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## **Impact of Menstruation Cycle on Physical Activity of University's Students in Banská Bystrica**

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### **Abstract**

In the article the author was trying to find out opinions of university female students on executing a motion activity during periods. Throughout the analysis of gathered results she found out, that university female students don't execute a motion activity in a full range and the hours are being used ineffectively during periods.

**Keywords:** menstruation cycle; university female students; motion activity.

### **Introduction**

Life is an admirable gift of nature which we get from it. It depends only on every person what his life, its content and value will be. Sport and motion activity represent the specific area of human activity. Regular sports and recreational activity lead to the healthy way of life. Absence of the natural motion with the increasing age cause civilization diseases as the obesity, cardiovascular illness and diabetes are. Psychological resistance in everyday life goes down as well. Regular sports activities lead to an improvement of psycho-motoric function of the (a) human body and also to an aesthetic appearance of the female students who study at the university.

### **Problem**

Health is the value which contributes to better life quality including university students. We agree with Kompan (2003) about the general characteristics of the university students who are specific group of population aged from 18 to 25 years. It is important for this group of population to consolidate an obtained relation to the physical activity and also to enhance the theoretical knowledge in the use of leisure, sports and recreational activities. The most important characteristic features of university students are substantial changes in the life of an individual which are mostly connected with the changes in the ranking values of a person, in the lifestyle, gradual independence and in the way how to use their free time. During the studies in this group of inhabitants the amount of psychical and physical stress raises what contributes to increased fatigue. That is why students have opportunities to use the different forms of physical activities which provide the stability of mentation and eliminate adverse effect of nervous tension.

It is known from many researches that there is a strong correlation between the physical activities in the free time and academic success. People with higher education try to develop more effort to do sports activities in their free time. They are aware of the importance of physical activity for their health. Sports and recreational activities in their free time create kind of form of their lifestyle. Lower educated people have less interest in sports activities in their free time and in order to consolidate their health they make mistakes which begin in their (daily) regime and end with disinterest in physical activities.

Michaela Bimpi-Dresp (2007) states that during the period we can do any kind of sports, it depends only on us. Physical activity has a relaxing and calmative effect on many girls and women. During the period women take part in physical activities differently. There are some who train unlimited, but it is usually only a light training. Activities of endurance and strength are limited. In the case of younger athletes training is stopped for 1 or 2 days or the training is reduced only on warm-up, improvement of techniques etc. Most women try to solve this problem by themselves.

Many of them realize the less they train the less difficulties they have. During the Physical Education a teacher do not force girls or women to do physical activities, but he/she has no objection if they want to do them. It is just a question of social tact and aesthetics than the health hazard. Women who do not do any sports activities are in risk that causes functional defect, obesity, diseases of blood circulation and so doctors strongly recommend them to do physical activities regularly, during their whole life. Women should start with their physical activities at the primary school and in the higher grades they should confirm in it. Later they should increase the training intensity and capacity. If you train regularly, the period can not be a barrier for you. Maybe it will be necessary for you to change your training plan slightly. During the period women should care about their relaxation and should not train very hard.

Gynecologists recommend appropriate motion and light exercises. Hard sport performances or exhausting trainings are not recommended especially during the first days of period that are accompanied by spasms, stronger bleeding or unpleasant pain. A week before your period you maybe do not feel very well and you do not want to do any exercises, especially if you suffer from PMS. Do not worry and train. Do not give up physical activities because in these days training is so effective especially in burning fat. Train cardio, spinning or play tennis. A week after a period is also very positive. Certainly you feel new energy. This week is ideal for loosing your weight. Because of lower estrogen level in your body, you should mainly concentrate on relaxing exercises as for example yoga or callanetics. Higher level of tiredness is characteristic feature in the middle of the period therefore you should try to do exercises that make you “explosive” as dance, aerobics or combat sports. If you do not want to skip you should try pilates or yoga. Very important is to obey your body and its actual needs. Every period or every cycle is different.

Many factors as for example tiredness, stress, psychic and your daily menu can influence the period. (<http://www.prebaby.estranky.cz/clanky/menstruacia/menstruacia>)

Researches which have been made in this area (Baisová, 2009, Izáková, 2010 etc.) show long-lasting decline of an interest in physical activity of university female students.

The contribution is part of grant task VEGA 1/0757/12 „ Reactive and adaptation indicators of changes of athletes’ physical and psychical abilities with connectivity with biorythms with various lenght of period“.

