ORIGINAL ARTICLE

Exploration of the Quality of Life in Iranian Morbid Obese People: A Qualitative Study

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Abstract

Background: Morbid obesity (body mass index≥40 kg/m^2 or >35 kg/m^2 with co-morbidity) is an important factor in reducing the quality of life which is influenced by the characteristics of the individual, his social, cultural, and environmental conditions; also, each disease has unique effects on it. Although most of the studies have been conducted on obesity (25>BMI>40), how to prevent it and improve life quality, there is lack of knowledge about what morbid obese people really experience about their life quality. Thus, this qualitative study aimed to explore the viewpoints of morbid obese people about life quality.

Methods: In this conventional content analysis, data were collected using semi-structured interviews with 20 morbid obese patients who were referred to nutrition and obesity clinics of Shiraz and Ahvaz Jundishapur University of Medical Sciences. Purposeful sampling was processed from May 2016 to January 2017. The sampling continued until data saturation. Each interview was recorded by audio recorder and typed in the MAXQDA10 software. Data were analyzed after each interview. The meaning units were encoded and the codes were categorized. This trend continued until the main and sub-categories emerged.

Results: Data analysis indicated 1835 codes, 76 sub-subcategories, 26 subcategories and 6 main categories including physical changes, psychological experiences, socio-personal dysfunction, negative body image, financial pressure, and change in the spirituality.

Conclusion: Final results indicated that life quality had a special definition in morbid obesity and includes very different dimensions. This study can promote health care providers' knowledge (nurses) for supporting obese people and improving their quality of life by community-based care approaches.

Keywords: Morbid obesity, Iran, Qualitative study, Quality of life

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Introduction

Morbid obesity (body mass index (BMI) ≥40kg/m^2 or BMI>35kg/m^2 with co-morbidity), as a global health problem, is caused by genetic, metabolic, social, behavioral, and cultural factors.[1, 2] World Health Organization (WHO) reported that more than 1.9 billion adults suffered from being overweight and 650 million suffered from obesity.[3] With increase in the Western eating habits, obesity has become an emergency problem in Asia as well.[4] In Iran, the prevalence of overweight, obesity and morbid obesity was respectively 28.60%, 10.80%, and 3.40%.[5]

Obesity reduces life expectancy and leads to a poor quality of life (QOL) because of several related conditions including cardiovascular, hyperlipidemia, diabetes, musculoskeletal problems, and cancer.[6] To improve the QOL in obesity, there are several treatment interventions including lifestyle modification, behavior therapy, pharmacotherapy, and surgery.[7]

Although most of the studies have been conducted on obesity (25>BMI>40) and how to prevent or treat it and improve QOL by quantitative approaches,[8, 9] there is lack of knowledge about what morbid obese people really experience about their QOL. Also in Iran, only a few qualitative studies have been done on special age and gender groups of obese patients and explored some of aspects of life with obesity such as psychological or social dimensions.[10, 11]

Therefore, many studies have reflected the general meaning of QOL,[8, 10-12] while every illness has its specific effects on the QOL, the concept of QOL of morbid obesity, as a subjective and complex structure, can be understood based on individual experiences and it has different interpretations in different cultures.[13] Also, WHO defines the QOL as an individual's perception of his/her position in life in the context of culture in which he/she lives regarding his/her goals, expectations, and concerns,[12] which is influenced by the characteristics of the individual's health; and his social, cultural, and environmental conditions;[14] therefore, it should be explored by those who have experienced it by a qualitative study. Advocates note the strength of qualitative methods in delivering a deeper understanding of, for example, the complex phenomena faced by patients living with long term conditions.[15] Due to the increase of morbid obesity in Iran, and poor QOl and social isolation of this group who has been neglected by the community and researchers, we aimed to explore the viewpoints of morbid obese people about their QOL.

Materials and Methods

This exploratory qualitative study was conducted using conventional content analysis from May 2016 to January 2017 in nutrition and obesity clinics of Shiraz and Ahvaz Jundishapur University of Medical Sciences. The participants of this study included adult patients with BMI≥40 kg/m^2 or BMI>35 kg/m^2 with co-morbidity who spoke in Persian. Patients who were diagnosed with serious chronic diseases or severe illness/injury (physical or mental) or were not willing to participate in the study were excluded from the study. Besides, we tried to choose the participants from different social and cultural levels (age, education, job, marital status, and various BMI) through purposeful sampling. The researcher selected morbid obese people who were able to transmit their experiences. In the first meeting, the researcher talked about the aim of the study, the role of the researcher and participants.

