Developing an Exercise Routine among People with Serious Mental Illness in the Clubhouse Structured Exercise Program

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Abstract

Using a psychosocial rehabilitation approach, the clubhouse model provides community-based services to address the multiple health and mental health needs of adults with Serious Mental Illness (SMI). Research resulting from two clubhouse programs demonstrated the effectiveness of a Clubhouse Structured Exercise (CSE) program on client outcomes. The main purpose of this study was to examine changes in Health-related Quality of Life (HRQOL) and selected health-related psychosocial factors (i.e. health motivation; health self-efficacy and self-esteem), which are associated with the level of physical activity in the CSE program. Second, this study explored the process of developing an exercise routine among people with SMI participating in the CSE, who are diagnosed with SMI. Twenty-five participants were selected from two leading clubhouses, which have developed strong CSE Programs. A mixed method was used to find changes of health-related outcomes through pre- and post-testing, as well as to gather qualitative information. The results of this study provided evidence of improvement in the perceived quality of life (physical health) and some health-related psychosocial factors. The findings from the qualitative interviews show the motivational and behavioral process of changing health behavior through the CSE Program.

Keywords: Clubhouse, health promotion, exercise, psychiatric rehabilitation, wellness

Introduction

Increased physical health problems for people with Serious Mental Illness (SMI) are well documented and pose tremendous health and lifestyle concerns, therefore promoting healthy living is pivotal for lives of people with SMI (Pearsall, Hughes, Geddes, & Pelosi, 2014). Many research studies indicated that people with SMI have shorter lifespan and greater co-morbid physical health problems than the general population in the United States (Aschbrenner, Mueser, Bartels, & Pratt, 2013; Casagrande et al., 2010; Lawrence, Kisely, & Pais, 2010). The life expectancy gap between people with SMI and the general US population is 25-30 years (Colton & Manderscheild, 2006; Hert et al., 2011). de Wit et al. (2010) stated that unhealthy inactive lifestyles are common for people with SMI and their low physical activity rates are a possible contributor to premature death and health complications from obesity. Therefore, there is a lot of focus on addressing physical health problems and physical activity interventions by mental health services (Tosh, Clifton, Mala, & Bachner, 2010).

The widely used theoretical models such as the Health Belief Model, Protection Motivation Theory, Theory of Planned Behavior, and Social-Ecological Model of Health have attempted to explain the process of how people choose healthy life styles and take action of health behavior including physical activity through getting motivation and changing their beliefs (Rimer & Glanz, 2005; Xu, 2009). As such, developing regular physical activity is associated with health-related psychosocial factors such as health self-efficacy, health motivation and self-

esteem; increasing health-related psychosocial factors can be a pivotal goal of a physical activity intervention (Gallagher, Jakicic, Napolitano, & Marcus, 2006; Jayanti & Burns, 1998; Xu, 2009). Many researchers have indicated that participation in physical activity is strongly related to an individual's self-esteem and stimulates motivation for change in his/her behaviors (Marmot, 2003; Tremblay, Inman, & Willms, 2000). The Health Action Process Approach, developed by Schwarzer, also emphasizes that health motivation (self-determination of one's own health), and health self-efficacy (an individual's ability to practice health behaviors) are pivotal predictors that help people with chronic disabilities engage in health promoting behaviors (Chiu, Lynch, Chan, & Berven, 2011; Paxton, Motl, Aylward, & Nigg, 2010). Overall, in order to increase and maintain physical activity, an individual needs enough perception, awareness, motivation and belief about his/her ability to control his/her health (Buhagiar, Parsonage, & Osborn, 2011; Rimer & Glanz, 2005). It is also important to pay attention to Health-Related Quality of Life (HRQOL), which indicates an individual's overall perception of physical and mental well-being, because physical activity also offers a means to increase HRQOL (Anokye, Trueman, Green, Pavey, & Taylor, 2012).

A prior study found that people with SMI tend to be physically inactive and have difficulties maintaining health-oriented behavior (Shor & Shalev, 2013). Research has also found that people with SMI are more likely to develop physical diseases such as cardiovascular diseases, type II diabetes, and obesity-related diseases because of their physical inactivity (Nyboe & Lund, 2013; Scott & Happell, 2011). There is growing evidence that physical activity and exercise are vital to modify unhealthy behaviors among people with SMI (van Berkel et al., 2013). Paxton et al. (2010) also asserted that physical activity is associated with better mental health, physical functioning, and HRQOL. Consequently, physical activity can supplement medical treatment, improve HRQOL, and reduce symptoms of depression and anxiety among people with SMI (Oeland, Laessoe, Olesen, & Munk-Jorgensen, 2010; Perraton, Kumar, & Machotka, 2010; Shor & Shalev, 2013). Therefore, exposing people with SMI to physical activities and developing an exercise routine could be critical to improve their HRQOL and their psychological functions. Research studies emphasized that structured physical activity programs need to be integrated into mental health service programs (Richardson et al., 2005; Ussher, Stanbury, Cheeseman, & Faulkner, 2007).

