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Quality of life and levels of physical activity of residents living in therapeutic residential care facilities in Southern Brazil

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Abstract *Interest in the quality of life of people with mental disorders living in therapeutic residential care facilities is an important indicator for the evaluation of therapeutic interventions in the area of health. Physical activity can contribute to a good quality of life. This study evaluated the quality of life and levels of physical activity of people living in therapeutic residential care facilities in the metropolitan area of Porto Alegre. This case series study (n = 68) used SF-36, EuroQol and IPAQ and social-demographic questions. The SF-36 results showed that the domain of general health received the lowest scores (57.47 ± 14.27). The highest scores were in terms of social aspects (77.39 ± 20.21) and physical aspects (77.57 ± 39.71).When using EuroQol, at least one problem (mild or extreme) in at least one dimension was evident among 82% of the residents. The physical activity levels showed that most of the participants were insufficiently active (48.5%) and 14.7% were sedentary. The domains of pain and mobility suggested that the residents were not being encouraged enough to perform physical activities. Knowledge about the perceptions of those living in therapeutic residential care facilities is critical in order to establish effective public policies.*

Key words *Therapeutic residential care facilities, Exercise, Quality of life, Mental disorders, De-institutionalization*

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Introduction

Therapeutic residential care (TRC) is an alternative form of housing within the community. It is aimed at people with mental disorders who have left long-term psychiatric care and who do not have family support. These types of homes are located in urban areas and they are designed to meet the housing needs of people with severe mental disorders, whether they have been institutionalized or not. The Brazilian Ministry of Health implemented the TRC system within the Unified Health System (SUS) through Decree No. 106/2000 in order to meet the needs of former "patients/residents" from public and private psychiatric hospitals. In 2011, Decree No. 3090 provided for the transfer of funds for the operation of TRC[1].

The services are divided into two types: TRC I and II. The first of these is the most common and it is designed to suit people who only require the services of a caregiver. The second type is designed to provide care for people who have been institutionalized, often for their whole lifetime, and who require intensive care, technical monitoring, and permanent support staff in residence. The two types of TRC are housing options that are community- based; they are located outside the boundaries of general or specialized hospitals and they are linked to the public network of health services[1]. The technical team should be compatible with the needs of residents and the latter should be assisted by Centers for Psychosocial Care (CAPS) or specialized outpatient mental healthcare, or even family health teams[2]. In conjunction with the Ministry of Health, state, district and municipal health departments establish monitoring, supervision, and control and evaluation procedures designed to ensure that TRC provides quality care[1].

TRC facilities form part of the network of mental health services that was established by the psychiatric reform process in Brazil. Considering the number of people still living in institutions, and the consequent loss of family ties or abandonment, TRC constitutes an important method to provide de-institutionalization. However, studies of TRC are still scarce in Brazil. There have been a small number of studies regarding patients in long-term care and very few studies regarding therapeutic residential care, despite the experience of de-institutionalization that has shaped the history of psychiatric reform in Brazil[3].

There has been growing interest in evaluating the quality of life (QOL) of people with mental disorders in recent years as an indicator of the evaluation of therapeutic intervention, services, and healthcare practices. During the Third National Health Conference (2001), a regulation regarding TRC was included, which was designed to provide changes in the QOL of people residing in psychiatric hospitals. The concept of QOL was, and still remains, much discussed in recent years from a sociological and objective perspective in relation to a psychosocial perspective that attaches importance to the subjective aspects of well-being and personal satisfaction[4]. The measurement of QOL is crucial because it evaluates individuals in relation to their own health and treatment[5]. QOL concerns the living conditions of human beings and it involves social relationships, as well as mental, psychological, emotional and physical well-being. Physical activity improves mental health outcomes in relation to various psycho-social factors and several studies have shown the positive impact of exercise on depression[6]. A lower risk of depression and suicidal ideation are among the beneficial psychological effects of the practice of physical activity[7,8].

Research regarding exercise in individuals with neurological impairment is controversial. Physical exercise was shown to improve the mood and affectivity in patients with Alzheimer's living in nursing homes[9] and reduced agitation in patients living in nursing homes[10]. Some studies have shown slight improvements in cognitive function in elderly people living in nursing homes[11,12] while no change was detected in other studies[13-15]. A recent study evaluated the effects of six months of aerobic exercise or stretching in 33 people with mild cognitive impairment who lived in the comunity[16]. The results indicated that aerobic exercise provided cognitive improvement for the women who participated. However, it was not possible to identify studies about the effect of exercise and quality of life in de-institutionalized patients living in TRC facilities. Consequently, the present study provides valuable information for the scientific community regarding this issue.