**The aim**

The main aim of the work was to find out the impact of physical activity on the menstrual cycle of Matej Bel University female students in Banska Bystrica.

**Tasks (of research)**

**In order to fulfill our aim we provided the following tasks:**

1. Through the inquiry find out the attitudes and opinions of university female students towards the physical activity during their periods.
2. To analyze the students’ answers and provide conclusions (for practise) for university female students towards the physical activity during period.

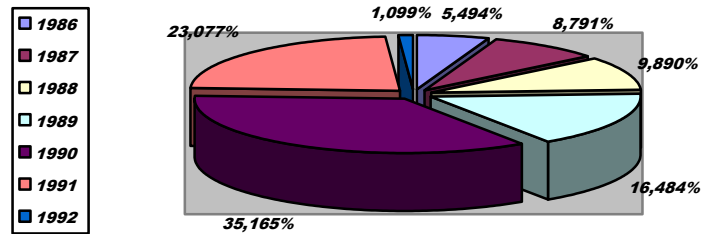
**Methodology**

The research sample consisted of 91 (100 %) university female students who have different approbation subject as the Physical Education (PE). Female students attended aerobics within the project Sport for All. The inquiry consisted of 12 questions and all participants responded anonymously. Research has been made during the summer semester 2011. Averaged age of female students was 21 years. Most of female students (participants) attended 2<sup>nd</sup> university year 32 (35,16 %), just 2 (2, 19 %) of participants were students of 5<sup>th</sup> university year.

Chart 1: Birth year of participants

Birth year	n	%
1986	5	5,49
1987	8	8,79
1988	9	9,89

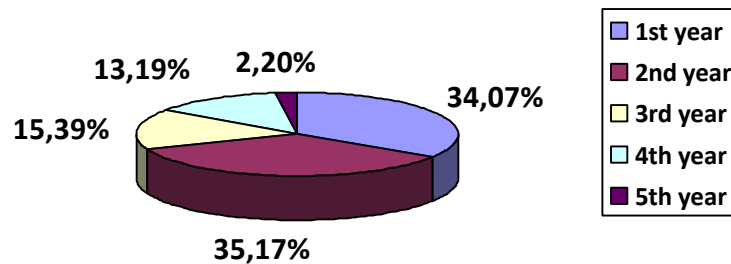
<b>1989</b>	<b>15</b>	<b>16,48</b>
<b>1990</b>	<b>32</b>	<b>35,16</b>
<b>1991</b>	<b>21</b>	<b>23,07</b>
<b>1992</b>	<b>1</b>	<b>1,09</b>
<b>Overall</b>	<b>91</b>	<b>100 %</b>



Picture 1: Birth year

Chart: 2 Study years

<b>Study year</b>	<b>n</b>	<b>%</b>
<b>1<sup>st</sup> year</b>	<b>31</b>	<b>34,06</b>
<b>2<sup>nd</sup> year</b>	<b>32</b>	<b>35,16</b>
<b>3<sup>rd</sup> year</b>	<b>14</b>	<b>15,38</b>
<b>4<sup>th</sup> year</b>	<b>12</b>	<b>13,18</b>
<b>5<sup>th</sup> year</b>	<b>2</b>	<b>2,19</b>
<b>Overall</b>	<b>91</b>	<b>100 %</b>



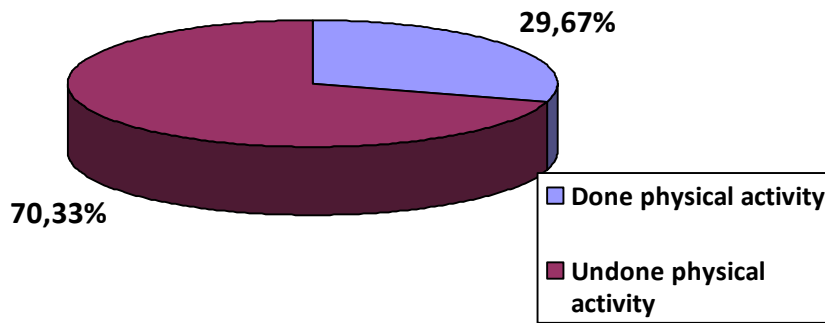
Picture 2: Study year

**Results**

We have found out alarming fact. 64 (70, 33%) of all participants do not practice any physical activity and just 27 (29, 67%) participants do physical activity regularly.