The clubhouse model, which is a world-wide psychosocial rehabilitation program for people with SMI, has focused on the promotion of healthy lifestyles (both mentally and physically) through its physical activity program called Clubhouse Structured Exercise program (CSE). Since Fountain House, the first clubhouse, was established in 1948, people with mental illness (called "members" in the clubhouse model) have been provided with social support and supportive relationships for their rehabilitation (Raeburn, Halcomb, Walter, & Cleary, 2013). Over 350 worldwide clubhouses accredited by Clubhouse International provide their members support to live independently in the community using clubhouse resources (Jackson, 2001). Through the clubhouse model, social networks and supportive relationships are developed and maintained , which in turn have a significant impact on the HRQOL and health related-psychosocial factors of clubhouse members (Biegel, Pernice-Duca, Chang, & D'Angelo, 2013; McKay & Pelletier, 2007). In order to initiate a modified wellness promotion program for the clubhouse model and include the theme of wellness into the clubhouse standards, there have

been ongoing debates to establish best practices for promoting healthy lifestyles for clubhouse members (Osterman, 2013).

Given the evidence suggesting the positive impact of physical activity for people with SMI, it is important to determine the effectiveness of CSE programs on HRQOL and selected health-related psychosocial factors among clubhouse members. By reviewing existing behavioral theories including self-determination and health belief model, and exploring a phenomenon in the clubhouse model, this research can find pathways of developing an exercise routine and roles of clubhouse distinctive cultures such as self-determination, peer support, and so on in the pathways. Understanding effective ways to support clubhouse members to develop exercise routines during the period of participation in the CSE program will benefit developing clubhouses and other mental health service providers to better offer effective physical activity interventions to people with SMI. However, no studies have been conducted to explore the link between participation in a CSE program on these factors and explain how clubhouse members develop an exercise routine. Therefore, the current research will focus on the impact of the CSE Program on health-related psychosocial factors, and investigate how clubhouse members integrate physical activities into their daily lives.

Research Questions

The primary aim of this study is to explore whether participating in the CSE program affects a clubhouse member's HRQOL and health-related psychosocial factors, which are associated with health behavior changes. The following research questions were developed to understand the influence of the CSE Program on HRQOL and health-related psychosocial factors: (1) Does participation in the CSE Program have positive effects on perceived physical and mental health of the participants? (2) Is participation in the CSE Program associated with increases in health-related psychosocial factors (i.e. health self-efficacy, health motivation, and self-esteem)?

The secondary aim is to illustrate the motivational and behavioral processes of exercise routine adoption and maintenance of physical activity based on the clubhouse support system. This researcher referred to existing behavioral health promotion models to design the program logic model of the CSE Program. Open-ended interviews were used to explore the following research question: how do members experience the motivational and behavioral process of adopting and maintaining an exercise routine during participation in the CSE?

Methods

Research Design

A mixed method was employed to examine changes in selected client outcomes as well as qualitative information about the motivational and behavioral process of changing health behavior through the CSE Program. A concurrent transformative strategy was applied to this study in that the quantitative method and qualitative method were concurrently implemented and both research questions were created based on widely used health-related theories and models (Creswell, 2008).

Sample

A purposive sampling approach was used to access individuals with SMI who participate in the CSE program through the clubhouse model. Two major clubhouses, Independence Center in St. Louis, MO and Genesis Club in Worcester, MA, were selected because of their status as clubhouse international training centers and they have both run a well developed CSE program for over 5 years. Therefore, clubhouse members who met the following criteria were recruited: 1) Over the age of 18. 2) Diagnosed with severe mental illness based on the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-V). 3) Medical permission from a primary care physician for exercise. 4) Ability to attend at least two group exercise programs per week. As a result, 12 members at the Independence Center and 13 members at the Genesis Club volunteered to participate in the research study. Out of 25 participants, 17 of them had no prior experience of regular exercise, and 22 of the participants answered that they had not exercised regularly before they joined the CSE program. The requirement of attending the CSE program was at least two times per week for four months.

