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Elderly Women's Experience of the Role of Hydrotherapy in Health: Content Analysis

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Abstract

Living to an old age is considered by many elderly women to bring about a decreased quality of life. Hydrotherapy allows individuals to engage in certain physical activities that cannot be done outside the water. The purpose of this study was to explore elderly women's experience of the role of hydrotherapy in their health and was conducted in selected pools of Guilan province in Iran in 2015-2016. Twenty-three elderly women were selected using a purposeful sampling strategy. The data was gathered through semi-structured interviews; Researchers used a qualitative design, based on a content analysis approach. Analysis results were identified as 3 main themes and 12 subthemes. Improved physical health: reduced consumption of painkillers, improved balance, pleasant breathing, easy menopause; Moving toward ability: increased independence, role fulfillment, application of efficient strategies, will to health; Psychological and social relief: sense of liveliness, reduced stress, peaceful sleep and re-emergence in society. "Competence development" was identified as the central code. Results indicate that participation in hydrotherapy by elderly women supported the benefit of advising them to participate in hydrotherapy sessions, as well as government's cooperation with regard to creating proper conditions for improving the health and life quality of this valuable population.

Keywords

Hydrotherapy, Elderly Women, Experience, Qualitative Research

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Elderly Women's Experience of the Role of Hydrotherapy in Health: Content Analysis

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Living to an old age is considered by many elderly women to bring about a decreased quality of life. Hydrotherapy allows individuals to engage in certain physical activities that cannot be done outside the water. The purpose of this study was to explore elderly women's experience of the role of hydrotherapy in their health and was conducted in selected pools of Guilan province in Iran in 2015-2016. Twenty-three elderly women were selected using a purposeful sampling strategy. The data was gathered through semi-structured interviews; Researchers used a qualitative design, based on a content analysis approach. Analysis results were identified as 3 main themes and 12 subthemes. Improved physical health: reduced consumption of painkillers, improved balance, pleasant breathing, easy menopause; Moving toward ability: increased independence, role fulfillment, application of efficient strategies, will to health; Psychological and social relief: sense of liveliness, reduced stress, peaceful sleep and re-emergence in society. "Competence development" was identified as the central code. Results indicate that participation in hydrotherapy by elderly women supported the benefit of advising them to participate in hydrotherapy sessions, as well as government's cooperation with regard to creating proper conditions for improving the health and life quality of this valuable population. Keywords: Hydrotherapy, Elderly Women, Experience, Qualitative Research

Introduction

Demographers consider 60 to 65 years of age as the beginning of old age (Mellor, Russo, McCabe, Davison, & George, 2008). Medical and hygienic advances in the mid-20th century (Tinker, 2002), have reduced the rate of reproduction, and the increase in life expectancy has led to the rapid growth in world (Jadidi, Farahaninia, Janmohammadi, & Haghani, 2011), and the elderly population of the world. In 2006, the elderly population was approximately 688 million, however, it is expected to reach almost 2 billion by the year 2050 (Mellor et al., 2008).

Statistical indices indicate an increase in the Iran population's aging trend (Mirzaie & Ghah-Farrokhi, 2007). According to statistical analysis conducted in 2011 by the Iranian Statistics Center, the population of elderlies aged 65 and over in Iran amounts to around 4.2 million, which forms about 5.7% of the whole population of Iran. Also, in Guilan province, the population aged 60 years and older was reported to be 242,850 in 2006, and increased to 286,547 by 2011. With respect to the population ratio of elderlies, Guilan province in Iran has been identified as the oldest province (Statistical Center of Iran, 2015). Although living to old age is accompanied by a decrease in occupational, skill and learning responsiveness which is regarded as a huge challenge for individuals (Mehrotra & Batish, 2009), some of the aging individuals are able to maintain their health and continue their social activities.

In almost all the countries of the world, elderly women outnumber the elderly men (Mehrotra & Batish, 2009) and elderly women are faced with certain medical conditions which are completely different from those of younger women (Ozalp, Tanir, & Gurer, 2006). Physical

exercise can improve their muscle power, flexibility, balance, and quality of life (Coker, Williams, Kortebein, Sullivan, & Evans, 2009). However, symptoms such as pain, muscle weakness, impaired balance, obesity and arthritis pose problems for elderlies intending to engage in land-based physical exercises (Resende, Rassi, & Viana, 2008). The presence of an age-appropriate exercise program including activities such as walking and swimming can have beneficial effects on their health (Cooke et al., 2007). Hydrotherapy allows certain physical activities that cannot be done outside the water (Resende, Rassi, & Viana, 2008).