In the conventional qualitative content analysis, the coding categories are derived directly and inductively from the participants' quotations.[16]

Accordingly, 22 semi-structured, face-to-face interviews using open-ended questions were conducted with 20 participants in nutrition and obesity clinics. Two participants (P7 and P13) were interviewed twice. Each interview variably lasted about 1–3 hours. One researcher started the interview with the initial questions, followed by the main

questions. Then, based on the participants' answers, the researcher helped them to share their experience of morbid obesity by probing questions (Table 1).

The sampling continued until data saturation was achieved or until no new code was derived in the five final interviews. Each interview was recorded by audio-recorder and typed in the MAXQDA software, version 10.

The research team analyzed the data after each interview using Graneheim and Lundman's method:[17] (i) the interviews were transcribed. After reading the text for several times, (ii) the words, phrases, sentences, and even paragraphs were considered as meaning units. (iii) The meanings units were encoded. (iv) The codes were categorized according to the content similarities to be minimized. (v) This trend continued throughout the analysis of the units until the categories and sub-categories emerged. Finally, the data were categorized by content meanings as the main categories were identified (Table 2).

The analysis process was repeated after each interview. The researcher used memo writing and field note for recording the insights to facilitate the data analysis.

This study was approved by the ethics committee of Shiraz and Ahvaz Universities of Medical Sciences (IR.AJUMS.REC.1395, 10). Written informed consent was signed by the participants. They were made aware of ethical, secrecy (anonymity in publishing) and voluntary participation principles and recording of their interviews.

Credibility, dependability, confirmability and transferability were considered.[18] For credibility, the codes were confirmed by each participant and two qualitative research experts. For dependability, all interviews were recorded and transcribed word-by-word and saved. Furthermore, transferability of data was enhanced by full description of the research field, the participants, and sampling methods. For confirmability, the researcher recorded her activity over the time.

Results

The mean age, mean weight, mean height, and mean BMI of the participants were 40.60±11.65 years, 121.30±22.75 kg, 163.80±10.31 cm, and 44.66±5.16 kg/m^2, respectively (Table 3).

Data analysis indicated six main categories (physical changes, psychological experiences, socio-personal dysfunction, negative body image, financial pressure, and change in the spirituality).

1. Physical Changes

Most of the participants considered "*physical change*" was one of the important categories in the QOL of obese patients. They suffered from unhealthy body systems and worried about physical disorders in the future. This main category included two subcategories of *the body system disorders* and *physical activity limitation*.

1.a. The Body System Disorders

Most of the participants complained

Table 1: An example of interviews with participant 10

Type of question	Question	Answer
The initial question	Could you please tell me how your weight gain started?	"when I was born, I was an obese girl, but I was not severely obese. After I got married and got pregnant, I gained weight and became severely obese "
The main question	How has your life changed with obesity?	"I had a bad feeling; I became very depressed, and I did not want to have sexual activity… I was severely isolated"
	Please tell me about your feeling?	
Probing question	Please explain more, What do you mean by isolation?	"Before I suffer from morbid obesity, I was a happy and sociable woman, but now I always stay at home…I don't go to the parties, shopping, my relatives' house; I don't go to my daughter's school…"

Table 2: An example of analysis process

Main Idea	Code	Sub-sub category	Sub category	Category	Main Category
Even if I want to wash the dishes, I have to use a chair under my feet	Use the chair anywhere	Mandatory use of auxiliary equipment	Threatening one's independence	Physical activity limitation	Physical changes
I have to use non-Iranian toilets for many years	Use of Non-Iranian toilet				
I have to sleep in bed; it's hard to sleep on the ground	Obligatory sleep on the bed				
When I lie down, two pillows should be placed on both sides, so that there is a little pressure on my back	Use pillow to sit down to lower the back pressure				
The clothes were washed by my husband. My husband is doing more housework such as washing the dishes... My mother is doing more chores	Doing household chores by husband / mother	Dependence on others			
I must buy the prepared barberry. I must buy easy-made vegetables	Buy prepared foods				
Because of my excess weight, no one can lift me. I need help from several people to stand up	Need others for stand up				
…I must make my own food...	Doing cooking	Mandatory daily activities			
I'm on my feet for a long time to wash the dishes.	Long time washing the dishes				
I must sweep up too, but in sitting position	Home cleaning in sitting position				
I must wash my clothes by myself; nobody has washed my clothes even my daughter	Washing clothes by herself				
I can't do anything, even my personal work…	Disability to perform personal tasks				