Interventions

The Genesis Club exercise program was held in the YMCA in the community. Genesis Club provided the selected members with transportation, a subsidized fee, outreach activities, and coaching exercises at a local gym. Alternatively, the exercise program at the Independence Center was held in a gym there. Independence Center has two expert wellness coaches to provide its own exercise program for members at the wellness center. During the 16 weeks of the study period, all participants were encouraged to exercise at least two days per week. Each physical exercise session was composed of 30 minutes of aerobics and flexibility exercises as well as 30 minutes of weight loss and strength training.

Measures

This researcher designed a paper-based, self-administered survey to collect quantitative data regarding HRQOL and psychosocial factors of the participants of the CSE Program.

Health motivation in physical activity scale. Health motivation in physical activities is a predictive tool for level of physical activity. Therefore, the health motivation in physical activity scale was included in the survey to assess the changes in the participants' motivation to perform physical activity after participation in the CSE Program. This scale consists of four subscales: Health Motivational Tendency (8 items), Health Intention (7 items), Action Initiation Motivation (7 items), and Persistence Motivation (8 items) (Xu, 2009). Each item has a 5-point Likert scale ranging from -2 "extremely not like me", to 2"extremely like me".

Health self-efficacy in exercise scale. The health self-efficacy in exercise, which was developed by Becker, Stuifbergen, Oh, and Hall (1993) for measuring one's own belief about health ability in exercise, was included in the survey. The scale is comprised of seven items measured on a 5- point scale ranging from 0, meaning not at all, to 4, meaning completely. A higher score indicates a higher degree of belief about ability in exercise (Xu, 2009).

Rosenberg Self-esteem scale. The Rosenberg self-esteem scale was used to evaluate the self-esteem of the participants. A 10-item scale measures global self-worth with a 4-point Likert scale format ranging from strongly agree to strongly disagree (Rosenberg, 1965).

HRQOL measure (SF-12) scale. For the first quantitative research question, the health survey short form (SF-12) was used to evaluate perceived mental and physical health, SF-12 has 12 items and is composed of two parts: The Mental Component Summary (MCS) for perceived mental health and Physical Component Summary (PCS) for perceived physical health. Both components were computer scored.

In order to find an internal consistency reliability of each group of items other than the SF-12 scales, Cronbach's coefficient alphas were measured by using the SPSS program (Table 1).

Table 1

Table 1 Internal Consistency Reliability

Scale	Reliability	
	Pre-test	Post-test
Health Motivational Tendency	.746*	.895*
Health Intention	.774*	.505
Health Initiation Motivation	.805*	.807*
Persistence Motivation	.844*	.924*
Health Self-Efficacy in Exercise	.733*	.627
Self-Esteem	.884*	.808*

Note. $\alpha \geq 0.70$ is reliable.

Most groups show substantial reliabilities ($\alpha \geq 0.70$), but health intention in post-test and health self-efficacy have weak reliabilities. There was sufficient evidence that SF-12, which is a briefer version of SF-36, is a reliable and valid tool for evaluating perceived mental health and physical health in people with SMI. The test-retest reliability for SF-12 among people with SMI was tested by intraclass correlation coefficients (ICCs) and shows substantial reliabilities for both the MCS (ICC= 0.37) and the PCS (ICC=0.80) (Salyers et al., 2013).

Data Collection

Predictive measurements for health-related psychosocial factors and HRQOL were used and analyzed with a paired sample t-test. The survey was conducted for the pre-test at the Genesis Club and the Independence Center in January 2013. Post-tests took place in both clubhouses in May 2014. The survey was administered by this researcher, who is a PhD Candidate at Simmons College, and informed consents were collected. The quantitative surveys were composed of ten scales that are associated with psychosocial factors. Due to the small sample size of this study, this researcher chose to combine the samples of the two clubhouses, rather than comparing the samples of the Independence Center and Genesis Club.

Qualitative interviews were held with four members and one staff member of the Genesis Club from March 2014 to April 2014, during the CSE Program. All interviews were face-to-face and tape recorded. The study was designed to include live experiences of participants to develop a unique model of the CSE Program.

Analysis

Quantitative data were scored and coded into an SPSS version 13. Descriptive analysis was performed to explore the sociodemographic data of participants such as their gender, age, years of attending clubhouses, whether they exercise on a regular basis, and employment. Participants' medical issues were also reported. Additionally, this researcher conducted a paired sample t-test to examine the effectiveness of the CSE Program on perceived physical and mental health, and health-related psychosocial changes.