Considering the fact that the activities based upon floating obviate the need to tolerate one's central weight, such activities can be an appropriate and healthy substitute for land-based exercises (Campbell, D'Acquisto, D'Acquisto, & Cline, 2003). Hydrotherapy is defined as physical exercise in warm water (Eversden, Maggs, Nightingale, & Jobanputra, 2007) that allows patients to do appropriate exercises with greater intensity in water than on land (Foley, Halbert, Hewitt, & Crotty, 2003). Even though some studies have reported minor effects of hydrotherapy as their results (Craig, 2004; Martin & Noertkoko, 2004), some other studies indicate positive effects of hydrotherapy on regaining the lost independence, and fulfillment of elderlies' daily needs (Campbell et al., 2003; Cooke et al., 2007; Foley et al., 2003).

Improved conditions of patients suffering from chronic heart failure (Michalsen et al., 2003), decreased number of spasms in patients with severe brain injury (MacKay, 2001), faster recovery of injured sportspeople (Hamlin, 2007), decreased exhaustion (Ghafari, Ahmadi, Nabavi, & Kazemnezhad, 2008), decreased levels of pain in patients with Osteoarthritis and Rheumatoid Arthritis (March & Stenmark, 2001), and improved life quality of patients with Multiple Sclerosis (Sintay, 2011) are among the positive effects of hydrotherapy. In the study conducted by Malekzade, Ghasemi, and Mirnasuri (2014), to determine the effect of one period of hydrotherapy on the performance and life quality of patients with Knee Osteoarthritis, it was found that hydrotherapy exercises can improve these patients' performance and life quality in an effective and safe way (Malekzadeh et al., 2014). Moody, Hale, and Waters (2012) investigated the effects of a 12-week water-aerobics program on the risk of fall and physical performance in elderly individuals suffering from lower extremity osteoarthritis. The obtained results indicated improved movements, breathing, balance, as well as decreased levels of pain and risk of fall in the study population (Moody et al., 2012). Also, in the study conducted by Alikhajeh, Attarzadeh, Hosseini, & Moghaddam, (2012), to determine the effect of hydrotherapy on elderly men's dynamic and static balance, it was concluded that hydrotherapy affects the balance and risk of fall in middle-aged men positively (Alikhajeh et al., 2012).

Many studies on hydrotherapy have been based on a quantitative approach, while qualitative studies take human generalities into consideration (Polit & Beck, 2008). In this latter type of study, individuals' exclusive experiences are understood through an awareness about their lived experiences (Tong, Sainsbury, & Craig, 2007). The hidden patterns can then be extracted from the data content through qualitative content analysis (Hsieh & Shannon, 2005).

According to multiple searches conducted, all of the investigations undertaken in Iran in this regard have used a quantitative study approach and in individuals with a particular disease. However, qualitative research in this field has been done in other countries. Qualitative research in the field of hydrotherapy has been used to assess patient experience of hydrotherapy after a diagnosis of fascioscapulohumeral muscular dystrophy or stroke (Castel, 2012), to explore the influences on back pain sufferers' decision-making about treatment seeking with practitioners for their most recent episode of back pain (Kirby et al., 2014), and to evaluate the effect of a hydrotherapy program for balance, in relation to the risk of falls in elderly women (Resende, Rassi, & Viana, 2008). However, given that Guilan province has been identified as the oldest province of Iran, and cultural differences and different experiences accordingly, the researcher was conducting qualitative research on the experiences of older women to develop a deep understanding in the field in Guilan province in North of Iran.

Study Purpose

Considering the fact Guilan province in North of Iran has been identified as the oldest province of Iran, awareness about elderly women's experiences can help to plan strategies to improve their positive experience and remove or decrease their negative experiences. Due to the lack of any similar studies in the province, the present qualitative study aims at exploring elderly women's experience of the role of hydrotherapy in their health. Improving our knowledge of elderly women's experience of the role of hydrotherapy in health will be the first step to conducting further studies in different cultures and contexts.

The researcher involved in this study, P. Pourghane, PhD., is an Assistant Professor in the Department of Nursing in the Faculty of Nursing and Midwifery at Guilan University of Medical Sciences, Rasht, Iran. Her areas of research include education, cardiac rehabilitation and qualitative studies, including Content analysis. For years, the researcher has had experience with water sports, and has seen the positive effects of hydrotherapy in the elderly. As such, she would like to learn from the experiences of older women regarding the effects of hydrotherapy on their health. Also, she is an experienced swimming instructor and lifeguard.