Considering the issues mentioned addressed above, and the lack of research regarding the physical activity of people living in TRC facilities, this study evaluated the QOL and levels of physical activity of people living in TRC facilities in the city and metropolitan area of Porto Alegre. The assessment of QOL and levels of physical activity of this sector of the population is crucial because issues relating to people with mental disorders represent a constant challenge in terms of the need to ensure the promotion of health,

Ciência & Saúde Coletiva, 23(5):1521-1530, 2018

citizenship and social inclusion as fundamental human rights.

Methods

This series case study comprised an intentional sample and consisted of all the residents of TRC facilities in the city and metropolitan area of Porto Alegre who were able to answer the questionnaire. In total, 68 people were assessed (42 men and 26 women) from April to June 2014. The TRC facilities in Morada São Pedro (TRC MSP) are services provided by the Secretariat of Health of the state of Rio Grande do Sul; they are located in the city of Porto Alegre and are linked to the São Pedro Psychiatric Hospital. They were inaugurated on December 30, 2002 and were part of the São Pedro Citizen Project, which included the land regularization of Vila Sao Pedro and the influx of ex-patients who had been long-term residents of the São Pedro Psychiatric Hospital. The Morada Viamão TRC facilities were reopened in September 2005 in the facilities previously occupied by the Residential Morada Dom Bosco care home[17].

The participants were residents of the São Pedro Citizen Project TRC facilities, which are divided into five locations (four of which are located in Porto Alegre and one in Viamão). These services were created as part of the psychiatric reform process in the state of Rio Grande and they meet the provisions of Federal Law No. 10,216/2001; Law No. 10,708/2003; State Law No. 11,791/2002; GM Ordinances Nos. 52 and 53/2004, 3090/2011; Ordinance No. 106/MS of 11/02/2000 and Ordinance No. 1,220/2000[17].

The instruments used for data collection were SF-36 and EuroQol EQ-5D to measure QOL, and IPAQ (short version) to assess levels of physical activity. A questionnaire was prepared by the researcher in terms of socio-demographic issues, in which the information was taken from the records of the facilities. The following variables were used: age; length of hospitalization (years); time living in facilities (years); level of education; type of mental disorder; illnesses other than mental disorder; difficulties in relation to movement; and smoking.

The SF36 questionnaire, which was the version adapted for Brazil, was self- administered and in interview form. It consisted of 11 questions and 36 items covering eight components (domains or dimensions), which were represented by functional capacity (ten items), physical aspects (four items), pain (two items), general health (five items), vitality (four items), social aspects (two items), emotional aspects (three items), mental health (five items) and a comparative question regarding the perception of current health and health over the preceding 12 months. Individuals received a score for each domain; these ranged from 0 to 100, with 0 being the worst score and 100 the best. As this was a generic questionnaire, its concepts were not specific to a certain age, illness or treatment group[18].

The Health-Related Quality of Life (HRQOL) questionnaire (EuroQol EQ-5D) is a generic instrument that was developed in Europe; it has been translated and validated for various languages, including Portuguese[19,20]. It is applicable to a wide range of health conditions, does not require a high cognitive level, and it can be performed in a few minutes. It considers each domain independently and does not allow a total score for QOL. The descriptive system defines QOL relative to health in five dimensions (mobility, self-care, daily activities, pain/discomfort and anxiety/depression), each of which have three levels of severity (1 = no problem, 2 = some problem, 3 = extreme problem)[21].

The International Physical Activity Questionnaire (IPAQ) (short version) is the most widely used instrument for measuring physical activity in population groups and it enables the evaluation of this behavior, considering the following four domains: work, leisure, domestic activity and movement. Its classification is divided into sedentary, insufficiently active, active and very active[22].

The application of the questionnaires and the interviews were conducted in person in the home of each resident by the research coordinator, who was assisted by a professional from the "Returning Home" program, which provided a more homogenous approach and avoided any interpretation that might not be desired by the instrument. Each interview lasted between 30 and 40 minutes.

The data relating to the characteristics of the sample and the scores for the domains/ dimensions of QOL were presented descriptively. One-way ANOVA was performed to verify the relationship between the means of the domains of QOL (SF 36) and the classifications of the levels of physical activity; the chi-square test and Fisher's exact test were performed in order to check the relationship between the categories of EuroQol EQ/5D and levels of physical activity. A significance of 5% ($p < 0.05$) was considered.