Chart 3: Doing physical activities in general

	<b>n</b>	<b>%</b>
<b>Done</b>	<b>27</b>	<b>29,67</b>
<b>Undone</b>	<b>64</b>	<b>70,33</b>
<b>Overall</b>	<b>91</b>	<b>100 %</b>



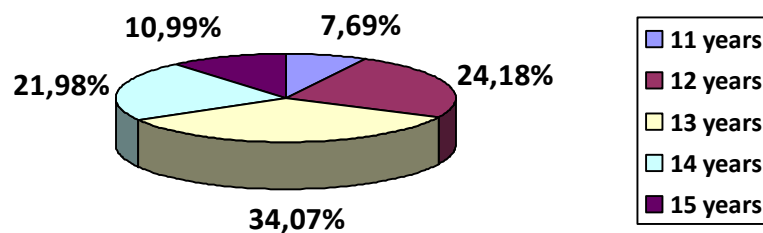
Picture 3: Doing a physical activity in general

Based on some knowledge of practice (Jančoková, 2000) one of the important factor of normal sexual evolution is the age of the participants during their period. After our analysis we came to the following results. Results show that the age of the period of university female students who practiced recreational physical activity is 13 years. From the physiologist point of view we wanted to know whether they have regular or irregular period. 77 (84, 61%) of all female students have regular period and just 14 (15, 38%) have irregular menstrual cycle.

**Characteristics of the period**

Chart 4: Age of the first period

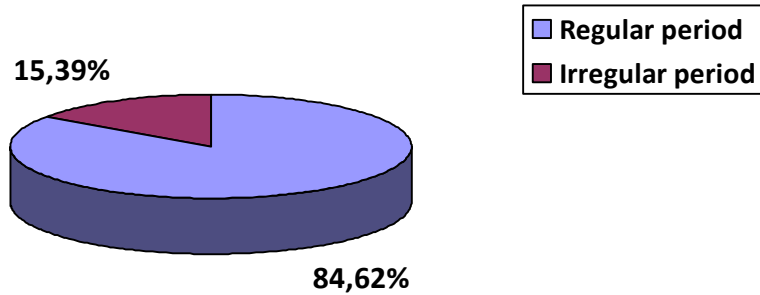
	<b>n</b>	<b>%</b>
<b>11</b>	<b>7</b>	<b>7,69</b>
<b>12</b>	<b>22</b>	<b>24,17</b>
<b>13</b>	<b>31</b>	<b>34,06</b>
<b>14</b>	<b>20</b>	<b>21,97</b>
<b>15</b>	<b>10</b>	<b>10,98</b>
<b>OVERALL</b>	<b>91</b>	<b>100 %</b>



Picture 4: Age of the first period

Chart 5: Regularity of a period

	<b>n</b>	<b>%</b>
<b>Regular</b>	<b>77</b>	<b>84,61</b>
<b>Irregular</b>	<b>14</b>	<b>15,38</b>
<b>OVERALL</b>	<b>91</b>	<b>100 %</b>

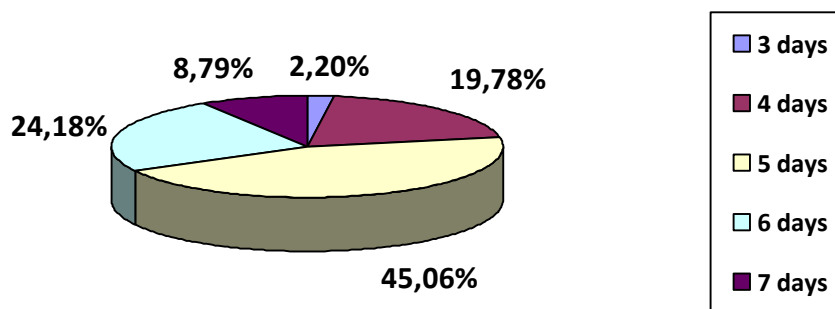


Picture 5: Regularity of a period

Most of the female students 41 (45,06 %) have a 5-days-period and just 2 (2,20 %) female students state that they have a period for 3 days.