Method

Study Design

The present study was a conventional qualitative content analysis aimed at exploring elderly women's experience of the role of hydrotherapy in their health. Qualitative researches provide an exceptional opportunity to researchers to better understand various phenomena (Straubert & Carpenter, 2010). Considering the main research question ("what is elderly women's experience of the role of hydrotherapy in their health?") and the general objective of the research ("exploring elderly women's experience of the role of hydrotherapy in their health"), the conventional qualitative content analysis was determined as the appropriate methodology of the present research; such a designation is related to the nature of the research question. Content analysis is a systematic coding-and-categorizing approach, which can be used to explore unobtrusively a large amount of textual information in order to ascertain the trends and patterns of communication (Gbrich, 2007). As the present study focuses on gaining insight into elderly women's experience of the role of hydrotherapy in their health, and as each individual may have a different experience due to their specific traits, the selected methodology, qualitative content analysis, appears to be the most appropriate methodology as it aims to find the relationship between ideas and opinions, the main content, tendencies and meanings. Researchers extract the key points and specific themes from these general relationships.

Participants

The research was conducted in selected pools of Guilan province in Iran in 2015-2016. The study population was selected through purposive sampling and included those elderly women who were willing and able to have interviews and had experienced several hydrotherapy sessions (at least 4 sessions). To have maximal variation in sampling, elderly women were selected from a wide range of women with various characteristics with regard to their age and the number of hydrotherapy sessions. Twenty-three elderly women between 61 and 73 years old (mean age: 67) participated in the present research which lasted for 9 months.

Data Gathering

Data was gathered through face-to-face semi-structured interviews which lasted between 30 and 45 minutes. The term “semi-structured qualitative study” is used here to refer to qualitative approaches, typically involving interviews and observations, that have some explicit structure to them, in terms of theory or method, but are not completely structured (Blandford, 2013). The interviews started with some open-ended questions such as “if possible, please talk about your motivation for taking part in Hydrotherapy sessions,” “please talk about your own experience of the effective factors of hydrotherapy on your life style.” The next questions followed as per the provided answers to these questions with a greater focus and for a better understanding of the issue. The interviews were conducted with individuals separately. All interviews were recorded by a digital recorder, then they were carefully listened to and transcribed verbatim, and finally the researchers analyzed them concurrently. The data collection and analysis proceeded concurrently, and once the themes were identified and data saturation was achieved, the interviews were discontinued (Elo & Kyngas, 2008). The interviews were conducted by the author (p.pourghane) in the Persian language and after that translated into English after analyzing the data. Required permissions were obtained from the Research Deputy of Guilan Medical Sciences University in Iran and then were provided to respective authorities to acquire permission for conducting the research.

Data Analysis

Data analysis was conducted as per the steps recommended in content analysis by Graneheim and Lundman (2004). First, the interviews were transcribed, and then read for several times to achieve a general and accurate understanding. Then, the whole interviews were regarded as an analysis unit, and the words, sentences, and paragraphs were regarded as meaning units. In fact, meaning units were comprised of words and sentences that were related to one another for their content and thus were consolidated and put together considering their content and provisions. The meaning units were then underlined and subsequently reviewed several times, followed by allocating a code for each meaning unit. In the next step, the codes were compared and contrasted, and then were grouped under specific labels and combined into categories. At the final step, the categories were compared to one another and after a close and deep study the content hidden in their data, which are called “themes,” were introduced (Graneheim & Lundman, 2004). In this study, codes were categorized in three main themes and 12 subthemes, and then were named as per their nature.

Trustworthiness

The criteria proposed by Guba and Lincoln (2003) were utilized to determine the accuracy and strength of data (Strubert Speziale, Alen, & Carpenter, 2003). In order to ensure the credibility of the study, the researcher engaged with the research subjects and the data over a long period. The researcher is a swimming instructor and has attended several days a week in the pool and is linked with a lot of elderly women participating in the pool and there was enough time to connect with participants. In addition, using member checks agreements were sought with some of the participants involved to see if what was said was true, by conducting several additional interviews and it was confirmed that the researcher was representing their ideas and their real world. For transferability, the maximum variation sampling technique was used in order to choose the participants in terms of age (61 and 73 years old) and number of hydrotherapy sessions (6 and 36 sessions). Confirmability was measured by external checks conducted by foreign observers who were academic lecturers in nursing and had a good

background in qualitative research methods with several international publications. To ensure reliability, the researcher tried to provide quotes from the different participants in the same form that they were spoken. Also, the researchers documented and reported the stages and processes of the study more precisely in order to make it possible to follow the study.

