 by the researcher at one of the two medical centers where they were receiving their treatment. Of the 124 participants who were recruited to participate in the study, 121 completed the questionnaires with a response rate of 97.58%.

2.2 Instrument

The University of California at Los Angeles Prostate-Cancer Index (UCLA-PCI), including the RAND 36-Item Health Survey v2 (SF-36 v2) Health-Related QOL was used in this study. Besides addressing HR-QOL issues specific to prostate cancer, the instrument addresses the general HR-QOL. The instrument consists of three parts: (a) the RAND 36-Item Health Survey v2 (SF-36 v2), (b) the UCLA Prostate Cancer Index (PCI), and (c) the Socio-demographic data [12]. The SF-36 v2 consists of 36 items that assess the eight health domains considered by the medical outcomes study to represent the most frequently used concepts in relevant health surveys and those that are affected by several diseases and treatment. These domains cover the following areas: physical functioning, role physical (role limitation due to physical health problems), bodily pain, general health, vitality (energy/fatigue), social functioning, role emotional (role limitation due to emotional problems), and mental health (psychological distress and psychological well-being). It also includes an item in which the patient makes a statement about the evaluation of their general health status [13]. The scores recorded for each scale range from 0 to 100, with the higher scores referring to a better HR-QOL. The UCLA-PCI contains 20 items that quantify and cover six health-related domains that are prostate-specific to HR-QOL. These domains are urinary functions and bother, bowel functions and bother, and sexual functions and bother [14]. The UCLA-PCI including the SF-36 was proven to be valid and reliable [15].

The instrument was translated into the Arabic Language by the researchers. Some modifications were done on wording to fit into the cultural and religious variability pertaining to the people living in Gaza Strip. To ensure the accuracy of translation, the instrument was translated back into the English language by a third bilingual nurse.

The demographics and brief medical part of the instrument was replaced by another one that fits into the characteristics of the population of Gaza. Also, some additional questions were added to the instrument to address issues related to measure HR-QOL in relation to the blockade imposed on the Gaza Strip. Prior to using the instrument in this study, the content validity of the entire instrument was examined by five expert nurses. They were asked to rank each item on a four point scale where 1= not relevant, 2= somewhat relevant, 3= quite relevant, and 4= highly relevant. Then their responses were dichotomized where any item that was rated 1 or 2 was considered not relevant and any item that was rated 3 or 4 was considered relevant [16]. Then, item content validity index (I-CVI) of these ratings was calculated by figuring out the proportion of items that were rated as relevant by all five experts. The result showed that the I-CVI of each item was 100% and therefore, all items were considered relevant according to Polit and Beck [16].

2.3 Data Analysis

The Statistical Package for Social Science (SPSS) was used to compute and analyze the data. Data analysis procedures included basic descriptive statistics to describe the sample (mean, range, standard deviation, and percentage) and frequency distribution tables and occasionally *t* test were used.

3. RESULTS AND DISCUSSION

3.1 Description of the Sample

A total of 124 potential participants were recruited to participate in the study. Out of this, 121 agreed to participate in the study with a response rate of 97.58%.

Descriptive socio-demographic statistics about participants are summarized in Table 1. Participants’ age ranged between 52 and 89 years old with a mean of 71.80 and a standard deviation of 7.66. The majority of participants (n=79, 65.29%) were

Table 1: Descriptive Sociodemographic Statistics of Participants

Characteristic	Value	%
Age		
Mean by years	71.80	
Standard deviation	7.66	
Age by category		
< 60 years	5	4.13
60-64	17	14.05
65-69	20	16.53
70-74	34	28.1
> 75 years	45	37.19
Level of education		
No school	41	33.88
Some education below primary school	23	19.01
Finished Primary School	11	9.09
Finished secondary School	11	9.09
Finished High school	23	19.01
Higher Education	12	9.92
Relationship status		
Live with wife	92	76.03
Divorced or widowed	29	23.97
Place of living		
Northern Governorate	22	18.18
Gaza Governorate	61	50.41
Mid zone Governorate	18	14.88
Khanyounis Governorate	10	8.26
Rafah Governorate	10	8.26
Types of treatment received		
Prostatectomy	15	12.4
Hormonal therapy	56	46.28
Prostatectomy and hormonal therapy	21	17.36
hormonal and chemotherapy	11	9.09
Prostatectomy and chemotherapy	6	4.96
Hormonal Therapy and Radiation therapy	5	4.13
Other combination therapies	7	5.78

