

Physical Activity and Behavioural Regulation for Taking Part in Exercise

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AI Acknowledgement

Research	AI has assisted me in finding terms so that I utilise them correctly when I've read them in the articles I've written about.
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Introduction

Regular physical activity is linked to better health, improved mood, and reduced risk of long term illness, yet many people find it challenging to sustain regular exercise habits (Craig 2003, Monteiro 2021). Motivation is a key factor for exercising behaviour and one of the most widely used structures for understanding the Self-Determination Theory (SDT). SDT states that people require three basic psychological needs, autonomy, competence and relatedness for the best motivation and wellbeing (Ryan and Deci 2017, Ryan 2023). When these needs are supported motivation becomes more self determined leading to more persistent and enjoyable engagement in physical activity.

Within SDT the Organismic Integration Theory (OIT) explains how motivation ranges from amotivation to intrinsic motivation, with several forms of extrinsic motivation in between (DECI and Ryan 2000, Ryan and Vansteenkiste 2023). The Behavioural Regulation in Exercise Questionnaire-3 is widely used to measure these types of motivation in exercise settings (Markland and Tobin 2004). Research shows that autonomous forms of motivation identified, integrated, and intrinsic regulation—predict regular activity and long-term adherence (Lindahl 2020, Hopkins 2022). In contrast controlled motivation, such as external or introjected regulation normally produces short term or inconsistent exercise behaviour (Ryan 2022, Hancox 2018)

A significant amount of research supports the importance of motivation for different activity levels. More active people usually report a higher autonomous regulation, while inactive people show higher amotivation and weaker psychological need satisfaction (Viveiros 2025, Mazzoni 2021). The beneficial effects of autonomous motivation on physical activity behaviour, habit strength, and wellbeing are also supported by meta-analytic research (Ryan 2022, Teixeira 2012). For university students motivation is especially important because of the academic pressure, reduced time, and low motivation can cause barriers to exercise (Perry 2017, Kwan 2012). Students who experience enjoyment, support and autonomy are more likely to maintain active habits and achieve healthier levels of physical activity.

The impact of psychological need satisfaction in predicting activity levels across various student groups is another significant topic that has been addressed in recent study. Research indicates that students report greater competence and autonomy when they feel encouraged by classmates, coaches, or their surroundings, which reinforces autonomous

forms of motivation (Wang & Liu, 2022). This is especially important for college students who could be adjusting to independent living and handling a variety of responsibilities. Unmet needs increase the likelihood of restricted motivation or amotivation, which lowers the likelihood of engaging in physical activity over the long run (Mazzoni et al., 2021).

Additionally, studies reveal that students' motivational characteristics might change a lot based on their background, degree of athletic experience, and self-assurance in training settings. For instance, students who have participated in organised sports in the past frequently report higher levels of intrinsic motivation, whereas those who have not may rely more on outside influences or be unclear about the advantages of exercise (Monteiro et al., 2021). Designing interventions that benefit all students, not just those who are currently involved, requires an understanding of these distinctions.

Physical activity levels are often measured by the International Physical Activity Questionnaire (IPAQ-SF), which divides people into groups according to their weekly MET minutes such as low, medium and high activity. (Craig 2003). Studies that combine the IPAQ and BREQ-3 often reveal variations in these groups' motivating styles. People who are more active report higher levels of intrinsic and integrated regulations, where those who are active report higher levels of amotivation and lower levels of psychological need satisfaction. (Monteiro 2021, Hopkins 2022, Hodge and Jackson 2020).

The aim of the present study is to examine the relationships between behavioural regulation and physical activity level among university students using the BREQ-3 motivation scores and IPAQ physical activity classifications.