For qualitative analyses, the interview transcribed by the researcher was coded into an NVivo qualitative data analysis program to identify all quotes having to do with new ideas and themes to develop a theoretical framework. Content analysis was conducted in four areas: Coding, memos, previous research, and theory. Through the line-by-line and open coding methods, 41 sets of coded data were elicited from the interviewees' responses and words. All these data sets and memos were also categorized into four phases. The themes that were found to be conceptually similar were categorized and visualized into a concept map and compared to the previous research and theories.

Quantitative Findings

Participant Characteristics

The mean age of study participants was 46.12 years (range 25 – 69, SD=11.73), (Table 2). Participants at Independence Center were younger than participants at Genesis Club (40.17 vs. 51.62 years). While there were differences in age, they were not significantly different. 60 percent of participants were female members and 40 percent of participants were male members. Racially, 19 out of 25 participants were white and6 were black. The average membership time at the clubhouses was 3.08 years (range 0-12 years).

Table 2

Sample Characteristics of participants in pre-test and post-test

Sociodemographics		**Total Sample (n=25)**			**IC (n=12)**			**GC (n=13)**		
		N	*M*	SD	N	*M*	SD	N	*M*	SD
Age		25	46.12	11.73	12	40.17	11.84	13	51.62	8.86
Gender	Male	10	1.60	.5	5	1.58	.51	5	1.62	.51
	Female	15			7			8		
Race	White	19			8			11		
	Black	6			4			2		
Years of attending clubhouse		25	3.08	2.64	12	2.67	2.19	13	3.46	3.04
0- 1 year		9			6			3		
2-5 years		13			5			8		
6-10 years		2			1			1		
Over 10 years		1			0			1		
Regularly exercise										
	Yes	23	1.08	.277	11	1.08	.29	12	1.08	.28
	No	2			1			1		
Employment										
	Yes	9	1.64	.49	3	1.75	.45	6	1.54	.52
	No	16			9			7		

Three participants at Independence Center and six participants at Genesis Club answered that they were working a part-time job while they were participating in the CSE Program. 92 percent of members have worked out on a regular basis since they joined the CSE Programs. According to the medical releases from primary care physicians, 10 Genesis Club participants and 9 Independence Center participants reported medical problems such as hypertension, asthma, diabetes, osteoporosis, seizures, BMI>30, etc.

Impact of Participation on Client Outcomes

Health motivation in physical activities. Average scores of participants' health intention indicated statistical significance. The mean score of persistence of physical activity was also improved and indicated statistical significance. Although the health motivation tendency score and action initiation motivation score did not show a large difference, the overall score of health motivation in physical activities in the post-test increased significantly (Table 3). This indicated that participants in the CSE Program increased their health motivation in physical activities.

Table 3

Pre- and post-test of Health Motivation and Health Self-efficacy

Health-related outcomes	Pre-Test $\bar{x}$ SD	Post-Test $\bar{x}$ SD	t
Health Motivation in Physical Activities			
Health Motivation Tendency	37.28 (5.44)	38.92 (5.65)	-1.41
Health Intention	25.88 (4.47)	27.24 (3.02)	-1.88*
Action Initiation Motivation	28.56 (5.96)	29.40 (4.97)	-.60
Persistence	30.24 (8.57)	33.48 (6.40)	-1.74*
Health Self-Efficacy Scale in Exercise	22.28 (4.83)	24.40 (3.81)	-2.67**
Self-Esteem	18.44 (6.25)	20.72 (6.64)	-2.48**

*Note. 1 tailed significance; df=24; *=p<.05, **=p<.01*

Health self-efficacy in exercise. For the participants of the CSE program, the mean score of the health self-efficacy scale in exercise showed statistically significant improvement from 22.28 to 24.40. In the research of Becker et al. (1993), the mean score of health self-efficacy in exercise for individuals with disability was 16.68, while general adults' mean score was 19.88. As a result, participants in the CSE Program showed high self-efficacy in exercise and their perceived self-efficacy increased after participating in the program.

Self-esteem. According to Sinclair et al. (2010), the average self-esteem score was 22.62 (SD= 5.8) among a sample of 503 adults. The average self-esteem score in the pre-test of this study was 18.44 (SD= 6.25) indicating lower self-esteem among people with SMI than the general population. However, the major improvement was found on the self-esteem scale (M=20.72, SD=6.64) in the post-test. There was a statistically significant effect on self-esteem. On average, participants who joined the CSE Program gained higher self-esteem after they completed four months of the exercise program at the Genesis Club or consistently used the gym at the Independence Center.