about their body system disorders including cardiovascular, gastrointestinal and musculoskeletal, and other body systems' problems, which disrupt their function. The participants' statements represented a negative attitude towards these disorders that could treat their health. In this regard, one of the participants said: "*…I have knee pain and backache..., I'm short of breath and have palpitation on walking…*" (P.11). Another participant stated: "*...I got severe musculoskeletal problems... I have experienced all types of pain in my body such as knee and waist pain, and backache...*" (P.12). Another one said: "*…I have some problems in my gastrointestinal systems such as constipation and bloody stool and anal fissure; sometimes I have stomachache, too*"...(P.15).

1.b. Physical Activity Limitation

Physical activity limitation was another important experience repeatedly mentioned by the participants. Weight gain affected their activities, including "*inability to do daily activity*" (sitting, walking, sleeping, washing, moving) and "*threatening one's independence*" negatively, all of which could influence the QOL. As to the inability to do daily activities, a participant said: "*…I have some problems when sitting and standing up. I should sleep on the bed not ground. I cannot do household chores because of my excess weight. When I traveled, my family walked around the park, but I couldn't…*" (P.9). Another participant stated: "*…Moving is difficult for me; I can't sit on the ground at all. That is, I should sit either on the chair or on the sofa; I'm doing all the housework in*

Table 3: Demographic characteristics of the morbid obese participants (n=20)

Participant	Age (years)	Gender	Weight (Kg)	Height (Cm)	BMI (Kg/M²)	Marital Status	Education	Employment Status
1	34	F[a]	127	170	43.9	Single	Under Diploma	Hairdresser
2	27	F	105	155	43	Married	Diploma	Housewife
3	50	F	132	163	50.2	Married	Associate Degree	Retired
4	65	F	107	154	45.1	Married	Under Diploma	Housewife
5	49	F	100	160	39	Widow	Elementary degree	Housewife
6	38	F	122	169	42.7	Married	Under Diploma	Housewife
7	35	M[b]	168	184	49.6	Married	Master's Degree	Full time Employed
8	49	F	131	161	50.5	Married	Elementary degree	Housewife
9	54	F	116	154	48.2	Married	Bachelor's degree	Retired
10	34	F	96	148	43.8	Married	Diploma	Housewife
11	40	F	99	164	36.8	Married	Diploma	Housewife
12	42	F	116	163	43.6	Married	Diploma	Housewife
13	63	F	98	150	43.5	Married	Associate Degree	Retired
14	27	F	122	156	50.1	Single	Bachelor's degree	Unemployed
15	42	F	115	160	40	Married	Bachelor's degree	Housewife
16	40	F	102	160	40	Married	Bachelor's degree	Unemployed
17	30	M	119	181	36.3	Married	Master's Degree	Employed
18	35	F	132	168	46.7	Married	Diploma	Unemployed
19	38	M	185	180	57	Married	Master's Degree	Full time Employed
20	20	M	134	176	43.2	Single	Associate Degree	Employed

a: Female; b: Male

standing position…" (P.8).

2. Psychological Experiences

Psychological experiences were another basic category of QOL of morbid obesity. In this study, all of the participants expressed negative psychological outcomes due to their excess weight such as concerns about the co-morbidities, experience of depressive mood, low self-worth, and sleep problems.

2.a. Concerns about Co-Morbidities

In this study, the participants were concerned with obesity and its complications in the future. These concerns were mentioned by one of the participants: "*…My daughter is so worried about something bad happening to me which leads to my death*...Also, my wife tells me *"You are very obese; I worry about your health..."* (P.7). Another participant said: "*…I am very worried about my health; my concern is the co-morbidities of obesity and even sudden death…If I die, what would happen to my wife and son…*" (P.19).

