

RECREATIONAL GAMES FOR A GROUP OF OLDER PEOPLE: IMPACTS ON MENTAL AND CARDIOVASCULAR HEALTH

JOGOS RECREATIVOS PARA UM GRUPO DE IDOSOS: IMPACTOS SOBRE A SAÚDE MENTAL E CARDIOVASCULAR

ABSTRACT

Recreational games are of the utmost importance in human aging and can help the individual improve their physical and mental health. This work presents the extension project "The Importance of Sports to Health", developed in the city of Jataí-GO, during the activities of the Nursing course of Universidade Federal de Goiás. The objective of this project was to promote mental and cardiovascular health through physical activity and recreational games. Games represent leisure time for the public with the opportunity for communication and entertainment, and also allow the elderly to perform psychomotor and cognitive functions. This extension project used methodology based on the quantitative and qualitative approach and the data collection instruments were completed on physical examination forms, collected prior to the recreational activities due to the intake of drug products after the beginning of the games. The results show slight yet positive changes in the reduction of systolic blood pressure and pulse pressure along with weight loss. In addition, the interviews showed that the subjects had a remarkable awareness of the need for greater care with their own health. Leisure activities combined with physical activity have proved effective for healthy aging, with an improvement in quality of life, social participation, mental and cardiovascular health, emphasizing the importance of interprofessional actions for the promotion of health.

Keywords: Games, Recreational; Aged; Mental Health; Cardiovascular Diseases.

RESUMO

Os jogos recreativos são aliados fundamentais do envelhecimento humano e podem auxiliar o indivíduo a desenvolver melhores condições de saúde física e mental. Este trabalho apresenta o projeto de extensão "Educação em Saúde no Esporte", desenvolvido na cidade de Jataí-GO, no decorrer das atividades do curso de Enfermagem da Universidade Federal de Goiás. O objetivo deste projeto foi a promoção da saúde mental e cardiovascular por meio da realização de atividades físicas e jogos recreativos. Os jogos oferecem um momento de lazer, comunicação e diversão ao público e permitem, também, que os idosos possam trabalhar as funções psicomotoras e cognitivas. Este projeto de extensão empregou metodologia pautada na abordagem quanti-qualitativa e os instrumentos de coleta de dados foram preenchidos em fichas de exames físicos, colhidos antes da recreação devido ao consumo de medicamentos após o início dos jogos. Os resultados demonstram que houve mudanças discretas, porém positivas, na redução da pressão arterial sistólica, pressão de pulso e perda de peso e, além disso, notou-se, por meio das entrevistas, que os participantes tinham notável consciência da necessidade de maiores cuidados com a própria saúde. As atividades lúdicas aliadas à atividade física mostram-se efetivas para o envelhecimento saudável, com melhora da qualidade de vida, participação social, saúde mental e cardiovascular, ressaltando a importância de ações interprofissionais para a promoção da saúde.

Descritores: Jogos Recreativos; Idoso; Saúde Mental; Doenças Cardiovasculares.

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Received on 08/06/2018,

Accepted on 12/11/2019

INTRODUCTION

Health is one of human beings' greatest riches. The World Health Organization (WHO) defines health as "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity."¹ In order for a population to be healthy, it needs to have good living conditions, basic sanitation, leisure, education, good nutrition, work, safety, and other factors that contribute to a good quality of life.^{2,3}

The elderly need health-focused assistance and special attention from their family members and the professionals that serve them, since many have entered a stage of functional decline and progressively decreased physical activity. It should also be highlighted that the elderly population has been continually increasing according to the Brazilian Institute of Geography and Statistics (IBGE).⁴⁻⁷

The Elderly Statute states the need to prioritize the quality of life of the elderly, and that family, society, and public officials are responsible for the promotion of their continued health.

To age healthily, it is recommended that the elderly preserve and strengthen their independence, autonomy, interpersonal relationships, and leisure, actively participating in memory games, checkers, dominoes, and physical activities, for example. These games stimulate the mind and body and social perceptions, promoting satisfaction, wellbeing, and the experience of productive interpersonal moments, and exercise physical, psychomotor, and emotional functions.⁸

Recreational games exercise cognitive, emotional, and psychomotor processes; provide moments of leisure that help promote mental health through entertainment, integration, and communication; and promote happiness in the elderly. Integration within a group of institutionalized elderly was promoted through the introduction of recreational games, and the hemodynamic parameters of memory, feelings, and communication between the elderly and the professionals were analyzed to understand the impact of these activities.

This study aimed to demonstrate the importance of physical activity associated with playful activities for hemodynamic parameters and health promotion in the elderly, with the resultant dialogue being a great ally⁴⁻⁶ in identifying their needs.