SF-12. The mean score of the SF-12 in physical health increased from 45.42 to 48.25 (Table 4). Scores greater than 50 represent above average health status (Ware, Keller, & Kosinski, 1998). Therefore participants' health status in this research indicated below average. On average, participants answered that their physical health significantly improved after four months of participation in the CSE Program. The result of mental health in the SF-12, however, does not show a significant difference between pre-test and post-test despite 0.43 improvements

of the mean score. These results provide statistical support that participation in the CSE Program is correlated with increased subjective aspects of physical health.

Table 4

Pre- and Post-test of Health Value, HLC, Self-Esteem and SF-12

HRQOL	**Pre-Test**		**Post-Test**		
	$\bar{x}$	SD	$\bar{x}$	SD	t
SF-12 (Physical)	45.42	(11.53)	48.25	(9.50)	-1.80*
SF-12 (Mental)	42.51	(10.98)	42.94	(11.50)	-.145

*Note. 1 tailed significance; df=24; *=p<.05, **=p<.01*

Qualitative Findings

Clubhouse Structured Exercise Model

The framework of the CSE explains the motivational and behavioral processes of developing a physical activity routine as the mission of the CSE Program. The live experiences of the 5 interviewees (members and the staff of the Genesis Club participating in the CSE program) were elicited by the unstructured and open-ended questions to delineate CSE model based on other significant health behavior theories. Through the descriptions provided by the interviewees, the framework of the CSE program explains the motivational and behavioral process of developing an exercise routine. There are four phases of developing and maintaining an exercise routine through the CSE program (see Figure1).