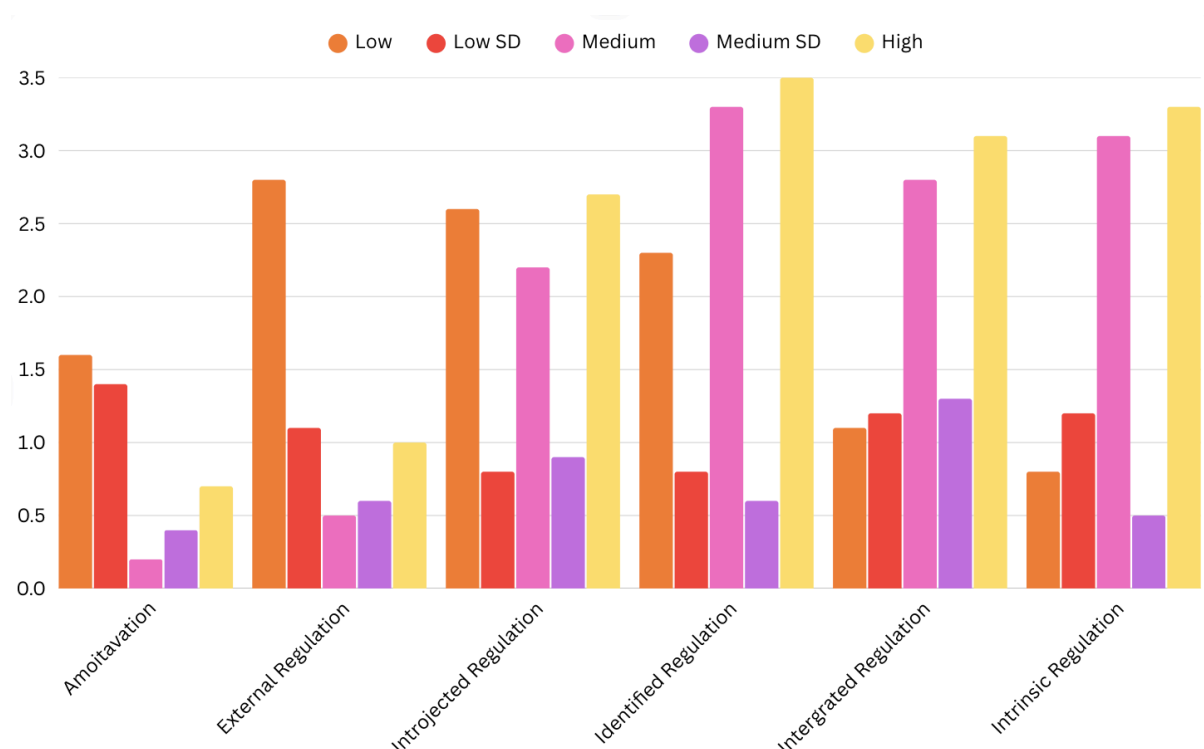
Methods

Participants were undergraduate students enrolled at the University of Wales Trinity Saint David. They completed two questionnaires, the BREQ-3 which measures six types of motivational regulations, and also IPAQ-SF which assess weekly physical activity levels. of exercise motivation. Amotivation, external regulation, introjected regulation, identifiable regulation, integrated regulation, and intrinsic motivation are all covered in the BREQ-3. On a scale of 0 (Does not apply) to 4 (applies for me), students scored each statement. The IPAQ-SF classifies people into low, Prior to filling out the questionnaires, students were instructed to be truthful and to consider their typical weekly activities rather than just one exceptionally active or idle week. In order to lessen inaccuracies, this was done. Students were free to take their time and consider their responses since the questionnaires were completed on their own.

Both questionnaires were finished by the students. Following data collection, the BREQ-3 motivation ratings were categorised into groups based on whether the student's IPAQ values indicated low, medium, or high levels of physical activity. After that, a graph displaying the average score for each motivation type made it easy to understand how the three groups differed from one another.

Results

This graph summarises the Mean scores for the BREQ-3 for low, medium and high physical activity groups based on IPAQ-SF classification



The findings demonstrated distinct motivational variations among activity levels. Increased physical exercise led to an increase in autonomous motivation. The identified regulation rose from 2.3 in the low group to 3.5 in the high group and 3.3 in the medium group. Similar trends were seen in integrated and intrinsic regulation, with high-activity students exhibiting the highest scores. As activity level rose, motivation declined. Amotivation was highest in the low group (1.6) and significantly lower in the middle and high groups (0.2 and 0.7, respectively). The low-activity group had the highest level of external regulation (2.8), followed by a steep decline in the medium group (0.5) and a minor increase in the high group (1.0). There were only slight variations in the introduced regulation, which ranged from 2.2 to 2.7 between groups.

In general, students who reported more physical activity showed lower levels of amotivation and larger levels of autonomous motivation, which is in line with SDT predictions.

Discussion

The findings of this study align strongly with previous SDT-based research. Students with higher activity levels reported higher levels of identified, integrated and intrinsic regulation, supporting SDT prediction that autonomous motivation leads to healthier and sustained behaviour (Ryan and Deci 2017, Ryan 2022). Students who are highly active seem to enjoy and include exercise into their identities which are associated with consistent participation and favourable psychology outcomes (Hopkins 2022, Teixeira 2012).

The fact that low activity students exhibit the highest levels of motivation is in line with past research demonstrating that individuals with low self esteem steer clear of physical activity in their day to day life (Viveiros 2025, Mazzoni 2021). This suggests students who lack motivation may benefit from interventions focused on autonomy support, competence building and social connection (Ryan 2023).

These findings also demonstrate how behaviour is influenced by motivational quality rather than just quantity. The medium activity group, for instance, had a mix of reduced external regulation and moderate autonomous motivation. This could be an indication of a time of transition as kids start to move away from external influences and towards more internalised motivations. According to research, these shifts frequently occur when people enjoy pleasant experiences or build confidence in environments related to physical activity (Monteiro et al., 2021). People may eventually progress towards more autonomous forms along the motivational continuum as a result.

Some moderately active students may exercise because of pressure, appearance concerns, or social expectations, as shown by external regulation peaking in the medium group. SDT contends, however, that managed motivation does not result in sustained engagement or contentment (Hancox et al., 2018; Ryan et al., 2021). Students who routinely exercise are more likely to be motivated by internal factors rather than external pressure, which could account for the low level of external regulation in the high-activity group.

The results also have obvious applications for university wellbeing teams and exercise psychologists. More kids can develop autonomous motivation if situations that foster autonomy, competence, and relatedness are created. Providing a variety of recreational options, assisting novices with training, and encouraging constructive social interactions are a few examples. These techniques can lessen controlled motivation and amotivation while boosting pupils' self-assurance in physical activity settings. This is consistent with broader studies that demonstrate how need-supportive settings improve wellbeing, adherence, and habit strength (Hopkins et al., 2022; Viveiros et al., 2025).

These results highlight clear practical implications. Exercise psychologists and university wellbeing services can use SDT principles to support students motivation. Strategies include offering students meaningful choices in exercise programmes which encourage enjoyable activities, providing positive feedback to build competence, and creating a supportive social environment (Viveiros 2025, Ryan and Deci 2017). Additionally, research indicates that autonomous motivation supports both pleasant emotional experiences and continuous repetition in the development of stronger exercise routines (Hopkins et al., 2022).

All things considered, the results support the significance of motivation quality in explaining levels of physical activity. Less active students exhibit lower motivation and higher levels of amotivation, whilst more active students exhibit more internalised and autonomous control. Therefore, encouraging autonomy, competence, and relatedness is necessary to support student welfare and exercise engagement in order to create long-lasting, self-driven motivation.

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