70 years and older. Many participants didn't attend school (n=41, 33.88%) and a few number of them (n=12, 9.92%) finished their higher education. The majority of participants (n=92, 76.03%) were living with their wives while the rest of them were either widowed or divorced. The most common mono therapy used by participants was hormonal therapy (n= 56, 46.28%) while prostatectomy alone was used by 15 participants (12.4%). The rest of the participants used combinations of two or more types of treatment modalities.

3.2 Quality of Life

Quality of life was described in two categories; general quality of life (SF-36) and prostate-specific quality of life (PCI-QOL). The mean of the scores of each sub-domain in both categories was calculated, and then the means of the entire items of the SF-36 and the PCI-QOL were calculated and presented in table 2. Scores of the SF-36 QOL sub-domains ranged between 33.97 (role limitation-emotional) and 68.23 (bodily pain). The score of the entire SF-36 sub-domains was 47.93. On the other hand, scores of UCLA-PCI sub-domains ranged between 10.02 (sexual function) and 89.74 (bowel bother). The score of the entire UCLA-PCI sub-domains was 44.20.

Several studies [14,17-29] that were conducted to assess HR-QOL for men with prostate cancer using the UCLA-PCI instrument were reviewed to compare the result of this study with the literature. The scores of the HR-QOL sub-domains reported in the reviewed studies are summarized in Table 3.

Table 2: Scores of QOL (SF-36 and UCLA-PCI and their Sub-Domains)

	Number of items	Mean	Std. deviation	Minimal	Maximum
SF-36					
Physical Function	10	45.09	30.129	0	100
Role Limitation- physical	4	35.26	34.947	0	100
Role Limitation- emotional	3	33.97	34.274	0	100
Vitality	4	46.84	25.369	0	100
Mental Health	5	55.56	20.029	5	100
Social functioning	2	59.66	31.927	0	100
Bodily pain	2	68.23	31.136	0	100
General Health	6	59.19	34.833	0	100
Health Transition	1	50.34	27.178	0	100
General Quality of life (SF-36)		47.93	22.464	7.64	96.53
PCI				0	100
Urinary function	5	57.08	32.116	0	100
Urinary bother	1	39.74	37.306	0	100
Bowel function	4	84.96	16.633	0	100
Bowel bother	1	89.74	20.540	0	100
Sexual function	8	10.02	28.415	25	100
Sexual bother	1	49.15	20.541	0	100
Total Score of PCI		44.20	16.163	15.40	88.75

By examining the SF-36 scores reported by participants of this study and comparing them to those reported in the literature (Table 3), it was noticed that the scores reported in this study were less than those reported in the literature with one exception. Participants of Ishihara's, et al. [19] reported a score of 56 for general health sub-domain while participants of this study reported a score of 59.19 for the same sub-domain.

The same can be noticed about the scores of urinary function, urinary bother, sexual function, and sexual bother of the UCLA-PCI sub-domains. The scores reported by participants of this study are less than those reported in the literature with a few exceptions (one exception in the sexual function sub-domain, Inoue, et al.[27], and four exceptions in the sexual bother sub-domains, Letwin, et al. [15]; Jayadevappa et al. [20]; Arredondo et al. [21]; Karakiewicz, et al. [25], and Berge, et al. [29]). The scores for bowel function and bowel bother are within the range of the scores reported in the literature. These similar results could be due to the fact that a small number of participants of this study were treated with radiation therapy because it is not available in Gaza Strip.

3.3 Impact of shortage of drugs on HR-QOL

The majority of participants (85.12%, n=103) reported that drugs were not available at some point during the course of their treatment. A comparison of HR-QOL scores between participants who reported that drugs were not available at some point of their treatment and those who reported that they did not miss drugs during their course of treatment is presented in table 4.

