STUDYING THE INFLUENCE OF THE BULGARIAN FOLK DANCES ON STUDENTS’ OVERALL HEALTH

J. Videnova, S.P. Nikolova, D. Vankova
Medical University of Varna (BULGARIA)

Abstract

Background:
Bulgarian Folk Dances (BgFD) with their odd meters and ethnographic variety are unique cultural heritage, which deserves to be preserved and researched. In the presented research project, BgFD are a selective sport discipline part of the curriculum of the students in Medical University of Varna (MU-Varna), Bulgaria. BgFD optimally combine physical activity, social interaction and emotional experience, which could be beneficial for the health of the students.

The aim of the article is to present the preliminary results of a study investigating the influence of BgFD on the health status of the students from MU-Varna. The changes in the subjective health assessment of the participants at physical, mental and social dimensions after activities with BgFD have been taken into account. The same assessment is also carried out for a control group of students from the sport classes. Further, during the whole quantitative phase are assessed students’ attitudes to practice BgFD, their stress levels and anthropometric characteristics. Students’ opinion on their daily curriculum self-management is analyzed. The ambition of this project is to generate relevant data and to provide evidence that BgFD include physical activities, which are equal curriculum alternatives of sportive activities.

Design and Methods:
Herewith are presented the preliminary results from the quantitative prospective cohort study, in which the participants consisted of 184 students, divided into two main groups: BgFD-students (92 students) and sport-students (92 students) during their sports classes at the university. The study protocol has received approval by the Commission of Ethics in Scientific Research, MU-Varna, Bulgaria. Each of the students participated after signing an informed consent.

Concretely, we present the preliminary results from the initial analysis of the subjective health (twice—at the beginning of the semester, before their dancing and sport classes, and at the end of the semester). Further, in the middle of the semester, a standardized tool was applied to determine the stress levels of the participants. The data was collected in MS Excel and statistical descriptive analysis were performed with IBM SPSS Statistics v.23. Hypotheses are tested using paired t-test, mean and standard deviation (SD) for comparisons. The results obtained are considered as statistically significant if the p-value is <0.05.

Preliminary results and conclusions:
The quantitative study was performed during the 2018/2019 winter semester. The preliminary survey results can be structured as follows: 1) Assessing the levels of overall subjective health among students. "BgFD help for better physical and emotional health" - 78.8% of BgFD-group shared this statement. Overall, all the participants reported higher subjective health levels at the end of the semester. The self-rated health of the BgFD-students at the beginning and at the end of the semester is improving significantly at the mental dimension (t=2.868, p<0.006). There is also improvement in the physical and social wellbeing but it is not statistically significant. 2) Assessment of the stress levels of students. Data shows that over 50% of the study participants have high levels of stress. 3) Attitudes and motivation for dancing, daily curriculum self-management. Among the participants, around 37% have never practiced sports or BgFD. For 56.4% of those who are enrolled for BgFD-classes, dances are the only weekly physical activity. 4) The anthropometric profile shows that 59.74% of the participants are obese or overweight.

Recently, there is a growing interest towards BgFD among the young generation. This fact is an additional proof for the relevance of the reported research. Students “agree” or “absolutely agree” that the BgFD are exciting (65%) and interesting (72%). BgFD create social capital (trust, shared norms, openness, common values), which is a prerequisite for the development and sustainability of a healthy
community such as the one that students from the MU-Varna from. The overall results have been presented to institutional, professional and academic experts during the second phase of the research (Delphi-study). Similar research in Bulgaria has not been conducted and reported which provides its social implications and importance for promoting MU-Varna model of BgFD-teaching at a national level.

Keywords: Bulgarian Folk Dances (BgFD), self-reported health, physical activity, students, Medical University of Varna.

1 INTRODUCTION

There are more than 1000 types of Bulgarian Folk Dances (BgFD), which are described in the scientific literature [1; 2]. There is a revival among young people in Bulgaria to practice BgFD. Today BgFD are taught at sport and community clubs, at schools and universities. Since several years students at Medical University of Varna (MU-Varna), Bulgaria also have the opportunity to study BgFD.