Chart 6: Duration of a period

	<b>n</b>	<b>%</b>
<b>3 days</b>	<b>2</b>	<b>2,20</b>
<b>4 days</b>	<b>18</b>	<b>19,78</b>
<b>5 days</b>	<b>41</b>	<b>45,06</b>
<b>6 days</b>	<b>22</b>	<b>24,18</b>
<b>7 days</b>	<b>8</b>	<b>8,79</b>
<b>OVERALL</b>	<b>91</b>	<b>100 %</b>

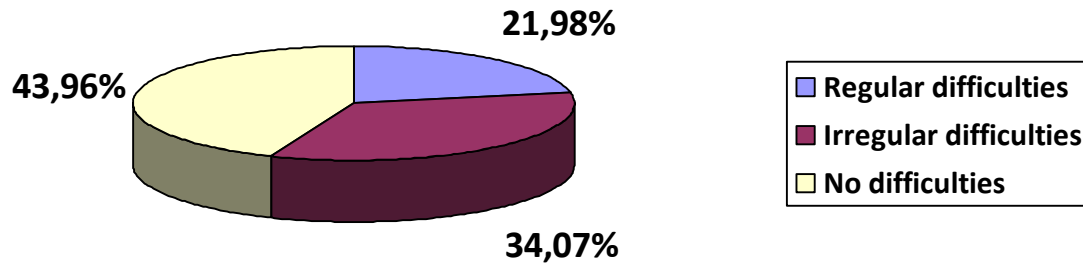


Picture 6: Duration of a period

20 (21,97 %) female students state they have regular difficulties during their period. 40 (43,95 %) participants have no difficulties during the period.

Chart 7: Difficulties during a period

	<b>n</b>	<b>%</b>
<b>Regular difficulties</b>	<b>20</b>	<b>21,97</b>
<b>Irregular difficulties</b>	<b>31</b>	<b>34,06</b>
<b>No difficulties</b>	<b>40</b>	<b>43,95</b>
<b>OVERALL</b>	<b>91</b>	<b>100 %</b>

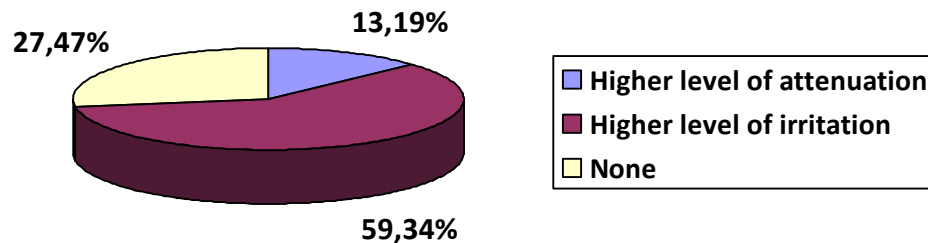


Picture 7: Difficulties during a period

54 (59,34%) university female students state that PMS syndrome is connected with higher level of irritation, but 25 of them do not state any PMS feelings.

Chart 8: PMS feelings

	<b>n</b>	<b>%</b>
<b>Higher level of attenuation</b>	<b>12</b>	<b>13,18</b>
<b>Higher level of irritation</b>	<b>54</b>	<b>59,34</b>
<b>None</b>	<b>25</b>	<b>27,47</b>
<b>Overall</b>	<b>91</b>	<b>100 %</b>

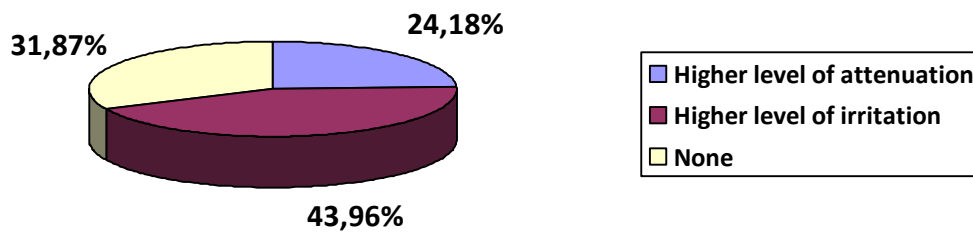


Picture 8: PMS feelings

40 (43,95 %) female students have higher level of irritation during their period and 22 (24,17 %) of them have higher level of attenuation.