Ethical Considerations

The present study is the partial result of the program ratified by Guilan University of Medical Sciences in Iran under the code IR.GUMS.REC.2015.281 dated 5th October, 2015. Required permissions were obtained from the Research Deputy of Guilan Medical Sciences University in Iran and then were provided to respective authorities to acquire permission for conducting the research.

Volunteer elderly women were invited to take part in the research after the research objective, the reason for recording the interviews, confidentiality of their data, deletion of their data after extraction of results, their voluntary participation in the research, the possibility to opt out of the research, and possibility of having access to research results were explained to them and their informed consent was obtained. Written informed consent was obtained from those who agreed to voluntarily participate in the study.

Results

Categories and the Main Theme

The obtained themes and subthemes are: the main theme of **improved physical health** including the subthemes: reduced consumption of painkillers, improved balance, pleasant breathing, easy menopause; the main theme of **moving toward ability** including the subthemes: increased independence, role fulfillment, application of efficient strategies, will to health; the main theme of **Psychological and social relief** including the subthemes: sense of liveliness, reduced stress, peaceful sleep and re-emergence in society. **“Improved sense of competency”** was identified as the theme shared between categories encompassing all participants’ experiences (See table 1 for results obtained from data analysis).

Table1. Overview of the Themes, Subthemes and codes Constructed Based on Elderly women’s experience of the role of in health

Main themes	Subthemes
Improved physical health	Reduced consumption of painkillers
	improved balance
	pleasant breathing
	easy menopause

moving toward ability	increased independence	Competence development
	role fulfillment	
	application of efficient strategies	
will to health		
Psychological and social relief	sense of liveliness	
	reduced stress	
	peaceful sleep	
	re-emergence in society	

Improved physical health

The elderly women participating in the present research regarded their improved physical health as the effect of hydrotherapy. Reduced bodily pains, and as a result of reducing consumption of painkillers, improved sense of balance, ease of effective breathing, and fewer menopause side effects, such as boredom and flushing, were among these positive experiences.

Reduced consumption of painkillers

Some participants reported a decrease in their consumption of painkillers as a result of hydrotherapy. "I was annoyed by my backache for a while forcing me to relax more at home. But since I have stepped in the water, I feel much better. I mean I am not taking half of my painkillers," stated one of the participants in this regard. Another participant stated: "I started taking painkillers when I turned 50 as I always had some pain. So, I had to take several painkillers each day. But now, I take only half of them," stated one of the participants.

Improved balance

Improved balance was another effect experienced by elderly women participating in hydrotherapy. They stated that they were experiencing an improved balance because of participating in hydrotherapy. "I had not been able to maintain my balance for some time, and I constantly felt as if I were going to fall down. However, it's been sometime I can go out by myself and my balance has improved," mentioned one of the participants. "I have a better sense of balance since I have been coming to this pool. I used to lose balance as soon as I started moving or walking," added another participant in this regard.

Pleasant breathing

The majority of elderly women experience difficulty in breathing in various conditions. They reported having various difficulties in breathing and not being able to breathe with ease and without any problems. They improved breathing conditions through gaining the ability to

breathe with ease and pleasure. “I used to breathe with great difficulty. That is, I felt like suffocating when breathing. I used several types of sprays. I had not been smoking for several years, but it got worse and worse. But coming to this place (referring to the pool) helped me get better. They told us how to breathe when walking, and it was very good,” mentioned one of the participants in this regard. Another participant stated, “I used to breathe with great difficulty when walking or even sleeping which deprived me of having any good sleep. None of the various medications I used to take seemed to be effective. Since the time I have been coming here (indicating hydrotherapy), I am feeling some improvement in my breathing and I sleep better at nights.”

Easy menopause

Most elderly women develop various symptoms, such as flushing and mood swings, upon entering menopause. Even though some pass through this stage without serious complications, some others face various problems. Some participants of the present study reported some of their problems caused by menopause were alleviated by hydrotherapy. “Some time before my menopause, I didn’t feel well. I had irregular bleedings, sometimes little blood, and sometimes much blood, which made me sluggish. It started little by little as my period stopped completely. I was bored and irritable. I was flushed. Till the day my doctor suggested me to go to the pool. It was quite effective when I came here. I don’t claim I am completely recovered, but my symptoms have declined a lot,” stated one of the participants. “Some annoying symptoms started right after reaching menopause. I used to flush all the time. I was not in the mood to communicate with others. I was quite irritable. I came to the pool as recommended by some of friends telling me about hydrotherapy effects. I feel like my previous symptoms are reduced and I’m feeling great now,” mentioned one of the participants.