The Statistical Package for Social Sciences (SPSS) program, version 18.0 for Windows, was used for these analyses.

All the participants were informed of the project's objectives and purposes and they signed an Informed Consent Form (ICF). The study was approved by the Research Ethics Committee in Human Beings (CEP) of the Lutheran University of Brazil (ULBRA/RS) and was authorized by the Division for Care to Residents (DAUM) of the São Pedro Psychiatric Hospital.

Results

The majority of the study participants were men (61.8%) and the average age was 57.15 years (SD = 12.02). The previous length of stay in hospital was 29.15 years (SD = 10.44). The length of time since leaving psychiatric hospital and living in TRC facilities was 5.49 years (SD = 4.38). Regarding education, the majority of residents defined themselves as illiterate (77.9%). The most common mental disorder was schizophrenia (44.1%). The majority only reported mental disorder as a known disease (41.2%), followed by having at least one more disease other than mental disorder (38.2%). The majority of the sample had no difficulty in movement (82.4%). The prevalence of smoking was 48.5% (Table 1).

The results obtained in each of the eight domains of the SF-36 regarding the perception of each resident were numbered, whereby the closer to zero, the worse the quality of life, and the closer to 100, the better. The general state of health domain had the lowest score, with an average of 57.47 (SD = 14.27). The domain of vitality scored a mean of 63.09 (SD = 16.07). The other domains were non-parametric so the mean was also determined. Functional capacity scored an average of 66.03 (SD = 34.06) and a mean of 80, with a minimum of 0 and a maximum of 100. Mental health scored an average of 70.29 (SD = 18.30) and a mean of 72, with a minimum of 20 and a maximum of 100. The perception of pain scored an average of 70.59 (SD = 25.90) and a mean of 67, with a minimum of 20 and maximum of 100. Emotional aspects scored an average of 75.98 (SD = 40.51) and a mean of 100, with a minimum of 10 and a maximum of 100. The highest scores were in relation to social and physical aspects, with respective scores of an average of 77.39 (SD = 20.21), with a mean of 75 (minimum 25 and maximum 100) and 77.57 (SD = 39.71) with a mean of 100 (minimum 0, maximum 100) (Table 2).

In the EuroQol EQ-5D questionnaire, 82% of residents reported at least one problem (moderate or extreme) in at least one dimension. The four most common health conditions (a combination of responses for the five dimensions) were as follows: 18% with no problem – the best health condition; followed by 15% who reported moderate problems in at least two dimensions; 10% with a moderate problem in one dimension; and 9% with moderate problems in the five dimensions. The most frequently reported symptom was pain/discomfort with 17 moderate or extreme problems, followed by at least 13 in relation to daily activities. Mobility, anxiety/depression and functional capacity received 12, 11 and 10 moderate or extreme problems, respectively.

The levels of physical activity of the residents showed that most of them were insufficiently active (48.5%), 14.7% were sedentary, 35.3% were active and only 1.5% were very active. Those who were "very active" were included in the "active" category in the statistical analysis because there was only one person.

When comparing the data obtained by the SF-36 questionnaire in relation to the eight domains to the levels of physical activity by the classification groups (sedentary, insufficiently active and active) it was observed that there was a relationship between the levels of physical activity and the domains of perception of pain ($p = 0.023$) and social aspects ($p = 0.019$) (Table 3).

Table 4 shows that relating the data obtained through the EuroQol EQ-5D questionnaire in relation to the five domains (mobility, functional capacity, daily activities, pain/discomfort and anxiety/depression) with the levels of physical activity by classification groups (sedentary, insufficiently active and active) there was a relationship with the domain of mobility ($p = 0.006$), which indicated that those who were active were associated with the category of having no problems in walking (residual adjustment 2.6), those who were insufficiently active were associated with some problems in walking (residual adjustment 2.0), and those who were sedentary were associated with state of being bedridden (residual adjustment 3.5).

Discussion

This study assessed the current QOL of residents of people living in TRC facilities in the metropolitan area of Porto Alegre and found a good condition in relation to most domains, both

Ciência & Saúde Coletiva, 23(5):1521-1530, 2018

Table 1. Socio-demographic characteristics of the residents of the São Pedro Citizen Project therapeutic residential care facilities in the metropolitan region of Porto Alegre in 2014.