BgFD with their odd meters and ethnographic variety are unique cultural heritage, which deserves to be preserved and researched. In the presented research project, BgFD are a compulsory but selective discipline (as an alternative to sports subjects like aerobics, volleyball, football, etc.) in the curriculum of the students from all majors at MU-Varna.

BgFD optimally combine physical activity, social interaction and emotional experience, which could be beneficial and healthy for students. Therefore, BgFD are also viewed as a health promotion intervention which targets the overall health and wellbeing of students.

The research applies the holistic approach to health, which incorporates a broader understanding of the nature of health and its determinants [3]. Health is not only a bio-medical entity but also a focus of health promotion theories and practices. Health by nature is a social phenomenon [4]. It is time to work towards broadening the understanding of health and building awareness among both communities and key stakeholders and underlying the potential positive health impacts of health promotion programs, policies and strategies. This process requires moving beyond, towards more recent upstream structural indicators (such as social, political, cultural and economic determinants), such as assessing the benefits of BgFD-practicing, in order to encompass the widest possible understanding of personal wellbeing [5].

The improvement of wellbeing and quality of life are the social and policy targets of the 21 century. It is related with our subjective perception of good life, with life satisfaction, and happiness. The concept of quality of life, related to health refers to a personal perception of physical, mental health and social functioning over time [6]. Researchers in the public health domain use quality of life instruments to measure the effects of health promotion interventions or to monitor self-reported health in a community in order to identify population needs [7; 8].

The terms “quality of life”, “subjective health”, “self-assessed health”, “self-reported health”, “overall health”, “health status”, “health-related quality of life” are used interchangeably in the literature. For the purpose of this study the quality of life definition is derived directly from the WHO definition of health: “Health is a state of full physical, mental and social well-being and not merely the absence of disease” [9]. Thereafter, subjective health is viewed as three-dimensional: physical, mental and social dimensions.

The aim of the article is to present the preliminary results of a study investigating the influence of BgFD on the health status and quality of life of students from MU-Varna. Changes in the subjective health assessment at physical, mental and social levels after activities with BgFD of the participants have been taken into account. The same assessment is also carried out with a control group of students who practice different than the BgFD sport. Further, during the quantitative phase are assessed students’ attitudes to practice BgFD and their stress levels. Students’ opinion on their daily curriculum self-management is also analyzed. An anthropometric profile of students is going to be outlined. The ambition is to generate relevant data and to provide analysis and evidence that BgFD are an equal alternative to a sportive activity.

2 DESIGN AND METHODS

The study protocol consists of a quantitative and qualitative phase [10]. The quantitative prospective cohort study has already be carried out and the preliminary results are reported here. Based on the presentation of these results, a qualitative survey (Delphi technique) has been initiated, which will lead to an expert consensus on the place of the BgFD as a discipline in the students’ curriculum in all
universities in Bulgaria. For the purposes of exploring the influence of BgFD and sports on students’ self-reported health, motivation, time-management have been designed two questionnaires – the so called in the study protocol: start-up and end-up self-administered questionnaires. The standardized tool, developed by Paul C. Bragg and Patricia Bragg in 2008 is adapted for the purpose of the study in order to measure the stress levels of the students [11].

The subjective health is defined in three dimensions- physical, mental and social. Every dimension has five health status levels ranging from 1 [very bad health status], through 2 [bad health status], 3 [good health status], 4 [very good health status], to 5 [excellent health status].

There was also an opportunity for the participants to rate their health twice (at the beginning and at the end of the semester) through a “thermometer” type or the so called visual analogue scale. They need to answer the question: “As a whole how do you evaluate your health if you can measure it in a continuum from 1 (the worst health status) to 100 (the best possible health status)?”.

The study protocol has received approval by the Commission of Ethics in Scientific Research, MU-Varna, Bulgaria. Each of the students participated after signing an informed consent.

The data was collected in MS Excel and statistical descriptive analysis were performed with IBM SPSS Statistics v.23. Hypotheses are tested using paired t-test, mean and standard deviation (SD) for comparisons. The results obtained are considered as statistically significant if the p-value is <0.05.

