

## LONG TERM GROUPS OF PATIENTS WITH PSYCHOSIS: PHYSICAL ACITIVITY AND MEDICAL TREATMENT

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### SUMMARY

**Aim:** Long term group work with outpatients with psychosis who attended groups in the last ten years was evaluated regarding their physical acitivity, quality of life and medication treatment.

**Methods:** Outpatients with psychosis who attended long term psychotherapeutic groups were evaluated regarding their medication, quality of life and physical activity. A modified, non-structured, psychoanalytic group technique which includes psycho education, cognitive techniques, non-structural conversation and clarifications was used in group therapy. For evaluation purposes Quality of life Bref and a self-designed physical activity questionnaire along with clinical observation and Drug Attitude Inventory was used. Each patient's medication was noted at the time of the study and the dosage was transformed into chlorpromazine equivalents.

**Results:** Several therapeutic group factors are important for improving attitudes towards physical activity, improving quality of life and attitude towards medication. The physical activity questionnaire gave us some preliminary information on our patients' current physical activity. We explore the patients' Quality of life, medication and attitude towards physical activity.

**Discussion:** The results show that there is a relevant correlation between physical activity, quality of life and medication treatment. Therefore treatment in a team setting and a multidisciplinary approach could lead to the best results in this respect and better physical health of patients with psychosis.

**Key words:** schizophrenia - group therapy – exercise - quality of life - medication

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### INTRODUCTION

The few studies that have been done in group psychotherapy for patients with schizophrenia show that treatment outcome is significantly better than treatment without this therapy. Kanas (1996; González de Chávez 2009) with his meta-analysis of 40 studies showed that this is true for 67 per cent of the studies with inpatients and in 77 per cent of studies with outpatients.

Group psychotherapy has many different features that are in favour of its usage for people with schizophrenia. They are easy to carry out, have a synergic action and have specific features with great therapeutic potential.

Pharmacotherapy is an essential part of the treatment for psychosis. It is important to add that evidence shows pharmacotherapy alone is insufficient in many cases. Patients continued to have interpersonal difficulties, vocational impairment, and poor problem solving skills (Jindal & Thase 2005). With time pharmacotherapy began to be viewed as a way of hastening recovery and helping patients make better use of psychotherapy (Klerman et al. 1994, Jindal & Thase 2005). Among the benefits of combined treatment is increased adherence to medication regimens. One of the aims of group psychotherapy is to maximize psychosocial functioning, the aim is not necessarily to minimize florid symptoms as the medical interventions do (Falloon & Liberman 1983). Therefore combined treatment can be very beneficial for the overall treatment outcome of psychosis.

There are also many other different factors that influence the quality of life of a patient with psychosis. One of the positive influences on the psychological and physical aspects of a persons' life is physical activity. The benefits of exercise reach far beyond the physical level; their social component is as important if not even more. Exercise can enable people to interact with the wider community (Daley 2002). For people with psychosis physical activities within groups could enable them to confront and overcome their social anxiety, which has been observed in up to one in three individuals with psychosis (e.g. Davidson, Hughes, George and Blazer 1993, Michail and Birchwood 2009). In later studies researchers found that physical activity has the potential to improve the quality of life by improving physical health, social disability and the above mentioned psychiatric symptoms (Richardson et al. 2005). Researchers also found that exercise could alleviate secondary symptoms of schizophrenia (e.g. depression, low self-esteem, and social withdrawal). Further they state that exercise can be a useful coping strategy for the positive symptoms of schizophrenia (e.g. auditory hallucinations) (O'Conner, Raglin, Martinsen 2000, Richarson et al. 2005).

It was also observed that people with schizophrenia do small amounts of exercise which may be the result of many factors like features of the illness, sedative medication and lack of opportunity might be relevant although no reason has been demonstrated (Brown et al, 1999, McCradie 2003, Connolly & Kelly; 2005). Further their life expectancy is from 10 to 15 years lower compared to the general population (Phelan et al. 2001, Pack 2009; Bradshaw et al. 2010).

The aim of this study is to present data on attitude towards medication, current medication of patients with psychosis and physical activity for patients with psychosis who attended group therapy for up to ten years.

## METHOD

All the included patients were diagnosed as having schizophrenia or schizoaffective disorder based on DSM-IV criteria. They were treated by regular psychiatric care which included individually prescribed medication. Patients were medicated with atypical antipsychotics, antidepressants, mood stabilisers and anxiolytics. All of them have been in remission of acute psychotic symptoms most of the time spent in group therapy.