	Total	Men	Women
n (%)	68	42 (61.8)	26 (38.2)
Age (mean ± SD)	57.15 ± 12.02	54.95 ± 12.52	60.69 ± 10.44
Time hospitalized - years (mean ± SD)	29.15 ± 10.44	29 ± 10.08	29.40 ± 11.22
Time of residence - years (mean ± SD)	5.49 ± 4.38	5.84 ± 4.12	4.92 ± 4.77
Education n (%)			
Illiterate	53 (77.9)	31 (73.8)	22 (84.6)
Did not complete elementary school	14 (20.6)	10 (23.8)	4 (15.4)
Did not complete secondary school	1 (1.3)	1 (2.4)	-
Type of mental disorder n (%)			
Bipolarity	5 (7.4)	2 (4.8)	3 (11.5)
Depression	1 (1,5)	1 (2,4)	-
Schizophrenia	30 (44.1)	18 (42.9)	12 (46.2)
Mental retardation	14 (20.6)	9 (21.4)	5 (19.2)
Not related	18 (26.5)	12 (28.6)	6 (23.1)
Diseases known other than disorder n (%)	26 (38,2)	15 (35,7)	11 (42,3)
None	28 (41.2)	20 (47.60)	8 (30.8)
1	26 (38.2)	15 (35.7)	11 (42.3)
2	12 (17.6)	6 (14.3)	6 (23.1)
3	2 (2.9)	1 (2.1)	1 (3.8)
Limited mobility n (%)			
Yes	12 (17.6)	10 (23.8)	2 (7.7)
No	56 (82.4)	32 (76.2)	24 (92.3)
Smoking n (%)			
Yes	33 (48.5)	19 (45.2)	14 (53.8)
No	35 (51.5)	23 (54.8)	12 (46.2)

Source: The authors.

Table 2. Quality of life (n = 68) by SF 36 questionnaire for each domain.

Domains	Average	Minimum	Maximum	Mean ± SD
Functional capacity	80	0	100	66.03 ± 34.06
Limitation – physical aspects	100	0	100	77.57 ± 39.71
Perception of pain	67	20	100	70.59 ± 25.90
General state of health	57	25	90	57.47 ± 14.27
Vitality	65	20	95	63.09 ± 34.06
Social aspects	75	25	100	77.39 ± 20.21
Limitation – emotional aspects	100	10	100	75.98 ± 40.51
Mental health	72	20	100	70.29 ± 18.30

Source: The authors. SD = standard deviation.

through SF 36 and EuroQoL. Many countries have shown that de-institutionalized patients can be maintained in the community with improvements in daily living skills and social interaction at an overall level of functioning and in terms of QOL. Most patients who have been transferred to TRC have shown improved QOL compared to those who are hospitalized because they are less restricted and regimented[23]. In this context, it is important to emphasize that when individuals move from one situation to another they expect that their living conditions will improve, which

Table 3. Quality of life (SF36) for classified physical activity groups (n = 68).

Domains	Sedentary	Insufficiently active	Active	p value
Functional capacity	49.00 ± 35.963	64.09 ± 33.74	75.40 ± 32.30	0.106
Limitation – physical aspects	87.50 ± 31.73	74.24 ± 42.15	78.00 ± 40.39	0.659
Perception of pain	50.20 ± 24.15	72.97 ± 24.93	75.60 ± 25.15	0.023*
General state of health	51.20 ± 16.02	57.09 ± 13.75	60.48 ± 14.08	0.221
Vitality	56.50 ± 19.30	61.36 ± 14.43	68.00 ± 16.01	0.110
Social aspects	61.25 ± 24.61	79.17 ± 20.17	82.00 ± 16.57	0.019*
Limitation – emotional aspects	69.70 ± 39.91	83.84 ± 34.48	68.00 ± 47.61	0.304
Mental health	62.00 ± 19.17	72.97 ± 16.76	70.08 ± 19.77	0.257

Source: The authors; * $p \leq 0.05$.

Table 4. Quality of life (EuroQol) for classified physical activity groups (n = 68).

EuroQol	Sedentary	Insuficiently active	Active	Total	p value
Mobility					
no problem	5	20	**22**	47	
moderate problem	3	**13**	3	19	0.006*
extreme problem	2	0	0	2	
Personal care					
no problem	6	22	19	47	
moderate problem	2	11	6	19	0.084
extreme problem	2	0	0	2	
Daily activities					
no problem	3	19	18	40	
moderate problem	6	14	6	26	0.60
extreme problem	1	0	1	2	
Pain/discomfort					
no problem	1	10	11	22	
moderate problem	9	23	14	46	0.171
extreme problem	0	0	0	0	
Anxiety/depression					
no problem	6	17	15	38	
moderate problem	3	16	9	28	0.366
extreme problem	1	0	1	2	

Source: The authors; * $p \leq 0.05$.

leads us to reinforce the importance of implementing actions aimed at the mental health of the comunity[24].