3 PRELIMINARY RESULTS

The study was conducted during the 2018/2019 winter semester. Herewith, are presented the preliminary results from the quantitative prospective cohort study, in which the participants consist of 184 students from all majors, divided into two main groups: BgFD-students (92 students who choose to practice BgFD) and sport-students (92 students) during their sports classes (volleyball and aerobics) at the university.

The demographic analysis shows that the younger participants are 18 years old and the oldest participant is 45 years old. The average age is 21 years. The comparative analysis of the sample, divided into 2 groups of BgFD-students (92 students) and sport-students (92 students) shows that the groups are nearly identical in terms of demographic characteristics and representation of all the specialties at the university. In both groups the predominate part are the medical students as they are the largest part of the student community at MU-Varna. In both groups female representatives predominate, which corresponds to the real proportion of the students studying BgFD and practicing sports at class (Table 1). The first and second-year students are the largest number, because they have more physical activities hours in their curriculum. All this gives us the opportunity to make a comparative analysis between the two groups e.g. between the BgFD-students and the sport-students.

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>BgFD-students</th>
<th>Sport-students</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>aerobics</td>
<td>volleyball</td>
<td>all</td>
</tr>
<tr>
<td>Number</td>
<td>92</td>
<td>61</td>
<td>31</td>
</tr>
<tr>
<td>Gender – female</td>
<td>75</td>
<td>61</td>
<td>16</td>
</tr>
<tr>
<td>number</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender – male</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Numbers - %</td>
<td>17 – 18.5 %</td>
<td>0</td>
<td>15</td>
</tr>
</tbody>
</table>

The preliminary survey results can be structured as follows: 1) Assessing the levels of subjective health among students; 2) Assessment of the stress levels of students. 3) Attitudes and motivation for BgFD-practicing, daily curriculum self-management. In this article are presented mainly the preliminary results related to subjective health assessment of the students from the two groups.
3.1 Assessing the levels of subjective health among students

Quality of life is a major goal in the context of public health. Herewith, it is a “mirror image” of the classical WHO-definition and is assessed in three dimensions: physical, mental and social (communication, self-realization, satisfaction from your daily activities).

"BgFD help for better physical and emotional health" - 78.8% of the BgFD-students shared this statement. The subjective health is assessed in the defined three dimensions: physical, mental and social in five health status levels. For the purpose of the analysis the levels have been merged as follows: 1 [very bad health status] and 2 [bad health status] levels in one group; 3 [good health status] and 4 [very good health status] in another group; the “excellent” level 5 is presented separately (Fig. 1).

Overall, all the participants reported higher subjective health levels at the end of the semester (Fig. 1).

The self-rated health of the BgFD-students at the beginning and at the end of the semester is improving significantly in the mental dimension (t=2.868, p<0.006). There is also improvement in the physical (t=1.246, p<0.216) and social dimensions (t=0.532, p<0.596) but it is not statistically significant.

The self-reported health of the sport-students at the beginning and at the end of the semester is also improving at all dimensions. There is a statistically significant improvement in the physical (t=2.340, p<0.021) and mental dimensions (t=2.868, p<0.006) of health. The improvement in the social dimension is there (t=1.543, p<0.126) but it is not statistically significant.

There was also an opportunity for the participants to assess their health twice (at the beginning and at the end of the semester) through a “thermometer” type or a visual analogue scale. They were asked: “As a whole how do you evaluate your health if you can measure it in a continuum from 1 (the worst) to 100 (the best) possible health status?”

The mean state of health recorded on the visual analogue scale of the BgFD-students was 70 out of 100 (SD±23) and 85 out of 100 (SD±21). For the sport-group the mean state of health recorded on the visual analogue scale is 68 out of 100 (SD±23), and at the end of the semester was 85 or 100 (SD±21). These figures again show improvement of the health status and similarities in this direction between the two groups.
The question “How do you evaluate your health status today at the following fields: physical, mental and social (communication, self-realisation, satisfaction from your daily activities)?” was included both in the start-up and end-up questionnaires.

**Figure 1. Numbers of participants according the reported health status levels in the two groups (BgFD-students and sport-students).**

The question: “As a whole how do you evaluate your health if you can measure it in a continuum from 1 (the worst) to 100 (the best) possible health status?” was included in the start-up and in the end-up questionnaires.