MATERIALS AND METHOD

The study was performed by a team of teachers and students from the Nursing Course of the Federal University of Goiás (*Universidade Federal de Goiás - UFG*) - Jataí Regional Division, and the Physical Educator from the municipality, to promote the health of the elderly living in the Vila Vida Nursing Home.

According to the Jataí City Hall, state of Goiás (GO), the Vila Vida Nursing Home is a public non-profit institution and entity, which houses elderly couples and retired people aged 60 or older, who do not have their own house and have preserved functional autonomy, in housing units.⁹

This is a descriptive cross-sectional study with a quantitative and qualitative approach. Data collection and physical exams were always completed before the recreational activities, because medication was taken after activities began. There were 30 elderly people living in the Vila Vida condominium, aged between 60 and 89. However, as many of the residents experienced difficulties in reconciling the proposed activities with their commitments outside the condominium, only nine

participated in the activities, and vital signs, body mass index (BMI), and interview data were collected and analyzed for these participants. Interventions were performed weekly, in morning meetings lasting two hours for a total of 10 meetings, that is, 20 hours.

An invitation was first made to the resident elderly, explaining the aims of the study and the activities that were going to be developed. Following acceptance, an interview was performed, during which the following data were collected: systemic blood pressure (SBP), measured using a manual aneroid sphygmomanometer, and heart rate (HR) and respiratory rate (RR), measured using a clock (Polar). Weight (kg) was measured using the scale from the housing unit, and height (cm) using a tape measure. The interventions took place after individual data collection. Seven weekly meetings were performed, during which the group was distributed between different game tables (checkers, UNO, dominoes) and conversation circles. A final get-together with family members and friends present closed the activities.

This extension project was legally supported by the Research Ethics Committee of the Federal University of Goiás (CEP/UFG), being approved under Report nº 1.008.808. The study was conducted in compliance with ethical principles, according to resolution 466/2012. Statistical analysis was performed by calculating averages \pm standard deviation. Values in figures are averages. Categorical variables were expressed as proportions or percentages. The D'Agostino-Pearson normality test was used to check whether a random variable was normally distributed and to calculate the probability of the underlying random variable being normally distributed, using BioEstat 3.0 software. The Student's *t*-test and Mann-Whitman test were used to compare the SBPc and SBPb components, depending on sample normality, using the SPSS 2.0 for Windows software. Differences were considered significant at $p < 0.05$. A databank was created, in which the qualitative variables were separated and stored for use in future studies.

RESULTS

Demographic data

As previously mentioned, nine elderly people residing in the Vila Vida Nursing Home with an average age of 74.5 years participated in the activities; of these, seven were widowers, six were illiterate, and all had been residing in the facility for over five years.

Analyzed parameters

The data from the nine elderly participants at the beginning of the project (first appointment) and after the interventions (final appointment) were compared (Table 1).

Overall, systolic blood pressure (SP), diastolic blood pressure (DP), and pulse pressure (PP) decreased between the first and the final intervention. However, this decrease was only statistically significant ($p < 0.05$) for SP, confirming that blood pressure decreased following health education.

Most participants (66.7%, $N = 6$) were overweight or obese, which is related to increased cardiovascular risk. It was therefore necessary to alert the participants about the need to change their eating habits and increase physical activity

Table 1. Clinical data obtained from the elderly during the first and last visits to the Vila Vida condominiums. Jataí, Goiás, Brazil, 2016.

First appointment									
Patients		SP	DP	PP	HR	RR	Weight	Height	BMI
1		150	80	70	73	16	49,5	1,5	22
2		110	80	30	56	16	66,9	1,79	20,8
3		130	60	70	63	20	70,3	1,63	26,4
4		130	70	60	62	16	113,6	1,5	50,4
5		120	80	40	61	16	73	1,55	30,3
6		170	80	90	78	20	54,3	1,59	21,4
7		130	80	50	46	23	81	1,5	36
8		120	80	40	62	20	83	1,75	27,1
9		120	100	20	51	19	61,9	1,47	28,6
	Average	131	79	52	61	18	73	2	29
Last appointment									
Patients		SP	DP	PP	HR	RR	Weight	Height	BMI
1		120	80	40	69	17	49	1,5	21,7
2		120	80	40	62	17	66,5	1,79	20,7
3		120	80	40	64	20	75	1,63	28,2
4		120	90	30	51	18	113,3	1,5	50,3
5		110	80	30	66	20	72,3	1,55	30,0
6		120	80	40	70	18	54	1,59	21,3
7		130	50	80	48	20	80,7	1,5	35,8
8		110	60	50	62	19	78,5	1,75	25,6
9		120	80	40	56	18	59,3	1,47	27,4
	Average	119	76	43	61	19	72	2	29
	P	0,04	0,3	0,2	0,4	0,4	0,3	0,5	0,2

Systolic Blood Pressure (SP), Diastolic Blood Pressure (DP), Pulse Pressure (PP), Heart Rate (HR), Respiratory Rate (RR), Weight (kg), Height (cm), Body Mass Index (BMI).

to improve their quality of life and decrease cardiovascular risk. All patients presented HR and RR variations within the normal range.