Figure 1

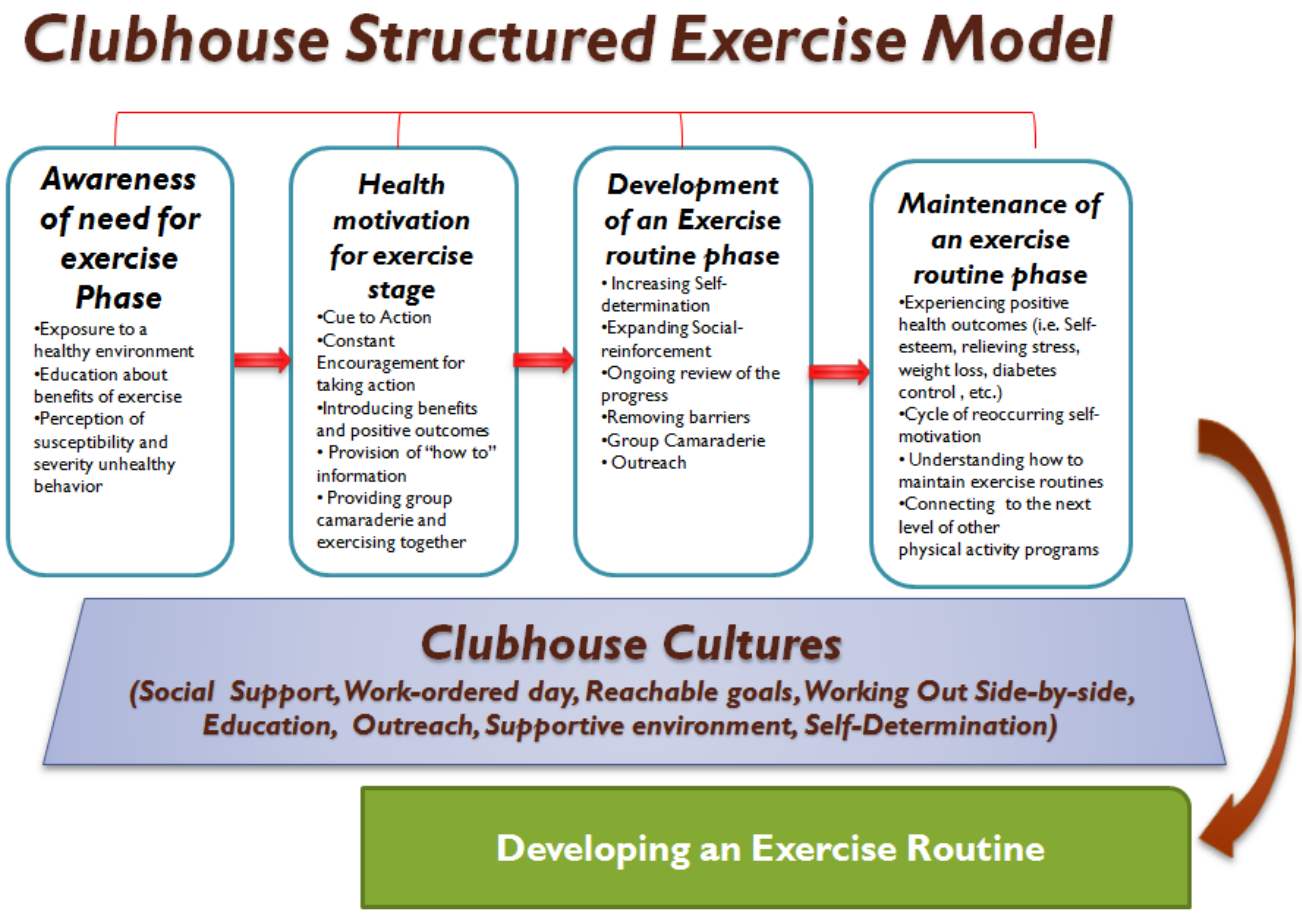

Figure 1. Model shows a path of changing health behavior, building an exercise routine, and maintaining exercise as an important part of the members' life. The map illustrates the flow through the process, focusing on clubhouse supports and the four phases in developing an exercise routine for a healthy lifestyle. Supports from the clubhouse model and the unique characteristics of the clubhouse philosophy are the keys to answering the research questions and understanding the process of developing an exercise routine for clubhouse members.

Clubhouse supports for the CSE Program

In the process of building an exercise routine for clubhouse members, elements of clubhouse philosophy such as group camaraderie, reachable goal plans, working out side-by-side, valuing each day, outreach, supportive environment, self-determination, and self-efficacy are the pivotal features of success.
Interviewee #1who is a staff member of Genesis Club supports this:

> Our exercise program is helping our members to get motivated to do workouts and keep it up in their lifetime. We support them,

> encourage them, and work out together side-by-side based on our clubhouse standards. A clubhouse educates members about importance of physical health as well as mental health, and gives them a chance to determine something to do for being healthy. The clubhouse exercise program is one of our successful programs.

The clubhouse encourages the exercise participants to overcome potential barriers based on the clubhouse philosophy. According to the interviewees, mental distress and anxiety are the main reasons for the CSE participants to drop out of the program. Thus, the clubhouse provides ongoing support for its exercise participants to relieve mental distress and anxious feelings throughout the whole process. Interviewee #2 stated, "I helped her and she helped me. We worked out together. We encouraged each other to go and we motivated each other." As designated by interviewee #2, social support is also generated naturally due to the clubhouse's supportive nature and through meaningful relationships. The clubhouse is a unique community in that members and staff members have an equal opportunity to provide social support to one another (Pelletier, Nguyen, Bradley, Johnsen, & McKay, 2005). Similarly, social support generated by the clubhouse culture plays an important role during the CSE program.

Four Phases of Change Health Behavior

Awareness of the need for Exercise phase. According to medical release from members' primary care physician, most of the exercisers had ongoing physical problems such as obesity, diabetes, high cholesterol, etc. Interviewee #1 stated, "The whole idea is to help members develop an accurate thought of their own risk from unhealthy behavior." The statement of interviewee #1 is congruent with the concept "perceived severity" of Health Belief Model (HBM), believing that the condition causes serious consequences (Henshaw & Freedman-Doan, 2009). In other words, a first step to changing health behavior is defining an individual's risk levels and heightening their susceptibility of unhealthy behaviors. The HBM emphasizes perception of susceptibility and severity because individuals do not tend to take preventive actions before they have enough perception of susceptibility, severity, benefits, and barriers (Haley, Drake, Bentall, & Lewis, 2003). In accordance with this theory, awareness of the need for a physical activity phase is a gateway for clubhouse members to move forward. In this stage, the clubhouse educates members about benefits of exercise and risk factors caused by unhealthy lifestyles through meetings or workshops.
Interviewee #3 stated:

> I was very limited to doing exercise before I joined the program. I am diabetic and I had feet problems. Everyone in the clubhouse told me that I need to do something to get better. I knew they were right, but I had nowhere to go and did not know what to do. I have no money and no transportation. I am afraid to exercise by myself. I changed my mind when I attended healthy lifestyle meeting. I made a decision to join the group exercise.