By examining the results, it is noticed that there is a statistically significant difference between all sub-domains that measured HR-QOL, except in four domains {Bodily pain ($p = 0.052$), bowel function ($p = 0.624$), bowel bother ($p = 0.715$), and sexual bother (0.93)} between those who received all of their drug therapy and those who did not have consistent drug therapy due to the blockade. These differences reflect how much the QR-QOL of prostate cancer survivors in the Gaza Strip were impacted by the shortage of their prescribed drug supply.

3.4 Impact of delaying or inability to have surgery on HR-QOL

Of the total number of participants, 24 participants (19.83%) were supposed to have surgery and it was not done due to factors related to the blockade, such as lack of some surgical instruments or anesthetic agents, and evacuating the surgical departments in case of high emergency times. On the other hand, 67 participants had their surgeries completed as scheduled. The other 30 participants did not need to have any surgery. A comparison of HR-QOL scores between those who had their surgeries done and those who had their surgeries delayed or not done are presented table 5. The results reveal that there are

Table 3: A Comparison between the Result of this Study and other Studies that Used the UCLA-PCI

Authors	This study	Letwin, et al. [14]	Korfage, et al. [17]	Gacci, et al. [18]	Ishihara, et al. [19]	Jayadevappa, et al. [20]	Arredondo, et al [21]	Namiki, et al.[22]
Country	Gaza	USA	Holand	Italy	Japan	USA	USA	Japan
Physical Function	45.09	72.5		86.87	85.7	69.8	80.2	
Role Limitation – Physical	35.26	61.3		72.73	71.4	69.8	67.6	
Role Limitation- emotional	33.97	71.2		55.30	70.1	95.2	80.2	
Vitality	46.84	62.2		81.94	62	74.1	62.3	
Mental Health	55.56	76.7		72.63	64.2	85.4	77.2	
Social Functioning	59.66	80.0		80.18	79.5	92.9	81.9	
Bodily Pain	68.23	73.3		86.79	74.1	86.1	79.5	
General Health	59.19	67.0		66.36	56	73.5	71.1	
Health Transition	50.34			80.05			50.4	
Urinary function	57.08	83.8	85.0	75.18	84.2	77.1	69.9	81
Urinary bother	39.74	79.4	80.5	75.44	72.9	85.7	73.4	81
Bowel function	84.96	84.4	86.6	89.80	86	92.2	84.1	89
Bowel bother	89.74	83.1	87.0	84.96	88.8	96.4	82.9	92
Sexual function	10.02	38.5		17.89	32.5	21.7	25.6	15
Sexual bother	49.15	36.3		53.32	74.2	32.7	40.8	66

Table 3 Continued: A Comparison between the Result of this Study and other Studies that Used the UCLA-PCI

Authors	This study	Shikanov et al. [23]	Wakatsuki et al. [24]	Karakiewicz, et al. [25]	Krahn, et al. [26]	Wootten, et al. [27]	Inoue, et al. [28]	Berge, et al. [29]
Country	Gaza	USA	Japan	Canada	Canada	Australia	Japan	Norway
Physical Function	45.09			80.95				
Role Limitation – Physical	35.26			70.67				
Role Limitation- emotional	33.97			77.52				
Vitality	46.84			64.75				
Mental Health	55.56							
Social Functioning	59.66			82.13				
Bodily Pain	68.23			81.56				
General Health	59.19			71.31				
Health Transition	50.34							
Urinary function	57.08	72.0	82.5	70.86	90	79.44	71.8	79.7
Urinary bother	39.74	79.0	79.2	74.30		86.89	80.6	83.8
Bowel function	84.96		90.3		88		86.0	85.5
Bowel bother	89.74		95.8				86.3	78.1
Sexual function	10.02	45.2	38.9	21.47	38	25.73	7.3	32.1
Sexual bother	49.15	50.7	72.9	33.68		50.92	58.4	47.2

no statistically significant differences between the scores of all sub-domains of HR-QOL (except the bowel bother domain) between the two groups.