Moving toward ability

The elderly women participating in the research regarded hydrotherapy as a contributed move toward ability. They pointed out their increased independence, their increased ability for fulfilling their roles as a spouse or a mother, their ability to apply effective strategies and their will to maintain and enhance their health as the result of their participation in hydrotherapy sessions.

Increased independence

Another important issue mentioned by the elderly women participating in the present study was a decreased sense of independence as well as the need for others’ assistance with the majority of personal affairs. Their experience indicated a decrease in their sense of dependence and moving toward independence through hydrotherapy. “One needs some assistance from others for their affairs as one gets older. There is no other way. But when you constantly stay at home and have no activity, then your arms and feet will stiffen. And you get completely dependent. I advise all not to forget physical exercises in the water. It helps much with one’s empowerment. I do most of my affairs all by myself,” stated one of the participants. “I used to be quite independent and managed to do all my affairs by myself. However, I started feeling more dependent as I started growing older which was increasing day by day. Hydrotherapy was a good experience. I don’t claim to be completely independent, but things are looking up now,” mentioned one of the participants in this regard.

Role fulfillment

The elderly female participants exhibited an inability to perform their roles as their aging had started enervating them physically. Such an inability to perform one's role as a spouse and mother was coupled with mental and psychological side-effects as well as a growing sense of inability. "Some diseases and old age had joined hands to prevent me from being a good wife to my husband, and a good mother to my children. That is, I did not feel like doing anything at home, and thus I mostly relaxed. Since I have started coming here, my life has gone through a major change and I feel like I can carry out the majority of my duties as a woman and a mother, and I am glad for that," stated one of the participants. Another participant stated: "One feels empty as she cannot perform her role at home for her husband and kids. I felt it too as I had great difficulty doing my own affairs and my ability in performing my duties as a mother and spouse had decreased significantly. But now, I have turned into an active woman doing all household affairs actively and by myself."

Application of efficient strategies

Some participants also reported an inability to employ effective strategies in various conditions of life to overcome different problems. They felt like they were making improper decisions in day-to-day problems in their lives. Participants mentioned that hydrotherapy had helped them employ effective strategies in various conditions. "In recent years, I seemed to have lost my thinking ability when faced with daily problems and issues. I seemed to have been robbed of my thinking power and thus I had to rely on others for solving my problems. However, I feel more relaxed by coming here, and I seem to have regained my thinking power," mentioned one of the participants. "I think that coming here (referring to the pool) has increased my thinking powers which I think is due to greater relief. Because I had turned into a person who did not know what to do when something happened, and I then needed someone to tell me what to do. I feel I have made a good progress. It seems like my mind has opened up and I can make decisions for my problems to a large extent," stated another participant.

Will to health

Aging was accompanied by some level of exhaustion for most participants, which they indicated led to a decreased tendency in them for their health checkups. Some participants reported improvements in their mood, and thus in their tendency for health checkups. "Various problems have started occurring to me on a daily basis since I have started aging. As soon as one problem is treated, another one emerges. I used to have regular check-ups and follow up for treatment as soon as problems occurred. But that exhausted me. However, hydrotherapy helped me return to the previous state, and I now invest all my effort in maintaining my health," stated one of the participants. "Water is quite refreshing. I think when one comes here (referring to the pool) one feels so young and the need to take care of one's own health. When I talk with my friends, they say the same thing. That is, coming here has created such a feeling in me that I need to always take good care of it," stated one of the participants in this regard.

Psychological and social relief

A sense of mental and psychological relief, a greater sense of presence in society accompanied with peace of mind was among other experiences shared by the participants. The participating elderly women talked about a sense of liveliness and happiness for taking part in hydrotherapy sessions. They experienced decreased levels of stress and anxiety as a result of

using the pools. As a result, they reported experiencing relaxed and peaceful sleep at night. Such a sense of relief highlighted their presence in the society and among their circle of friends in lively relationships.