Health Motivation for physical activity phase. The main focus of this phase is health motivation because health motivation induces a "cue to action," utilizing health care and taking

preventive actions to disease (Haley et al., 2003). Once members become aware of the necessity to change their unhealthy behavior in the first phase, constant encouragement is provided to members to take action in the second phase. Interviewee #4 described how the clubhouse supported him to take action:

> Before I joined the exercise program, I hesitated to work out. My advisor and my friend at the club gave me information about the exercise program and asked me to join the group. I was told that exercise would increase self-confidence, relieve stress and control my diabetes. So, I chose to exercise with club members because they are familiar with my illness. The hard part of achieving my goal is that my motivation sometimes isn't there. Members and staff at the club encourage me to stay involved in the program. I am glad that staff members work out with me. It relieves my anxiety and stress. Without encouragement, I can't keep going.

The CSE Program attracts exercise participants by offering many benefits such as increasing self-esteem, relieving stress, losing weight, gaining physical ability, and socializing with others. Emphasizing these positive benefits and providing "how to" information inspires the clubhouse members to move on from only having motivation to taking action toward building an exercise routine. Participants also emphasized how important it is that clubhouse staff and members support each other while they work out in the community. The clubhouse program provides members with mutual help environment through peer support, group camaraderie, shared goals and working out side-by-side (Coniglio, Hancock, & Ellis, 2012). These characteristics help members reduce anxiety, stress, and other barriers to taking action for exercise.

Development of an exercise routine phase. In this phase, participants choose to develop a physical activity routine as well as maximum support from their clubhouse. Increasing self-determination and positive reinforcement were the keys for modification of health behavior. According to Deci and Ryan (2008), an individual who experiences self-determination can have a chance to maximize their autonomy, competence, and relatedness. The clubhouse model provides members assistance towards higher levels of self-determination (Raeburn, Schmied, Hungerford, & Cleary, 2014). Interviewee #5 stated:

> Work-out with a group made me more focused. It made me more determined to do something. Back then before I started training, I was not patient enough. But, now I am more likely to determine to do something that I want. When I work on something, I do not give up until I get it. I am determined to run and work out. I participated in local road races as a part of Team Genesis, which is a running team. I finished 5 k three times this year. At the gym, I practice again and again for that.

As presented, a synergy effect through combination of members' own determination and motivation from the CSE Program makes them concentrate on health behaviors. In this way, they

focused more on their health behavior change and developing an exercise routine was the individual's own decision.

Buhagiar et al. (2011) also stated that the awareness of an available reinforcer is important for health behavior change. In the clubhouse, a progress review meeting, outreach, buddy system, subsidized gym membership, and transportation service can be positive reinforcers for clubhouse members in the CSE program. The findings suggested that the clubhouse community is a strong network, which can encourage clubhouse members to develop exercise routines. Interviewee #1, a staff member, explained this part:

> It's all about being a coach and a kind of encouragement. I think most of it is a positive reinforcement and encouraging people to move a little bit more. I think it is more of being a cheerleader, and encouraging people and then, of course, if they don't show up, calling them, outreach is really important in this too. So, the whole idea is that we encourage people to stay with it and keep moving. My role is also helping them to prevent potential barriers and to reduce anxiety.

In summary, developing an exercise routine could be attained by allowing self-determination and expanding social-reinforcement at this phase.

Maintenance of an exercise routine phase. The maintenance phase represents the last phase of the CSE program. In this phase, participants of the exercise program can experience some of the positive health outcomes such as weight loss, diabetes control, blood pressure, or stamina. According to Harley et al. (2007), once individuals see benefit from physical activity, motivation reoccurs and execution follows as a cycle. In the CSE program, clubhouse members integrate their positive outcomes from physical activity into their lives, motivation is regenerated and they move onto the next level of physical activity. Clubhouse members in this phase also understand how to maintain their exercise routines and seek additional support. Interviewee #3 described:

> Since I joined the CSE program, I lost some weight and control my diabetes. I believe I gained self-confidence, too. Now, I know what the benefits of exercise are. So, I am thinking about having a gym membership and exercising with my wife. My advisor helped me to find one near my house.

This researcher also found that once members have a successful exercise experience, they also gain self-esteem, relieve stress, and avoid social isolation, which are the important psychosocial factors of physical activity for people with SMI (Richardson et al., 2005). Most interviewees stressed, however, that maintaining a physical activity routine is not easy. Interviewee #5 stated:

> It's very tough for anybody to get desire and energy to work out twice a week or three times a week, which is about what the clubhouse prefers, even though I successfully completed more than three periods of the

> clubhouse exercise program. I know Genesis Club has other physical activities like a pedometer program, a running team, and a noon walk. I will join the pedometer program. Now, exercise is a part of my life.