Three small groups of 6 to 10 medicated patients were run over a period of ten years. All groups were ongoing, new patients were included after the termination of a previous member. The groups were run in co-therapy. One of the co-therapists was an experienced psychiatrist, the other a psychiatric nurse in one group and a young psychiatrist or psychiatric resident in the other two groups. Sessions were run every two weeks for 90 minutes.

A modified, non-structured, psychoanalytic group technique which included psycho education, cognitive techniques, non-structured conversation and clarifications was used.

A total of 47 patients were recruited; 16 were excluded, 6 of them dropped out of group therapy after four sessions or less, 7 were lost to follow up and 3 refused to participate in the study. All 32 included patients (68% recruitment rate) were assessed in the same week.

Demographic characteristics of the sample are summarised in Table 1.

Two self-report questionnaires were administered (1, 2) in order to assess the quality of life and physical activity of the patients. World Health Organization Quality of Life - BREF questionnaire was translated into Slovene. The physical activity questionnaire was developed for the purpose of this study. All the patients also evaluated the importance of group therapy on a scale of one to three. The treating psychiatrist evaluated the patients' present severity of illness using the Clinical global impression scale. The group therapist evaluated the patients' quality of their participation in group therapy.

- Physical activity questionnaire. The questionnaire consists of 16 statements about ones physical activity and attitude towards physical activity. Only the first three questions are on actual activity of the participants, the rest of the questions focus on their attitude towards physical activity. Higher scores indicate a higher degree of physical activity.

- World Health Organization Quality of Life - BREF (6). It contains a total of 26 questions which produce a quality of life profile. We analyzed 4 domain scores: physical health, psychological health, social relationships and environment. Higher scores denote higher quality of life. It is applicable to people living under different circumstances, conditions and cultures.

**Table 1.** WHOQOL-BREF domains

Domain	Facets incorporated within domains
Physical health	Activities of daily living Dependence on medicinal substances and medical aids Energy and fatigue Mobility Pain and discomfort Sleep and rest Work Capacity
Psychological	Bodily image and appearance Negative feelings Positive feelings Self-esteem Spirituality / Religion / Personal beliefs Thinking, learning, memory and concentration
Social relationships	Personal relationships Social support Sexual activity
Environment	Financial resources Freedom, physical safety and security Health and social care: accessibility and quality Home environment Opportunities for acquiring new information and skills Participation in and opportunities for recreation / leisure activities Physical environment (pollution / noise / traffic / climate) Transport

- The Clinical Global Impression (CGI) Scale (8) is an assessment tool that allows the clinician to rate the severity of illness. This subscale assesses the clinician's impression of the patient's current illness state. Scores on the Severity of Illness subscale range from 1 not ill at all to 7 among the most extremely ill.
- Drug Attitude Inventory (DAI-10) by Daniel J. Dugan (7). The questionnaire consists of 10 statements about the perceived effects and benefits of antipsychotic medication. Higher scores indicate a more positive attitude towards medication.

SPSS version 17.0 was used for data analysis (SPSS, 2008).

## RESULTS

The results describe demographic characteristics and evaluation of group therapy influence on patients' lives. Tables below present frequencies for evaluation of participation in group therapy by the group therapist,

evaluation of CGI area of severity by the treating psychiatrist and correlation between WHOQOL-Bref domain scores and Participation in the group, CGI Severity, group therapy influence and time spend in group therapy.

**Table 2.** Demographic characteristics of the participants

	Category	Number (N=32)	(%)
Gender	Male	21	66
	Female	11	34
Age	Mean $\pm$ sd	40.01 $\pm$ 11.46	
Age in years	21 – 35 years	10	31
	36 – 50 years	16	50
	51 – 65 years	6	19
Marital status	Single	13	41
	Relationship	6	19
	Married	10	31
	Divorced/Separated	3	9
Number of children	None	20	63
	One	6	19
	Two	6	19
Education	Vocational High School	5	16
	Senior High School	14	44
	Student at present	7	22
	University degree	6	19
Current occupation	Unemployed	13	41
	Employed	10	31
	Part time retired	2	6
	Retired (psychosis)	7	22
Duration of group therapy in years and months	From 0 to 2;11	16	50
	From 3 to 5;11	11	34
	From 6 to 10	5	16

Our sample consists of 21 (66 %) male and 11 (34 %) female patients. There were originally 47 patients included in group therapy, 24 (51%) females and 23 (49%) males. On average male patients stayed in group therapy for 5,6 years and female patients for 2,5 years. Exactly half of the patients were between 36 and 50 years old. Most of the patients marital status was single (41%), they did not have children (63%), finished senior high school (44%), were unemployed (41%) and attended group therapy for less than 3 years.