Chart 9: Period feelings

	<b>n</b>	<b>%</b>
<b>Higher level of attenuation</b>	<b>22</b>	<b>24,17</b>
<b>Higher level of irritation</b>	<b>40</b>	<b>43,95</b>
<b>None</b>	<b>29</b>	<b>31,86</b>
<b>OVERALL</b>	<b>91</b>	<b>100 %</b>



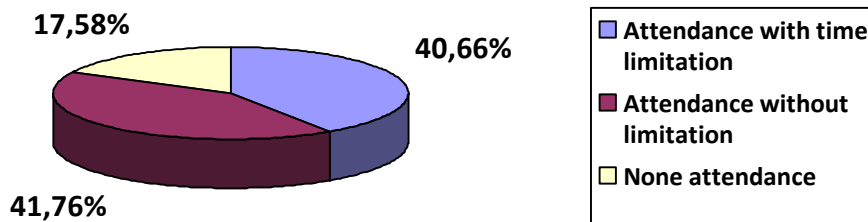
Picture 9: Period feelings

**Assessment of physical performance during a period**

38 (41, 75%) participants have no problem to attend aerobics lessons during their period, but 37 (40, 65%) female students attend these lessons only with time limitation.

Chart 10: Aerobics lessons attendance

	<b>n</b>	<b>%</b>
<b>Attendance with time limitation</b>	<b>37</b>	<b>40,659</b>
<b>Attendance without limitation</b>	<b>38</b>	<b>41,758</b>
<b>None attendance</b>	<b>16</b>	<b>17,582</b>
<b>OVERALL</b>	<b>91</b>	<b>100 %</b>

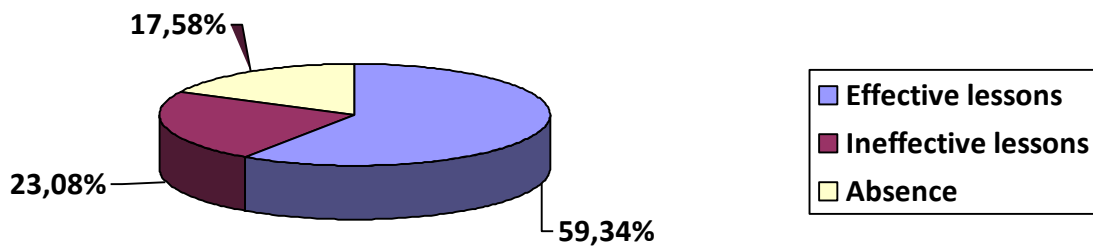


Picture 10: Aerobics lessons attendance

Female participants take part in the aerobics lessons during their period but 54 (59,34 %) female students state that lessons are not utilized effectively and 16 (17,58 %) participants do not take part.

Chart 11: An effectivity of aerobics lessons

	<b>n</b>	<b>%</b>
<b>Effective lessons</b>	<b>21</b>	<b>23,07</b>
<b>Ineffective lessons</b>	<b>54</b>	<b>59,34</b>
<b>Absence on lessons</b>	<b>16</b>	<b>17,58</b>
<b>OVERALL</b>	<b>91</b>	<b>100 %</b>

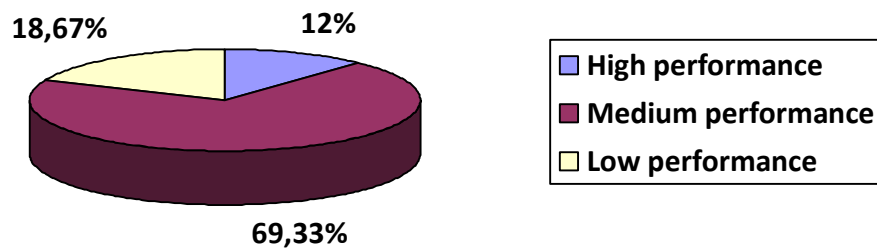


Picture 11: An effectivity of aerobics lessons

Performance of 52 (69,33%) participants during their period is at the middle level and performance of 14 (18,67 %) female students is at the low level.

Chart 12: Students' performances on aerobics lessons

	<b>n</b>	<b>%</b>
<b>High</b>	<b>9</b>	<b>12</b>
<b>Medium</b>	<b>52</b>	<b>69,33</b>
<b>Low</b>	<b>14</b>	<b>18,67</b>
<b>OVERALL</b>	<b>75</b>	<b>100 %</b>



Picture 12: Students' performances on aerobics lessons



### **Conclusion**

Research has shown that it is very important to do the physical activities regularly. Physical activity should be essential part of daily regime of female students during their periods. On the basis of analysis of results, we can say that 38 (41, 75%) participants do a physical activity also during their periods. This activity helps them to overcome not only physical stress and tiredness, but also to better their performance and to relax themselves. Good organization of daily regime and active relaxation through physical activities can make the life of university female students better and without an unpleasant emotional feeling during their periods. Female students who do sports regularly, reduce the risk of psycho – emotional state of menstrual difficulties as our research confirmed.

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