In the maintenance phase, one of the important roles for clubhouse staff and other colleagues is to link a member in this phase to resources outside or inside of the clubhouse. Sustained attention is also pivotal for an individual with SMI in the maintenance phase of an exercise routine.

Discussion

Among people with SMI, maintaining moderate to vigorous physical activity is very important in stabilizing their mental health because physical activity relieves mental distress (Carpiniello, Primavera, Pilu, Vaccargiu, & Pinna, 2013; Perales, Pozo-Cruz, & Pozo-Cruz, 2014). However, providing effective physical activity programs is the very challenging for mental health service providers including the clubhouse model. According to McKay and Pelletier (2007), 77% of the clubhouse directors, who participated in their research, reported involving various types of physical activity programs for promoting healthy lifestyle of their clubhouse members with SMI. In spite of a high rate of existing physical activity support in the clubhouse, there have been ongoing debates about what the roles of the clubhouse model are for the physical activity initiatives and a substantial need for more structured ways of assistance based on the clubhouse standards (Clubhouse International, 2013). Osterman (2013), program director of Genesis Club, stated in the 17th Clubhouse International Seminar that people with SMI need strong support for physical activity and clubhouses should actively promote healthy lifestyles for people with SMI in order to succeed in employment, education, and independent living. Therefore, providing physical activity interventions by mental health service programs will benefit people with SMI because increased physical activity is associated with health-related factors, self-esteem, and HRQOL among people with SMI.

This study proved the important role of the structured exercise program. The result of the study showed that participation in the CSE Program generated significant improvement in health-related psychosocial factors. First, participating in the CSE program increased health motivation in physical activities, which is a strong desire to exercise. Next, self-esteem, which is one of the important indicators of satisfaction with health, was also improved. Findings also suggested that physical activity was associated with increased HRQOL. . The improvement in health-related psychosocial factors supported that the CSE program can contribute to increased health-related psychosocial factors. The framework of the structured exercise model provides the motivational and behavioral processes of developing an exercise routine. Participants in the in-depth interviews reported significant lifestyle change and health outcomes. Most interviewees described how to develop an exercise routine and maintain it. The findings of this research emphasize the importance of developing an exercise routine for people with SMI, and the clubhouses' distinctive culture and strong clubhouse social network systems are the key to the process.

Strengths and Limitations

The strength of this study is the integration of both quantitative and qualitative findings of the impact of the CSE Programs on various psychosocial factors, which change health

behavior for people with SMI. This study reviewed the widely used health behavior theories and created a model of the CSE Program from empirical evidence of the participants' descriptions.

This study has some limitations. This study is limited by the small sample size and time constraints. Due to the small number of participants and short duration of participation in the CSE Program, it is difficult to show significant change in some results. In addition, this study did not include any control groups that did not have any intervention. The absence of a control group can restrict the quantitative findings of causal links between the condition (participation in the CSE Programs) and outcomes. Further research is needed to find causal links of the client outcomes and the CSE program.

Conclusion

In conclusion, the CSE Programs at Genesis Club and Independence Center help their members pay more attention to their physical health and change their health behavior. In spite of the methodological limitations, this study illustrates the positive impact of the CSE model in a variety of areas. The first contribution of this study is to gain a better understanding of the processes of the CSE Program, which help people with SMI in the community mental health setting build an exercise routine. Second, this study demonstrates improvement in participants' psychosocial factors that might be associated with changing their health behavior during the participation in the CSE Program. This proves that physical activity is strongly associated with HRQOL, health motivation, health self-efficacy and self-esteem. Once these psychosocial factors are improved, exercise routines are more likely to become a part of their lifetime and a virtuous circle.

Our findings can be applied to approximately 400 clubhouses all around the world to develop or evaluate their own exercise programs. Furthermore, findings can also be generalized beyond the clubhouse model to other mental health service programs. Qualitative findings from interviews provide information of what the benefits of an exercise program are and what makes people with SMI to develop an exercise routine. We believe that replicating the CSE program will help other mental health service programs develop a strong exercise program for people with SMI. Finally, these findings can inform policymakers and mental health professionals who provide wellness services and programs for people with SMI. Research suggests that mental health service providers should consider integrating a physical activity concept into their services, and policy makers should support this movement.

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