Sense of liveliness

Participants reported gaining back their liveliness through participation in hydrotherapy. “We never get old (she laughs). But this water has a really good effect. I also go to the sea. It makes me so lively. It makes me feel so young,” stated one of the participants. “Water is enlivening. Whenever one steps into the pool, one’s power seems to double up and problems seem to fade away. One feels full of energy and life. I am happy for how I feel,” stated one of the participants in this regard.

Reduced stress

A limited ability to employ appropriate solutions for fighting off various forms of stress was another experience the participants usually went through. One of the significant results indicated an improved ability to employ effective solutions when the individual is faced with stress as a positive result of hydrotherapy. “A series of problems had troubled me greatly. I used to be worried and anxious. I took medicine, sometimes went to the gym. I went out with my friends time after time. However, the effect of pool exceeds that of all I did before. As I also swim, I’ve got a pleasing sense of relief; that is, it decreases my sorrows and worries,” mentioned one of the participants. “Life is full of stress. But when one starts aging, the stress seems to increase tenfold to an extent one cannot fight them anymore. For a while, my whole life used to get disrupted by each annoyance I faced which ruined all my plans. However, coming here (pool), I feel less worried and less stressed. The tranquility I feel is quite valuable to me,” added another participant in this regard.

Peaceful sleep

Disruption of the normal pattern of sleep as well as disjointed and decreased sleep durations are experienced by the majority of participants. Disrupted night sleep pattern also was reported to impact participants’ daily performance. Even though the majority of the elderly participants took hypnotics to resolve their sleeping problem, the problem seemed to persist in the majority of individuals making them look for other solutions. “I am just flustered by my troubled and disjointed sleep. I used to be fatigued throughout the day as I had no peaceful sleep the night before. I used to try to tire myself during the day. I also used to drink a glass of warm milk; but all in vain. Since I stepped into the pool as per my doctor’s and friends’ advice, most of the nights I am having a good sleep. I have also cut down on the sleep pills I used to take,” mentioned one of the participants in this regard. Another participant stated: “since my husband’s passing, I have always been worried and lonely. I don’t remember sleeping for more than 3 or 4 hours at night till last year. And such sleep they were! I used to wake up with a bad dream. The drugs had also no effect. It is now 1.5 years that I am coming to the pool. And I always come here in the afternoons. Because I think I would have a better night-sleep those days I come to the pool.”

Re-emergence in society

Having been active in the society for years, the elderly feel a sense of separation from society as they start growing old and retire which was revealed in the elderly participating in

the present study. Entering this stage, some felt unable to be present in the community which had led to their distancing themselves from other groups. Upon taking hydrotherapy, some participants experienced a return to the society as a positive effect of this type of therapy. "I was happy in the first days of retirement for the little sense of relief I had. This feeling, however, did not last very long, so I withdrew from all groups. I was not in the mood for such gatherings. I was not in the mood for travelling with friends. I was feeling too old for me and felt like I had to stay home. I thank God for returning to the group of friends. I take trips again. I take part in religious rituals. I sometimes swing by my previous workplace, and I owe all these to the salubrious and enlivening effects of hydrotherapy," mentioned one of the participants. "In my opinion, not everybody does feel good about being retired, and they feel kind of disabled when they get retired. I can claim everybody has felt this. It has also occurred to me. Thirty years of working, and then suddenly you are jobless. It has impacted my relationship with my friends, even my going-outs. My doctor advised me to come to the pool for the pain I had in my leg. This not only healed the pain I had in my leg, but also made me resume my relationship with my friends. I go to the ceremonies I get invited. That is, I am again a sociable person" added another participant in this regard.

Discussion

Based on the research question "What is elderly women's experience of the role of hydrotherapy in their health?", the obtained results indicate elderly women's positive experience of the effects of hydrotherapy. They described an improved sense of physical health, moving toward ability, and psychological and social relief which seemed to allow for an increased sense of competency.

Sense of improved physical health

The elderly women participating in the present research reported about decreased physical pains and as a result reduced consumption of painkillers, improved standing balance, ease of breathing, and reduced levels of menopause side-effects as a result of their participation in hydrotherapy sessions.