**Table 3.** Frequency table for evaluation of CGI area of severity by the treating psychiatrist

CGI Severity	N	%
Normal, not at all ill	13	41
Borderline ill	8	25
Mildly ill	9	28
Moderately ill	2	6

Table 4 shows that most of the patients (41%) were regarded normal and only 6% moderately ill by the treating psychiatrist at the time of assessment.

**Table 4.** Correlations between WHOQOL-Bref domain scores, CGI Severity, and time spend in group therapy

WHOQOL-Bref	CGI Severity	Time spend in group therapy
Physical health	-0.316*	-0.193 <sup>a</sup>
Psychological	-0.284	-0.262 <sup>a</sup>
Social relationships	-0.312*	-0.301* <sup>a</sup>
Environment	-0.132	0.054 <sup>a</sup>
DAI-10	-0.349*	-0.018 <sup>a</sup>

Note: \* <0.01; \*\* <0.05; All the correlations were Spearman type, except for the ones marked with <sup>a</sup>.

A statistically significant negative correlation was found between the present severity of the psychotic illness rated on the CGI severity scale and the WHOQOL-Bref physical health domain.

No statistically significant correlations were found between the psychological domain of the WHOQOL-Bref time spend in group therapy or CGI severity.

We have clinically observed the best outcome for patients who attended the group for three to five years. Some patients who stayed in groups for more than six

years were unable to separate from the group and move on to social settings outside the group. The group represents the only social interaction outside the immediate family for some patients that stayed in the group for more than six years.

As expected there was a negative correlation between the social relationships domain and the CGI severity.

We have also found a negative correlation between the social relationships domain and time spent in group therapy.

No statistically significant correlation was found between the environment domain of the WHOQOL-Bref and time spent in group therapy or CGI severity, which is an expected finding.

A statistically significant negative correlation was found between the drug attitude and the CGI severity, which is not surprising.

**Table 5.** Frequency table of physical activity, activity per week and number of different types of activities

Physically active	N=32	%
Yes	25	78
No	7	22
Physical activity per week		
I am not active	8	25
One	6	19
From 2 to 4 times	12	38
5 times	6	19
Number of different types of activity		
0	1	3
1	11	34
2	11	34
3	9	28

Results in table 4 show that the majority of participants are physically active (78%). Most of them (12 or 38%) are active 2 to 4 times per week, whereas 6 of the participants (19%) are active one or more than five times per week. A quarter of the participants (25% or 8) has answered that they are not active at all.

Although some participants have evaluated that they are not physically active (7 or 22% in the first question and 8 or 25% in the second) only one participant did not tick any type of activity whereas 22 or 68% have put down one or two activities they take part in and 9 or 25% have put down 3 activities (which was also the top limit).

In table 5 we can see that all but one participant (31 or 97%) consider walking as their physical activity, followed by biking (14 or 44%), jogging or running (7 or 22%), hiking (6 or 19%), skiing, swimming and team sports are each represented by 4 (13%) of participants, 2 (6%) are doing Pilates, tennis, Tai chi, push ups, dancing, aerobics and badminton are each represented by one (3%) participant. Also one of the participants has specified they are not physically active.

**Table 6.** Frequency table for types of physical activity reported by the participants

Type of physical activity	N=32	%
Walking	31	97
Biking	14	44
Jogging or running	7	22
Hiking	6	19
Skiing	4	13
Swimming	4	13
Team sports	4	13
Pilates	2	6
Tennis	1	3
Tai chi	1	3
Push ups	1	3
Dancing	1	3
Aerobics	1	3
Badminton	1	3
I am not physically active	1	3

Note: In the questionnaire the following types of physical activity are not practiced by any of the participants: rollerblading, climbing, fitness, ice skating, martial arts, gymnastics and athletics.