2.b. Experience of Depressive Mood

Most of the participants believed that obesity is associated with depression and mood disorders. They experienced symptoms such as emotional distress, fear and anxiety, and despair. A participant said: "*…Once I suddenly started to beat myself. I was crying because I had eaten a lot and then I regretted it...I had this mode after eating…*" (P.13). Another participant said: "*…I always experience fear and anxiety...When my husband reminds me of my obesity, I get nervous; I start crying and become disappointed…*" (P.18).

2.c. Decreased Self-worth

The results of the study have also revealed that morbid obese patients are more likely to suffer psychological problems associated with low self-esteem and self-efficacy. Therefore, the obese individuals lose their self-esteem and have lower abilities than the non-obese. A participant said: "*…Overweight decreases my self-confidence; I was an excellent student, but I didn't get my conference grade…Because I*

felt embarrassed to present in the class…" (P.9). Another one said: "*…I was invited to teach English, but I was embarrassed to teach, because my confidence was low…*" (P.15).

2.d. Sleep Problems

Most of the participants believed that gaining weight could result in changes in the pattern and amount of sleep such as insomnia and hypersomnia.

A participant stated: "*…I don't sleep well, especially at night;...I can't go sleep easily; when I wake up, I don't have a good feeling…*" (P.8). A person said: "*…I sleep a lot after lunch and dinner...when I wake up, I'm still tired...I have nightmares that I am drowning in water…*" (P.6 & P.10).

3-Socio-Personal Dysfunction

Physical and mental disorders of morbid obesity can cause some social problems. Interviews revealed personal and social challenges of morbid obesity, such as missed social opportunities, concerns about clothing, and socio-cultural problems.

3.a. Missed Social Opportunities

The participants believed that fitness is very important for one to be better accepted in his/her society. They had lost their best opportunities for life, such as marriage, education, and employment, due to obesity.

In this regard, a participant said: "*…I had a very good suitor who was very fond of me, but his family did agree on our marriage, due to my obesity…*" (P.14). A participant stated: "*…Although I had great talent in my work, when I went to several places for work, they didn't employ me...because I did not have a fit physique…*" (P.1).

3.b. Clothing Concerns

Excess weight can cause a lot of problems with clothing. All participants stated a lot of worry about disproportionate body size because they are not able to choose the desired clothes and they have to wear clothes to hide their obesity.

In this regard, a participant said: "*…I can't always wear fashion and colorful clothes... because some colors show me very obese...I should wear simple and dark clothes…*" (P.12). Another person said: "*…when I go to buy clothes, I can't find a suitable one, so I'm upset. I should always wear loose clothes that do not show my obesity…*" (P.3).

3.c. Socio-Cultural Problems

Most of the participants believed that obese people were faced with difficulty in traveling and shopping, and social and employment isolation. A participant said: "*...In our society, people even health care providers don't have positive attitudes toward obese persons... When the nurses couldn't find my vein for injection, they deliberately hit me and say:... you had eaten too much, you shouldn't eat food tonight…*" (P.13). Also one said: "*...I can't go swimming or party because others laugh at me..."* (P.17). A participant said: "*...I'll never go out by a taxi because no taxi stops for me..."* (P.7). Another said: "*...I reduced my relationship with my husband's family because I can't do anything there…*" (P.18). Another participant said: "*...In our society, appearance is very important for employment...Despite having the power of expression, employers rejected me, because of my appearance…*" (P.1).

4-Negative Body Image

Because of psychological and social and even physical problems related to morbid obesity, patients experienced negative attitudes toward their body. All participants did not have a positive image and conception about themselves. Furthermore, other people also changed their attitude towards them.

4.a. Changed Self-Concept

The participants believed that due to inappropriate appearance their image and expression of themselves are changed and they hate themselves and their appearance.

A person said: "*…I don't like myself and my appearance…I think my real one is different from the one I am now…*" (P.15). Another one stated: "*...I don't like my appearance at all. When I see myself in the mirror, I say to myself, you are a big bear…*" (P.10).

4.b. Change of Other's Perception

Most of the participants stated that after gaining weight, other people's perceptions about them were changed. On the other hand, their identity was changed and became a symbol of obesity among others. A participant said: "*... When others want to give example, they say "oh you have become like my aunt"... That is, I am the symbol of obesity in my family…*" (P.4). Another participant said: "*… Someone looked at me and said "OH, look, how fat she is; she is like a crock…*" (P.1). Another one said: "*…people say to each other: Oh, look, he's like a bear..."*(P.20).