Those living in TRC facilities in greater Porto Alegre did not suffer from negative effects in terms of psychiatric symptoms or depression, increased difficulty in relation to daily skills, or problems of social behavior when they moved to their new housing. Furthermore, there was a significant improvement in QOL and a reduction in medication. We observed some commonly repeated words in the context of mental health, such as autonomy, respect, citizenship, home, peace, respect for life and difference, which are concepts that underpin the notion of psychiatric reform[17]. This study applied questionnaires directly to these "ex-patients" who are now living in TRC facilities; they are people who have been re-inserted into the community and are seeking their autonomy. Analyzing the QOL and the level of physical activity a relationship was identified regarding social aspects, which may have been due to the re-insertion of the study participants in the community.

The results of this study showed a higher average in relation to the domains of general health and functional capacity, which was similar to the results of another study which used SF 36 in relation to 755 individuals from the general population of the city of Porto Alegre[25]. The domain of general state of health is valid for the evaluation of both physical and mental health[26]. The subjective evaluation of the health of individuals is equally as important as the quantitative and objective evaluation of the health of individuals because it is in this way that individuals demonstrate their own perception of health and feeling healthy. It is through this view or dimension of health that the SF-36 evaluates this domain. Functional capacity refers to the most complex daily activities, such as strolling, shopping, cleaning the house, washing clothes, driving, using public transportation etc. Because the instrument that was used in this study was generic it evaluated the influence that functional capacity had on the life of the individual compared to the general population and how it affected their QOL.

The domain of mobility was related to levels of physical activity. The active residents of TRC facilities related to the category of having no problems with walking; those who were insufficiently had some problems in walking, and those who were sedentary were bedridden. The Mobility in Old Age Project (Lispe) used an accelerometer to assess the association between measured physical activity and the daily mobility of 174 people aged between 75 and 90 for a week. Those participants who had limited living space were less physically active and approximately 70% of them had exceptionally low values for daily step counts (≤ 615 steps) and moderate activity time (min ≤ 6.8). The highest number of steps was positively related to the greater mobility of participants, strengthening the relationship between mobility and physical activity[27]. A study with 1,149 participants examined whether physical activity in early adulthood, in late middle age, and old age, as well as the history of accumulated physical activity throughout life, were associated with changes in physical functioning and mortality in old age. The study found that being physically active throughout adulthood was associated with lower levels of decline in physical performance, as well as a lower risk of incident mobility disability, incapacity and premature death compared with those participants who had been less active during their adulthood[28]. Walking speed is an important vital sign in older people.

A study which investigated subjective age (the age an individual feels in relation to chronological age) assessed the walking speed of over 8000 participants and found that a younger subjective age was associated with a faster walking speed, as well as lower levels of physical and functional decline over time[29]. These associations were partially explained by depressive symptoms, the burden of disease, levels of physical activity and cognition, body mass index and smoking. Subjective age can help to identify individuals at risk of mobility limitations in aging and it can also be a target for interventions to mitigate physical and functional decline, as well as contributing positively to QOL.

Another study used the SF-3630 to compare physical activity and its relationship to QOL in chronic patients[30]. The aspect of pain was mentioned by 69% of participants who did not practice regular physical activity (70.54%), which was very close to the findings of the present study, in which 63.2% of residents were classified as sedentary and insufficiently active. Scientific evidence supports the effectiveness of physical activity (aerobic fitness, muscle strengthening, flexibility training and movement therapies) in combination with pharmacological and non-pharmacological approaches in improving QOL[30-33]. Despite variances in their source or pathogenesis, many conditions are also characterized by chronic pain, poor physical function, mobility limitations, depression, anxiety and sleep disorders[34]. Exercise can decrease pain and improve chronic pain conditions. It is an effective treatment for various diseases linked with chronic pain, including fibromyalgia, chronic neck pain, osteoarthritis, rheumatoid arthritis and chronic backache[30]. A study of the effects of physical exercise in women with chronic pain showed that after exercise there was a decrease in P substance and glutamate levels (which are nociceptive neurotransmitters of some afferent fibers), increased levels of beta-endorphin and cortisol, as well as a reduction in pain intensity and an increase in the pain threshold in a group with chronic pain[33].

