

The relationship between physical activity levels and behavioural regulation for exercise in university students.

Introduction

Physical Activity plays a very important role in preventing people from getting chronic diseases, and by supporting mental and physical well-being. The benefits of regular physical activities can help improve cardiovascular health and endurance, which can also help support healthy ageing. However, there are loads of benefits of regular physical activity but there are people that do not engage in regular exercise.

Motivation in exercise psychology means why someone chooses to start, continue to exercise. People exercise for intrinsic motivation for e.g, they're exercising because it feels good, they're enjoying the activity etc. In addition others may be motivated by exercising extrinsically for e.g, because the subject may want to lose weight, they may be doing it for rewards and praise.

Self Determination Theory (SDT) explains how motivation is influenced by three primary



psychological needs: Autonomy, Relatedness, and Competence.¹ Firstly, Autonomy refers to when the subject is feeling in control of their decision making regarding physical activity. 'Relatedness', refers to when someone is feeling supported by someone else or is connected to others whilst exercising. Finally, the final psychological need was 'Competence', that is when someone is feeling capable and is able to get success out

of exercise. 'Organismic Integration Theory' (OIT), it is a sub theory to the Self Determination Theory, this type of theory specifically refers to the extrinsic types of motivations in various forms, and why this type of motivation is instrumental in physical activity. This sub theory describes the four different types of extrinsic motivation such as: External Regulation, Introjection, Identification, and Integration.² As people realise the advantages of exercise, they may eventually become more self-motivated, going from exercising because they are under pressure to exercising because they appreciate its benefits, according to Organismic Integration Theory.⁴

Students who are more physically active tend to report higher levels of autonomous motivation, while less active students report more controlled motivation and amotivation, according to earlier research using the BREQ-2 and IPAQ.³ These results highlight how crucial it is to understand how university students' motivation varies depending on their activity level.

Aim:

Using the BREQ-3 as a motivation measure, the current study that I undertook aims to analyse the relationship between university students' levels of physical activity (low, moderate, and high) and behavioural control for exercise.

Hypothesis:

According to the hypothesis, the more active students will report higher levels of autonomous motivation (identified, integrated, intrinsic), whereas those who are less physically active will report much higher levels of controlled motivation (external, introjected) and amotivation.

Method

Participants

For this study, I had one subject – a male university student aged eighteen. He was a convenience sample, picked from my psychology class in a timetabled practical. The participant was eligible to take part because he was over 18 and therefore able to provide informed consent.

Materials

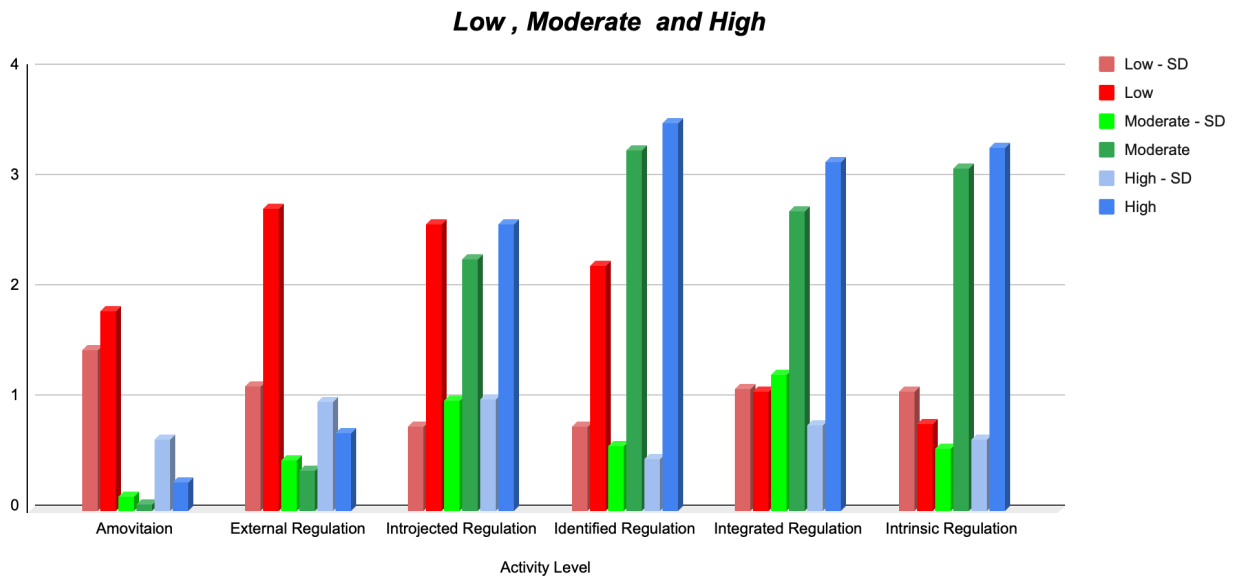
Two self-report questionnaires were used. The study which I conducted, I had used the International Physical Activity Questionnaire (IPAQ) to categorise people's activity levels, which as its name suggests, is an international standard. The questionnaire categorises people as having low, moderate or high levels of physical activity, based on how much they report moving around each week.

To measure motivation toward exercise, the researchers used the Behavioural Regulation in Exercise Questionnaire (BREQ-3). The questionnaire has six subscales (Amotivation, External Regulation, Introjected Regulation, Identified Regulation, Integrated Regulation and Intrinsic Motivation).