5-Financial Pressure

Most of the morbid obese patients need to refer to the health care system for curing mental and physical diseases. These expenses include medical and caring, and other life essential expenses. When they can't afford the treatment costs and experience financial pressure, their QOL is reduced.

5.a. Treatment Expenses

The participants approved the treatment costs of obesity and its co-morbidities. They need to visit the doctor, and use drugs or surgery methods. One of the participants said: "*…Our health services such as CT scan, MRI, and surgery are more expensive than those of other people due to the excess weight…*" (P.19). A participant said: "*...I paid a lot to buy slimming pills and herbal tea…I got a steam bath...*" (P.13). A participant said: "*...I paid a lot of money for acupuncture…It imposed too much cost…I cannot pay for it anymore…*" (P.15). Another one said: "*...I went to a health clinic…It was good and they paid attention and spent time for me, but they charged a lot of money for diet and exercise programs, so I did not continue that...*" (P.20).

5.b. Increased Basic Life Expenses

Most of the participants stated that because of the big size of the body, their life expenses have increased. They pay more for food, clothing, and traveling which is more than those non-obese people. A participant said: "*...I couldn't find a long coat; so I had to buy the material to sew it; it was costly...I had to cook more own food, too...*" (P.10). Another one said: "*...I had to sew clothes that had more costs for buying the material and sewing compared to the ready-made clothes...*" (P.20). About the traveling costs, a participant said: "*...When I want to travel by airplane, I have to pay more fees for my excess weight…*" (P.7).

6-Change in the Spirituality

Change in spirituality is one of the aspects of QOl of morbid obese people in the Iranian society. Our participants stated that morbid obesity and its co-morbidities such as physical and psychological disorders can influence one's spirituality. Thus, morbid obese patients experience weaknesses in spiritual communication, change in religious acts, and post-death concerns, and finally poor QOL.

6.a. Weakness of Spiritual Communication

The participants believed that they were angry with God due to the lack of accepting their invocation from God to get slim. A participant said: "*...I talked to God a lot and complained about my excess weight…Even though I am a culprit, sometimes when I can't endure it any more, I blame God...*" (P.18). Another one stated: "*…I'm so angry with God for my obesity; my sister's kids are thin and like to be obese…I complain that I'm obese…I talk to God, "What would happen if you had made me thin, but instead they got fatter…*" (P.16).

6.b. Change in Doing Religious Acts

The participants believed that obesity has made it difficult for them to do religious acts and sometimes they have given them up.

In this regard, a participant said: "*...obesity has reduced my spiritual states…I neglect praying...I'm not fasting for several years, too…*" (P.18). Another one said: "*…I can't pray while standing any more…I can't sit on my feet…*" (P.7).

6.c. Post-Death Concerns

The participants stated that they think about life after death, such as a heavy coffin, great grave, and even lost hope of being alive. A participant said: "*...I don't like to die when I'm obese. My grave would be big, my coffin would be heavy, and people will say "how obese she is…It's embarrassing at the time of washing my dead body...I think about such things a lot…*" (P18). Another one said: "*...I often think so much about the funeral, the people who pick up the coffin, how annoyed they will be…How hard it is for the one who wants to put me in the grave…"* (P.5).

Discussion

The aim of this study was to explore the viewpoints of morbid obese people about their QOL. Based on the results, QOL in morbid obesity include psychological consequences, physical disabilities, and impairments in socio-personal and socioeconomic functions, and changes in spirituality and negative body image.

In the present study, all the participants mentioned physical problems in most of their body systems such as cardiac problems, hypertension, hyperlipidemia, musculoskeletal disorders, and low activity. In this regard, the WHO has reported chronic diseases caused by obesity such as diabetes, heart disease, stroke, osteoporosis, ..etc.[19] Musculoskeletal problems were the most frequent complication expressed by our participants. This finding is in line with those of another study reporting that candidates for bariatric surgery showed high prevalence of musculoskeletal symptoms and limited activity,[20] and that obesity is associated with physical impairment and joint diseases, and knee osteoarthritis.[21] These similarities showed that morbid obesity generally has the same effects on the physical health in different societies and it's not related to culture. Although a Norwegian qualitative study showed that obese women felt more comfortable when exercising within a treatment context organized for patients with obesity problems,[22] there is no treatment context organized for Iranian obese patients. Therefore, it is useful to provide a public gym in obesity clinics of Iran for reducing physical problems.