3.5 Impact of inability to travel for treatment on HR-QOL

Of the total number of participants, 51 participants (42.15%) were told by their treating physicians that they needed a referral for treatment outside Gaza Strip. The majority (82.4%, n=42) of them were able to travel. Only 9 participants (17.6%) could not travel outside Gaza to receive treatment. Those participants who could travel outside Gaza to receive treatment had to

Table 4: A Comparison between QOL Scores of Participants who Missed Drugs and those who Did not Miss Drugs during their Treatment Course

	Missed treatment	Did not miss treatment	t Test	
			Value	Sig
SF-36				
Physical Function	41.58	63.16	-3.779	.001
Role Limitation- physical	29.85	63.16	-4.047	.000
Role Limitation- emotional	29.34	57.89	-3.479	.001
Vitality	43.11	66.12	-3.824	.000
Mental Health	53.32	67.11	-2.828	.006
Social functioning	55.99	78.29	-3.262	.003
Bodily pain	65.77	80.92	-1.966	.052
General Health	46.68	69.21	-4.483	.000
Health Transition	64.03	34.21	3.585	.000
General Quality of life	44.53	65.46	-3.942	.000
PCI				
Urinary function	54.49	70.44	-2.008	.047
Urinary bother	35.71	60.53	-2.726	.007
Bowel function	84.63	86.68	-.492	.624
Bowel bother	90.05	88.16	.366	.715
Sexual function	6.58	27.74	-2.801	.011
Sexual bother	49.23	48.68	.077	.939
Total Score of PCI	41.93	55.91	-3.628	.000

Table 5: A Comparison between QOL Scores of Participants who Had their Surgeries Done and those who Did not Had their Surgeries done

	Surgery was done as it should be	Surgery was not done as it should be	t Test	
			Value	Sig
SF-36				
Physical Function	56.52	47.54	1.242	.218
Role Limitation- physical	49.73	36.10	1.567	.121
Role Limitation- emotional	47.10	35.45	1.368	.175
Vitality	56.52	47.57	1.409	.162
Mental Health	60.22	56.79	.703	.484
Social functioning	60.33	59.89	.054	.957
Bodily pain	74.35	66.90	.985	.327
General Health	62.17	52.61	1.529	.130
Health Transition	50.00	61.19	-1.315	.192
General Quality of life	57.30	45.81	1.433	.155
PCI				
Urinary function	58.62	60.64	-.151	.881
Urinary bother	53.26	38.81	-.258	.797
Bowel function	78.35	88.32	1.615	.110
Bowel bother	82.61	91.42	-2.685	.009
Sexual function	15.90	9.93	-1.493	.147
Sexual bother	60.87	50.00	1.107	.271
Total Score of PCI	46.52	45.81	-.173	.863

Table 6: Impact of Inability to Travel on Time On QOL of Participants

	Frequency	Percent
Had a great effect	27	64.3
Had a moderate effect	5	11.9
Had a little effect	1	2.4
Did had any effect	9	21.4
Total	42	100.0

wait for various amounts of time to be able to travel. The waiting time ranged between 15 days and 22 months. The majority of participants (n=27, 64.3%) who could travel mentioned that waiting to travel had a great impact on their HR-QOL. The rest of the participants reported that waiting to travel had moderate, little, or no impact on their HR-QOL (table 6).

The four variables were dichotomized into two variables. The variables ‘had a great effect’ and ‘had a moderate effect’ were summed into one variable labeled ‘had effect on HR-QOL’ and the variables ‘had a little effect’ and ‘did not had any effect’ were summed into a second variable labeled ‘had no impact on HR-QOL’. Scores of HR-QOL were calculated for each group. As table 7 shows, there are high statistically significant differences between the scores of HR-QOL reported by both groups of participants in all sub-domains with the exceptions of bowel function and bowel bother sub-domains, which reflect the impact of inability to travel on time on the HR-QOL level of the participants who could not travel to get their treatment at the proper time.