**Table 7.** Correlations between DAI-10 domain scores and CGI Severity, group therapy influence and physical activity

WHOQOL-Bref	CGI Severity	Group therapy Influence	Physical activity
Physical health	-0.316*	-0.514**	0.448**
Psychological	-0.284	-0.228	0.291
Social relationships	-0.312*	-0.073	0.024
Environment	-0.132	0.009	0.226
DAI-10	-0.349*	-0.092	-0.359*

Note: \* <0.01; \*\* <0.05; All the correlations were Spearman type

Results in table 7 show that the participants that had a higher score on the physical health domain of the WHOQOL-Bref questionnaire had a statistically significant higher score on the physical activity questionnaire.

A statistically significant negative correlation was found between the present severity of the psychotic illness rated on the CGI severity scale and the WHOQOL-Bref physical health domain.

A statistically significant negative correlation between the health domain and the patients' influence of the group rating was found. This may mean that the group was more important to the more severely ill patients in our sample.

We have clinically observed the best outcome for patients who attended the group for three to five years. Some patients who stayed in groups for more than six years were unable to separate from the group and move on to social settings outside the group. The group represents the only social interaction outside the

immediate family for some patients that stayed in the group for more than six years.

As expected there was a negative correlation between the social relationships domain and the CGI severity.

We have also found a negative correlation between the social relationships domain and time spent in group therapy.

No statistically significant correlation was found between the environment domain of the WHOQOL-Bref and participation in group, time spent in group therapy, group influence on the patients' life or CGI severity, which is an expected finding.

A statistically significant negative correlation was found between the drug attitude and the CGI severity. That means that the more ill the patients are the more negative is their attitude towards medication which is not surprising.

**Table 8.** Correlations between WHOQOL-Bref domain scores and number of medication taken and cumulative antipsychotic dose.

WHOQOL-Bref	Number of medication taken	Cumulative antipsychotic dose
Physical health	-0.420**	-0.238
Psychological	-0.271	-0.077
Social relationships	-0.198	0.101
Environment	-0.097	-0.110
DAI-10	0.365*	-0.178
CGI Severity	0.222	0.120
Time spend in group therapy	0.256	0.114
Physical activity	-0.366*	-0.216

Note: \* <0.01; \*\* <0.05; All the correlations were Spearman type

Results in table 8 show that the patients that are taking a lower number of different medications had a higher score on the physical health domain of the WHOQOL-Bref questionnaire.

A statistically significant positive correlation was found between the drug attitude (DAI-10) and the number of medication taken, which means that patients with a higher number of different medications have a more positive attitude towards them.

We found statistically significant negative correlation between physical activity and number of medication taken.

This indicates that the patients with a higher number of different medications are less physically active.

No statistically significant correlation was found between the cumulative antipsychotic dose and physical activity.

## DISCUSSION

There were no severely ill patients in our sample. All of them live in the community, many are employed, and some of them are students.

The patients that had a high score on the physical activity questionnaire had a statistically significant lower score on the DAI-10 (attitude towards medication) questionnaire (Table 7). We assume that the patients that are more physically active consider themselves healthier and therefore do not consider medication as crucial.

Our finding of the negative correlation between the social interaction domain and the time spent in group therapy suggests that there may be an optimum time at which the patient should leave the group (Table 4). Our clinical observation is that the patients that stayed in the group for longer than six years had less social interaction outside the group or immediate family.

The physical health domain in our sample covers the areas that can be significantly impaired by the psychotic illness, like daily living activities, dependence on medical services and medication, energy and fatigue, sleep and rest and work capacity. The score on this domain can be interpreted as closely related to the severity of psychotic illness. The insight that these areas are impaired is better in patients that are less severely ill, which is in accordance with our results.

The patients that take more different medications were more depressed which is probably the main reason for their poorer physical activity (Table 8).

## CONCLUSION

Long term group work has important short and long term effects on quality of life, attitude towards medication, social functioning and stigma reduction. Patients should be intrinsically motivated and well prepared for group work.

They should be encouraged to stay in group therapy for long enough to gain insight into the nature of their illness, reduce the stigma, become more confident in social situations and more independent. The right time to leave the group should also be noted and they should be encouraged to do so and supported in the period after group therapy.

Further research into the specific therapeutic factors is needed.

Our study shows that chronic patients with psychosis take a number of different medications and can still be physically active. The number of medications they take is probably correlated to the severity of their illness and mood symptoms which also influence their current physical activity and perception of physical health. We need to further investigate some objective parameters of physical health and patients' physical activity, disease severity and plan appropriate interventions.

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