As individuals become older, they witness changes in different aspects of their body which can include physical weakness, pain in the joints, musculoskeletal lesions, imbalance while walking, Osteoporosis, loss of bone tissue, overconsumption of drugs (Kun, 2001; Rao, 2000). Decreased physiological functionality depends on the physical changes individuals experience as well as their personal experience in their response to these changes (Lena, Ashok, Padma, Kamath, & Kamath, 2009). The current results confirmed the necessity of a close attention to elderlies' quality of life (Mehrotra & Batish, 2009) and interventions for ensuring the health of this vulnerable group of society as well as policies targeted at fulfilling their needs (Lena et al., 2009). Life style modification and paying closer attention to the quality of life can, to a great extent, result in improved performance and independence in elders and help them better control the various complications of old age and its treatment (Van Malderen, Mets, & Gorus, 2012). Participants talked about a decrease in their pains because of participating in hydrotherapy sessions. Even though Martin and Noertkoko's (2004) findings on mere participation in hydrotherapy sessions did not show any considerable decrease in backache and muscular pains of patients suffering from Ankylosing spondylitis (Martin & Noertkoko, 2004), the results obtained from our study and many other researches indicate the potential for positive effects of hydrotherapy on these areas (Juarb, Turok, & Perez-Stable, 2002; Castel, 2012; March & Stenmark, 2001). In the study conducted by Juarb et al., the health of the women

aging between 40 and 79 had improved due to participation in hydrotherapy sessions (Juarb et al., 2002).

Improved walking and standing balance was another experience of elderly women participating in the present study. In fact, the hydrotherapy offers more effects to exit the imbalance status. According to the results obtained by various studies, hydrotherapy is identified as an optimal approach to improving cardiovascular readiness, decreasing metabolic disorders, improving muscular strength, and improving lung capacity performance as well as increasing the sense of balance (Alikhajeh et al., 2012; Devereux, Robertson, & Briffa, 2005; Resende et al., 2008). Also, the results obtained by Alikhajeh et al. (2012), indicate the considerably positive effect of hydrotherapy on the sense of balance in elderly men (Alikhajeh et al., 2012).

Ease of breath was another effect mentioned by the participants. The results of the study conducted by Wilder et al. (2004), also indicated an improved access to oxygen during swimming (Wilder, Brennan, & Cole, 2004). Shead and van Aswegen's study on "determining the role of hydrotherapy in managing chronic obstructive pulmonary disease COPD" concluded that considerable pulmonary performance improvement can be achieved through 120-minute or 6-day-in-a-week swimming programs (Shed & van Aswegen, 2012). Darby and Yaekle (2000), in their study on the effect of hydrotherapy on improved cardiovascular performance, stated that heartbeat reduced for 7 to 13 beats while exercising in water (Darby & Yaekle, 2000). The results obtained by Cox et al. (2006), indicate improved blood pressure in elderly women of 50 to 70 as a result of exercising in water.

The elderly women participating in the present research who were at the menopause age reported a decrease in menopause symptoms, such as mood change and flushing, as a result of their participation in hydrotherapy sessions. In this regard, it offers a possibility for experiencing an easy menopause along with a sense of relief and pleasure of old age, presenting a positive and active image of old age (Cooke et al., 2007)

Moving toward ability

Participants of the present study counted their increased independence in their daily affairs and life, their empowerment for fulfilling their roles, ability to apply effective strategies, and exerting their will toward health as their positive experience through participating in hydrotherapy programs. Self-care ability declines with old age, and the results obtained by various studies indicate that 58% of elderly individuals who are over 65 need some assistance with their daily routines (Fassino et al., 2002) and those who require such assistance experience a lower life quality (Hellström, Persson, & Hallberg, 2004). Self-care empowerment, which co-occurs with increased independence and getting empowered for fulfilling one's role, were highlighted by elderly women as per their experience.

Self-care is a central concept in health care and may be considered as a means to maintain, restore, and improve one's health and well-being (Soderhamn, 2013) and can enhance life quality (Morovatisharifabad & Roohanitonakaboni, 2009). Malekzadeh et al. (2014), also reported improved quality of activities of daily living through Hydrotherapy. Similarly, in a study conducted by Juarb et al. (2002), women between 40 and 79 years old stressed the effect of hydrotherapy on maintaining and enhancing their role as a mother or a wife (Juarb et al., 2002).

The results obtained by Hamidzadeh, Ahmadi, Aslani, and Eatemadifar (2009), on "determining the effect of team work on elderly's life quality" indicated the positive role of regular aerobic exercising in individual's empowerment in their daily routines without any dependence on others as well as their improved quality of life (Hamidzadeh et al., 2009). Similar results have also been reported by other studies. Improved physical performance and

empowerment for fulfilling one's daily roles was reported by Shead and van Aswegen's study on patients participating in hydrotherapy sessions (Shead & van Aswegen, 2012). The results obtained by Eversden et al. (2007), showed decreased pain, and as a result increased independence and improved performance in patients suffering from Rheumatoid Arthritis, which was considerably higher in patients taking hydrotherapy sessions (Eversden et al., 2007). In contrast to the control group, Foley et al. (2003) showed a considerable increase in the Osteoarthritis patients' ability and physical power acquired through hydrotherapy sessions for performing their daily routines.