**Fig. 2. Self-rating of the health status from 1 to 100 by the participants from the two groups (sport-students and BgFD-students) in the beginning and at the end of the semester.**

In order to present a more integral picture of the preliminary project results we summarize some accents from other parts of the quantitative phase. The cross-sectional assessment of the students’ stress levels shows that over 50% of all the study participants have high levels of stress. Among the participants, around 37% have never practiced sports or BgFD. For 56.4% of those who are enrolled for BgFD-classes, dances are the only weekly physical activity. The anthropometric profile shows that 59.74% of the participants are obese or overweight. Students who are enrolled in the BgFD-classes reported to be more self-organized and motivated to study.

### 4 DISCUSSION AND CONCLUSIONS

Recently, there is a growing interest towards BgFD among the young generation. Even students who do not study BgFD express positive attitudes towards BgFD: 65% of the respondents "absolutely agree"
or "agree" that BgFD are exciting, and 72% of the participants find BgFD interesting. Almost completely rejected are the claims that BgFD are boring or old-fashioned - over 90% of both groups "totally disagree" or "disagree" with these statements. In summary, the results show positive attitude of students towards the BgFD. This fact is an additional proof of the relevance of the reported research.

It is important however to look from a health promotion standpoint at BgFD which could be a possibility for highly effective intervention at both individual and community (academic) levels.

In health promotion research and practices, health-related quality of life has been increasingly acknowledged as a valid and appropriate indicator to measure health needs and outcomes. Measuring health rather than disease is a methodological challenge which has recently received more attention and should be further explored in target-setting exercises at a community level. Well-being targets, including health perception have to be currently mainstreamed [12]. The research idea to assess subjective health rather than taking blood samples from the participants is harmonized with the WHO-guidance. We focus on the positive health and try to pay particular attention to BgFD which could be an attractive and a health alternative to any sport activity. Moreover, the teaching of BgFD at MU-Varna fits to the sustainable educational and emotional model [13] which guarantees sound outcomes [14; 15].

It is evident from the results of the survey (Fig. 1 and Fig. 2) that the subjective health assessment is improving in the BgFD-group but also in the sport-group. The mean state of health recorded on the visual analogue scale is similar in both groups. Therefore, we could suggest that studying BgFD is an equal physical activity alternative to both individual and collective sports classes.

Healthy lifestyles are the most powerful health determinant. Further, 56.4% of the BgFD- students reported that BgFD are their only physical activity, which underlines the importance of BgFD as an alternative choice in the students’ curriculum.

"BgFD help me to manage everyday stress and the heavy workload"- around 70% of the students „fully agree“ or „agree“ with this statement. The fact that only 20% of the participants declare “lack of stress” gives us additional motivation for further health promotion research related to the emotional, invigorating and beautiful BgFD.

BgFD create social capital (trust, shared norms, openness, common values), which is a prerequisite for the development and sustainability of a healthy community such as the students from the MU-Varna. The preliminary results have been presented in the second phase of the research (Delphi-study).

Currently, the Delphi study is undergoing. It is being conducted in two rounds until consensus is reached on the special place of BgFD in the students’ curriculum. Two Delphi cards have been drawn, the second following the first. The first card with questions to the experts was accompanied by a briefing document that presented the results of the quantitative study. A summary document will be drawn up to all participants in the survey. Three expert panels have been formed, each representing a relatively homogeneous group: 1) Expert panel with key national experts in the field of sports and academic education; 2) Institutional panel of Experts designing and approving the university curricula; 3) Professional panel of specialists responsible for the implementation of the sports training programs for students. Similar research in Bulgaria has not been conducted and reported which provides its social implication and importance for promoting MU-Varna model of BgFD-teaching at a national academic level.

ACKNOWLEDGEMENTS

This research project was approved and received a financial support by “Nauka” funds of the Medical University of Varna, Bulgaria. The presented protocol is part of the PhD-project of Jhulieta Videnova and would not have been possible without the MU-Varna leadership support for innovations and research promotion.

We would like to thank Ivan Vankov, a student at Sofia University, for the technical support!

REFERENCES