Procedure

Both questionnaires were completed in the classroom, thus all responses were collected under identical conditions. completed the task within 20 minutes. Before the session, the subject was told about the study, that his or her responses would be confidential and that participation was voluntary. The participant gave informed consent and was made aware that she could withdraw at any time. Some readers may question the participation of human subjects.

Results



Activity Level	Low - SD	Low	Moderate - SD	Moderate	High - SD	High
Amovitaion	1.46	1.81	0.13	0.05	0.64	0.25
External Regulation	1.12	2.73	0.45	0.36	0.98	0.7
Introjected Regulation	0.76	2.59	1	2.28	1.01	2.6
Identified Regulation	0.76	2.22	0.58	3.26	0.47	3.51
Integrated Regulation	1.1	1.08	1.23	2.71	0.77	3.16
Intrinsic Regulation	1.08	0.78	0.56	3.1	0.64	3.29

The participant's motivation ratings were compared using three categories of physical activity from the IPAQ: low, moderate, and high. Each BREQ-3 subscale's score showed unique differences in motivation across exercise levels.⁵

The individual showed the highest levels of amotivation (M = 1.46) and fairly high levels of introjected and external regulation for low physical activity. These behaviours indicate a lack of internal motivation, which is either restricted or nonexistent. In this category, ratings for more autonomous motivational types, such as acknowledged, integrated, and internal regulation, were much lower. The participants' motivation ratings were compared using three categories of physical activity from the IPAQ: low, moderate, and high. Each BREQ-3 subscale's score showed unique differences in motivation across exercise levels.

In the moderate activity category, autonomous types of motivation began to develop. The participant reported higher scores for identified regulation (2.22), integrated regulation (1.08), and intrinsic motivation (0.78) compared to the low-activity condition. Meanwhile, amotivation and external regulation decreased, suggesting a shift towards more self-directed motivation.

The high activity category showed the strongest levels of autonomous motivation. The participants recorded their highest values for identified (3.26), integrated (2.71), and intrinsic regulation (3.10). Amotivation was lowest in this category (0.64), indicating that the participant engaged in physical activity because they personally valued it, enjoyed it, and felt competent while doing so.

Overall, the data reveal a clear pattern: as physical activity levels increase, self-motivation increases while amotivation and controlled forms of motivation decrease.

Discussion

The purpose of this study was to look into how levels of physical activity are linked to various forms of exercise motivation, using the BREQ-3 subscales to distinguish between low, moderate, and high activity categories. In summary, the findings revealed a clear pattern: as physical activity grew, so did autonomous types of motivation, while controlled and amotivation dropped. This pattern is consistent with the ideas of Self-Determination Theory (SDT), which suggests that people are more likely to participate in and maintain physical exercise when their psychological needs for autonomy, competence, and relatedness are met.

In the low activity category, the subject performed the best in terms of amotivation and regulated motivation (external and internal regulation). It suggests that when his physical activity levels were low, he exercised mostly out of pressure, guilt, or lack of motivation. According to SDT, people with limited autonomy or perceived competence generally struggle to find enjoyment or value in physical exercise, which might explain why controlled motivation is so common in the low-activity condition.

In the moderately active activity group, there was an obvious trend towards autonomous motivation, with increases in recognised, integrated, and intrinsic control. This suggests that when physical exercise becomes more constant, people may begin to realise its personal worth or develop early sensations of skill and enjoyment. According to Organismic Integration Theory (OIT), this process involves the progressive internalisation of externally controlled behaviours. The participant's results mirror this change, suggesting that moderate exercise may be an important point where motivation begins to grow in a more self-determined direction.

The highest levels of autonomous motivation were found in the high activity group, which had the highest scores for identified, integrated, and intrinsic motivation. The result is consistent with a prior study utilising the BREQ-2 and IPAQ, which revealed that highly active students report more self-determined sources of motivation. From an SDT point of view, this finding makes sense since regular physical activity is more likely to meet the demands for competence (feeling

capable), autonomy (choosing to exercise), and relatedness (feeling supported or socially linked), all of which promote long-term involvement.

Although it generated clear trends, the study had a number of problems. Additionally, it only included one subject. Therefore, the results are unpredictable and should be considered with caution. The results were only based on survey responses, which might include disadvantages such as poor knowledge or a desire to seem more active. However, the use of these reliable questionnaires, IPAQ and BREQ-3, and a controlled test setting are strengths that contribute to the reliability of the results.

In summary, the results agree with SDT and OIT. This suggests that more physical activity is highly related to greater autonomy motivation. More research with more participants will help identify whether this pattern is constant across university student groups.

Conclusion

In conclusion, the results of this brief investigation reflect the concept that increased physical exercise is connected with more independent types of motivation. As the students activity levels grew from low to moderate to high, their identified, integrated, and intrinsic regulation scores increased, while amotivation and controlled motivation dropped. This pattern of behaviour lines up with Self-Determination Theory and Organismic Integration Theory, which both indicate that people grow more self-motivated as they understand the value of exercise. Though the study was limited to one participant, the results highlight the potential importance of developing autonomous motivation in order to motivate a long-term physical activity routine. Further research with bigger sample sizes would help me give better evidence and lead to more reliable results.

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