The elderly women participating in the present study highlighted the creation of motivation and a will to health as well as an ability to employ effective strategies that brought about a sense of satisfaction with life as the result of their participation in hydrotherapy sessions. Elderly women noted that participation in hydrotherapy sessions leads the elderly individuals toward a will to health (Cooke, Greer, Murray, McGeown, McVicker, & Ruddy, 2007). Such a motivation can also be expressed with an improved sense of independence and as a result a sense of empowered self-care and self-sufficiency. In this regard, Bandura defines self-sufficiency as an individual's judgment over his or her own abilities for performing a certain activity. He also believes that self-sufficiency is an important predicting factor in individual's intention for hygienic behaviors that are one of the most important determiners of health, as a reflection of other various factors (Azadbakht, Taheri, Tanjani, Garmaroudi, Sahaf, & Shojaeejadeh, 2015). In this study, participants mentioned abilities improvement for performing and self-sufficiency as a result of their participation in hydrotherapy sessions.

Psychological and Social Relief

Psychological and Social Relief was another main theme extracted from participating elderly women's experience. This main theme includes the sub-themes: sense of liveliness, reduced stress, peaceful sleep and re-emergence in society. Stress, which is one of the common diseases of the modern age and a predictor of many other physical and psychological diseases, is one of the psychological problems threatening elderlies' health (Harsini, 2007).

Elderly individuals are faced with various stresses such as changes in family structure, changes in physical and physiological dimension, retirement, friends' death, and reduced social activity (Kushan & Vaghei, 2012). Various studies indicate the alleviating effect of hydrotherapy on stress as well as its positive effect on psychological relief along with individual's willingness for resuming their relationship with their friends, wider inter-personal activities, broadening their social network, and establishing new friendships.

Participants highlighted peaceful sleeps as a result of hydrotherapy sessions. The results obtained by Cooke et al. (2007), also indicate improved quality of sleep, decreased stress and anxiety, as well as enhanced levels of general health in elderly women as a result of participating in hydrotherapy sessions.

Various studies indicate improved life quality in physical and psychological aspects as well as a sense of relief in elderly individuals (Cooke et al., 2007; Ghafari et al., 2008; Kargarfard, Fayyazibordbar, & Alaei, 2012) and decreased depression (Cooke et al., 2007; Kargarfard et al., 2012) through participating in hydrotherapy sessions. In the study conducted by Shead & van Aswegen (2012), elderly women's happiness was also found by Salesi and Jokar (2011) to be correlated with participation in physical exercise programs.

The elderly participants of the present research also counted their participation in hydrotherapy sessions that co-occurred with a sense of liveliness and reduced stress, as a factor enhancing their relationship with their friends and re-emergence in society.

The present study identified the "improved sense of competency" as the theme shared between categories that embracing all participants' experiences such as physical health,

moving toward ability, and psychological and social relief. In fact, the elderly individuals participating in hydrotherapy sessions had achieved improved ability as well as physical, mental and social health through this “improved sense of competency.” Participation in hydrotherapy sessions improves their general quality of life as well as their breathing (Cooke et al., 2007; Kargarfard et al., 2012). Also, the study conducted by Zeleznik (2007) showed that individuals had achieved a greater level of self-esteem through being healthy and able (Zeleznik, 2007). Kargarfard et al.’s (2012) study also indicated a significant increase in all variables of life quality after 8 weeks of exercise in water (Kargarfard et al., 2012). Juarb et al. (2002) also identified physical competency as a well-known effect of hydrotherapy (Juarb et al., 2002).

The results obtained by the present study indicate elderly women’s positive experience of hydrotherapy with a sense of improved physical health, moving toward ability and psychological relief which indicate an improved sense of competence development. Elderly women’s experience confirmed the benefit of advising them to participate in hydrotherapy sessions in an orderly method as well as government’s cooperation with regard to creating proper conditions for improving the health and life quality of this valuable group of society. Further studies are recommended for a better understanding of elderly women in other various cultures.

Also, since this study was conducted in Iran, conducting further studies in different cultures is suggested in order to substantiate and follow up the present study’s findings, as well as to improve our knowledge regarding elderly women’s experience of the role of hydrotherapy in health.

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