Regarding the psychological aspect of QOL, this study showed that the participants experienced a lot of problems such as sadness, worries, low self-esteem, and sleep problems. These findings were consistent with a study that revealed the psychiatric problems of obesity.[23] It can be generally argued that morbid obesity leads to a range of depressive tendencies in obese people, so it is that suggested that these patients should be supported by their family and health care team.

Our participants suffered from social problems, especially social isolation, because the society and family judgments influence their QOL. In this regard, qualitative studies showed that obese people faced challenges with society, and were worried about repeated judgments.[11, 24] These similar results showed that stigmatization was a general experience in obese people and health care providers such as surgeons, nurses, nutritionists and psychologists could prevent people from judging about morbid obese individuals.

Our study showed that negative attitude towards obese people could threaten their health (mental, emotional and physical) and change their body image. In this regard, a qualitative research revealed that obese patients suffered from negative social consequences such as low self-esteem, and poor body image.[25] Also, one study showed that obesity increased the risk of negative body image, which can lead to dissatisfaction and unattractive feeling, and impairment of the body organs.[26, 27] Since socioeconomic factors can affect the expression of negative emotions of morbid obese persons about

weight gain[28] and their body image,[29] people with different cultures have a different perspective about the obesity; for example, Middle East, North Africa, Americans and East Asia do not have a negative perception about obesity and they see it as a wealth,[30] but interviews with Iranian obese people showed that they were more eager to have a good appearance to be accepted in the society. These differences could be related to the difference in culture and study context that Iranian people judge more than other society about their body appearance. In this regard, nurses and psychologists, as the important members of the health care team, can provide community-based and supporting care to the obese patients for improving their mental health and self-conception.

According to our results, obese patients experience physical and mental co-morbidities during their life and require frequent visits to various specialists. Their basic life expenses are also more than non-obese people, so they are faced with financial problems, which can have a negative impact on their QOL. In this regard, a study showed that obesity had a negative impact on health-care costs.[31] Multivariate analysis of the risk factors showed that BMI>27 caused two times more sick leave and led to low income.[32, 33] Therefore, nurses could reduce their health problems, hospital admissions and finally medical expenses by providing educational interventions. This information may be useful for designing prevention and treatment health policies that target obesity in our society as a developing country.

Moreover, three general dimensions (physical, mental and social) have been considered for QOL.[34] However, WHO and some studies have shown that spiritual health is a tool for evaluating the QOL,[35-38] but the studies conducted on obesity have not considered spirituality as one of the aspects of QOL.[39, 40] However, most of our participants mentioned that spirituality had effected their QOL and they experienced poor spirituality due to obesity issues and as a result had ineffective weight loss. Also, spirituality is a new category of QOL of morbid obesity in our study compared to other studies in other countries; the main reason might be different cultural and religious contexts of Iranian people. Thus, the Iranian health care system should provide spiritual care for these patients to improve their QOL and their motivation for weight loss.

Therefore, based on specific definition of QOL according to the perception of those who had experienced obesity in this study, the result can be used to assess the outcomes of obesity treatments and to conduct valid studies. Also, health providers such as nurses can use these findings to improve the effectiveness of the nursing care and provide community-based care for obese patients. In addition, obesity is rising among children and adolescents in the Iranian community; it is recommended that future qualitative studies should be conducted on these age groups to prevent more problems in the society.

The results of this study may not be generalizeable to other cultural contexts and age groups. The strengths of this study can be selection of the participants from different social classes and cultural levels and finding the participants' experiences from face-to-face interview to increase the credibility of the findings.

Conclusion

The QOL in morbid obesity includes different physical, psychological, socio-personal, body image, financial, and spiritual aspects. The participants expressed that if they didn't reach their ideal weight, they would experience significant disorders in physical, psychological and social aspects of life; this can weaken their spiritual connection with the superior divine power, decrease their hope for a healthy and prolonged life and have a poor QOL. Therefore, it is suggested that community based care should be offered by the health care team because it can be an essential issue to return these patients to the desired QOL.

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