Table 7: A Comparison between QOL Scores of Participants who Reported that Waiting to Travel Had Impacted Their QOL and Those Who Reported that Waiting to Travel Had Little or No Impact on their QOL

	Reported impact of waiting on QOL	Reported no impact of waiting on QOL	t Test	
			Value	Sig
SF-36				
Physical Function	18	65.67		.000
Role Limitation- physical	13.75	67.50	6.005	.000
Role Limitation- emotional	20	66.11	6.209	.000
Vitality	46.25	63.75	10.118	.000
Mental Health	59	73.33	17.098	.000
Social functioning	35	61.67	8.005	.000
Bodily pain	45	80.17	11.071	.000
General Health	59	76	23.267	.000
Health Transition	60	58.33	9.246	.000
General Quality of life	35.83	68.57		
PCI				.000
Urinary function	42.32	76.88	9.441	.000
Urinary bother	25	55	6.371	.000
Bowel function	71.25	96.40	21.454	.079
Bowel bother	80	95	18.653	.067
Sexual function	0	9.38	1.990	.048
Sexual bother	50	53.33	8.768	.000
Total Score of PCI	32.58	62.80	12.723	.000

3.6 Other variables

When participants were asked if they would travel to seek treatment outside of Gaza Strip if the borders were open, varied responses were mentioned. The majority (63.2%, n=74) reported that they would definitely or most likely would travel to seek treatment outside Gaza Strip. Some were not sure (14.4%, n=17), while the rest of them mentioned that they will definitely or will not likely travel (table 8).

Table 8: Responses of Participants about Possibility to Travel outside Gaza Strip to Seek Treatment

Variable	Frequency	Percent
Definitely, I will go	55	45.45
Mostly, I will go	22	18.18
I am not sure	18	14.88
Mostly, I will not go	16	13.22
Definitely, I will not go	10	8.27
Total	221	100.0

Table 9: Hospitalization Status of Participants

Variable	Frequency	Percent
Needed hospitalization and stayed in the hospital all the required time	47	38.8
Needed hospitalization and was discharged early because of the emergency situation	24	19.8
I did not need hospitalization	50	41.4
Total	121	100.0

The majority of participants (71.9%, n=87) needed hospitalization during the blockade time. Most of them (63), could stay in the hospital for the entire needed time for hospitalization, while the other 24 participants had to be discharged prematurely because of the emergency situation when the beds were needed to hospitalize victims of Israeli attacks on Gaza (table 9).

Finally, participants were asked if the blockade had generally impacted their quality of life. The majority (63.64%, n=77) reported that blockade had a moderate to great negative impact on their HR-QOL. The rest of the participants reported that blockade had no or little negative impact on their HR-QOL (table 10).

4. CONCLUSION

Prostate cancer is one of the most common cancers among men in Palestine and it is the second leading cause of cancer related-deaths among men. With the high survival rate, it is important to improve HR-QOL of men diagnosed with prostate cancer. Men diagnosed with prostate cancer who live in the Gaza Strip, Palestine do not have access to radiation therapy because it is not available in Gaza. Therefore, patients who need this type of treatment are required to travel to one of the neighboring countries to receive radiation therapy. Since the blockade was imposed against Gaza Strip in 2006, patients who needed to be treated outside Gaza were prohibited to leave the country. Furthermore, many drugs and medical supplies are deficient from the stores of the Ministry of Health. Such factors have affected HR-QOL of men diagnosed with prostate cancer who reside in Gaza Strip. As it was noticed from table 3; participants of this study report lower scores of HR-QOL than those reported in the literature. It is also noticed that the participants who missed some of their drug therapy during their treatment course reported lower scores of HR-QOL than those who did not miss their drug therapy while under the blockade. Similarly, the majority of patients who could not travel on time to a neighboring country reported that waiting to travel had affected their HR-QOL. On the other hand, inability to have required surgery done or a delayed surgery which was supposed to be done had not affected HR-QOL of participants. Finally, about 64% of participants mentioned that they would travel to another country to seek treatment if the border were open, and a great majority of the participants mentioned that the blockade had a negative impact on their HR-QOL.

Table 10: General impact of Blockade on QOL.

Variable	Frequency	Percent
Had a great negative impact	51	42.15
Had a moderate negative impact	26	21.49
Had a little negative impact	40	33.05
Did not affect me	2	1.66
Had a positive impact	2	1.65
Total	121	100.0

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