Interviews

All participants were interviewed, during which they revealed their feelings after the end of the interventions, allowing analysis of how the project activities affected their lives. Overall, the participants were pleased, aware of inadequate actions that do not help them achieve good health, and declared improvements in their mental health.

The interviews were analyzed using qualitative research methods, whereby topics that fell into three analytical categories were identified: 1-Satisfaction with the project; 2-Awareness about healthier lifestyles, and 3-Physical and mental improvements.

1 – Satisfaction with the Project

"You were wonderful (...) The games you brought seemed to brighten up our lives, because Saturdays and Sundays here in this condominium, they are sad, so the games you brought were very good for us, they made us have fun" (Patient 2, interview).

2 – Awareness about healthier lifestyles

"I noticed many things. One of them was our gluttony, because this diarrhea business, sometimes we eat things we can't, and it makes it worse" (Patient 1, interview).

3 – Physical and mental improvements

"Gosh! I thought it was great, very good. We become happier when you arrive here, we learn, we feel good, it controls the way we take the medicines" (Patient 3, interview).

DISCUSSION

This study showed significantly improved SP and decreased PP in the elderly participants between the first and last appointment, and their verbal accounts highlighted the benefits experienced during participation in the project.

PP is the difference between SP and DP and has been extensively described as an early and independent marker of cardiovascular risk (CVR).

Men and women with PP ≥ 50 mmHg therefore presented twice the risk of future cardiovascular events, even when other factors were disregarded. In the present study, the participants presented high PP at the first appointment (52 mmHg), which decreased to normal levels (< 50 mmHg) at the last appointment, following guidance. The high PP observed at the first appointment was observed even for participants with controlled SP and DP at the two assessments (SP < 140 mmHg and DP < 90 mmHg).^{10,11}

Despite the nutritional guidance imparted, no statistically significant differences were observed in BMI. However, this may have been related to the limited time of the intervention (20 hours), which may have been insufficient to show changes in this variable.

In the interview, the elderly spoke of the physical, emotional, and relational improvements they experienced and showed great satisfaction and gratitude for the close presence of professionals.

The elderly need attention, care, and company from their family members and personal relations, who are not always available to meet those needs. As is associated with a lack of family structure, the elderly often do not receive the necessary attention from their loved ones and are therefore put into long-term care facilities.^{12,13}

Health promotion was performed along with the playful activities, conversation circles, and monitoring of vital signs and BMI. This resulted in greater adherence to medication protocols, correcting previously incorrect dosages and daily number of pills, which may explain the decrease in PP. Playful activities and conversation circles were used to develop integration, learning, communication, and exchange of experiences by the elderly, who need so much attention.

FINAL CONSIDERATIONS

This study showed slight improvements in affective, interpersonal, and psychomotor fields and vital parameters in the elderly participants. The small number of participants, collected data, and time of intervention (10 meetings, 20 hours) are limitations of the study. However, these findings may contribute to the development of future studies, since they indicate a trend of improved quality of life in the elderly population.

The monitoring of vital signs and BMI together with recreational games and conversation circles raised participants' awareness about their own health and self-care. The participants showed euphoria and joy when they saw the team in the condominium, and the number of participants increased over time. Therefore,

the team developed a sense of closeness with the elderly, who eventually began talking about their problems, feelings, life stories, how they missed people, and their daily difficulties.

The project team hopes that the participants take these moments with them into their lives, and that they may pass these experiences on to other elderly, therefore improving the life quality of a greater number of individuals. The interventions were effective in obtaining the reported results. Furthermore, positive feedback from the participants was

received during the interviews. The relevance and possible extensions of this project to other realities of Brazilian cities should therefore be highlighted.

CONFLICTS OF INTEREST

The author declares that he has no conflicts of interest in this work.

AUTHORS' CONTRIBUTIONS: BBP and KFBSFC were the main contributors to the writing of the manuscript. BBP, LBOS, FBF, and LAS participated in the study conception and design. LBOS and FBF helped with the data collection. BBP, LGM, CJB, CRP, and MMA participated in the data analysis and interpretation. MMA, OPAN, and LPE were fully engaged in the statistical analysis. RBF participated in cost obtainment. GSM performed the critical revision of the manuscript regarding intellectually important content.

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