The perception of health-related QOL in the elderly is closely linked to the practice of physical activity[31]. A controlled, randomized, Australian study entitled Youth Study Early-Intervention (YES) utilized social participation and physical well-being as a complement to conventional psychiatric treatment. This ongoing study uses two facilitated group therapy modules (physical and social activity) as vehicles to promote clin-

ical, cognitive, social and professional changes in 120 young people who use mental health services in Sydney. These modules are in addition to the usual treatments offered to young people and they view physical activity as an invaluable resource in promoting health[35].

People with chronic mental disorders exercise less than the general population, whether as a result of the disease itself (which in some cases causes psychomotor retardation) or a result of medication which compromises movement. In this regard, frequent movement is preferable to sedentary behavior. Physical activity is increasingly recognized as an effective adjunctive treatment for various mental illnesses. The inverse association between physical activity and cardiometabolic disease is well established, as well as the strong link between mental illness, sedentary behavior and precarious cardiometabolic health[36]. Prescribing physical activity as treatment means that such interventions are most successful when physical exercise is adapted individually and respects an appropriate level of progression, considering the physical limitations, psychosocial needs and available resources of individuals[34].

Data provided by the World Health Organization shows that people with depression and schizophrenia have a 40 to 60% greater chance of premature death due to comorbidities (cancer, cardiovascular disease, diabetes, HIV) than the general populationl[37]. Just as there is evidence of the relationship between depression, myocardial infarction and diabetes, people who have suffered myocardial infarction and diabetes are more likely to develop depression, and vice versa. Thus, those who have been institutionalized for many years require careful attention, not only regarding psychiatric issues but also in terms of overall health. Complaints related to "physical" health, which are sometimes neglected due to the greater attention paid to mental health, indicate the importance of a comprehensive approach to care that does not distinguish between physical and mental health.

Physical activity improves overall health, as well as reducing the risk of disease and the progression of chronic diseases such as cardiovascular disease, Type 2 diabetes and obesity[34]. Exercise triggers the release of beta endorphin in the pituitary gland (circumferentially) and the hypothalamus (central), which in turn provides analgesic effects through the activation of μ-opioid receptors, both peripherally and centrally[32]. Furthermore, walking and physical activity programs can provide the opportunity to extend social relationships and foster new friendships, which generates healthy effects at the cognitive level and also in terms of QOL[28].

Conclusion

In recent decades, growing technological innovations in medicine have brought an increase in life expectancy. This occurs in both healthy individuals and those with chronic diseases because treatments that are now available allow for greater control of symptoms and delay the natural course of diseases. Thus, QOL becomes a key factor in assessing people with chronic mental disorders, and physical activity can be a protective factor.

The de-institutionalization of former residents of the São Pedro Psychiatric Hospital represented an important event in psychiatric reform in the state of Rio Grande do Sul, as well as resulting in the creation of a network of substitute services. The benefits of living in a house as opposed to a hospital are unquestionable. However, there is also a need to continue investing so that residents can fully enjoy the rights that they have achieved. This study provided more information about the perceptions of the residents regarding how services are being provided in relation to physical activity and QOL, thereby furnishing data that is important in terms of making decisions about future public policies.

This study evaluated the QOL of all the inhabitants of therapeutic residential care facilities in the metropolitan region of Porto Alegre, Rio Grande do Sul, Brazil by using two different instruments that are used in the international scientific literature. The data showed a relatively low average in terms of general health and at least one moderate or extreme problem in 82% of those who were evaluated. As regards levels of physical activity, it was clear that most participants did not practice regular physical activity. Analyzing these scores with the levels of physical activity of this population they mentioned perceptions of pain, social aspects and mobility related to physical inactivity. These data highlight the lack of incentive to practice physical activity and also the loss of possible physical and social benefits for those who participated in this study.

The limitations of this study were regarding the difficulty in gaining access to medical records and also differences that existed between the services provided in different therapeutic residential

care facilities. Furthermore, there are few Brazilian and international studies related to QOL and physical activity in people with mental disorders, and these studies are even rarer regarding the combination of these factors in residents of therapeutic residential care facilities.

Collaborations

SK Klein worked on the design of the study, data analysis and interpretation and on paper writing, A Fofonka participated on data analysis and interpretation, A Hirdes worked on paper writing and critical analysis, MHVM Jacob worked on the design of the study and on paper writing.

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