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Profile of Regulatory Motivation of Exercise Among Final Year Students Based on the BREQ-2 Instrument

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Abstract

Introduction: Physical activity is one of the most important factors in maintaining physical fitness and mental health among students. Sometimes motivation to exercise declines over time among final-year students due to academic responsibilities, focus on completing final assignments, and a new orientation focused on preparing for the world of work. This situation is one of the factors causing a decline in motivation to exercise. Although recent studies have examined the motivation to exercise in the general population, specific studies examining the motivation to exercise among final-year university students are still very limited. In researching their exercise motivation profiles, it is essential to support a sustainable active lifestyle in their college environment. **Objectives:** This study aims to examine the regulation of exercise motivation among final-year university students based on the Behavioral Regulation in Exercise Questionnaire-2 (BREQ-2) and to investigate the most dominant form of motivation regulation that influences their participation in exercise. **Method:** This study used a quantitative descriptive design with 35 final-year active students selected through purposive sampling. The BREQ-2 instrument, consisting of 19 items across five motivational dimensions, was administered online. The collected data was analyzed using descriptive statistics to obtain the mean value, minimum value, maximum value, standard deviation, and percentage distribution for each dimension. **Result:** The findings of this study show low scores of amotivation (M= 2.43) and external regulation (M= 3.46), indicating indifference and minimal influence from external pressures. Introjected regulations was in moderate category (M= 6.40), reflecting a sense of self-imposed obligation. Identified regulation (M= 12.14) and intrinsic motivation (M+ 13.66) scored the highest, indicating that students engage in exercise based on personal value and enjoyement. **Conclusion:** Overall, the results of the study show a motivation profile dominated by things that arise from and are enjoyed by themselves, especially in identified regulation and intrinsic motivation. However, motivation levels tend to be moderate based on the distribution of scores. The results of this study emphasize the importance of campus efforts in improving opportunities for better and more flexible exercise in order to strengthen sustained participation in sports among final-year students. This study contributes by examining more specific group, namely final-years students, which has not been previously explored in detail or with a specific focus.

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INTRODUCTION

Physical activity plays a very important role in maintaining a person's health, mental well-being, and social life (Abdullah, 2023). Research shows that regular exercise has benefits such as improving cardiovascular function, boosting the immune system, and reducing the risk of chronic diseases(Zhang, 2023). In addition to physical health benefits, exercise is also beneficial for mental health, such as improving mood, reducing stress, and boosting self-confidence (Muhsen & Muhsen, 2020). From an academic perspective, students who actively exercise tend to have better concentration, lower stress levels, and more stable academic performance (Gasiūnienė & Miežienė, 2022).

While previous studies consistently report high intrinsic motivation students, some findings indicate a decline in physical activity during academically demanding periods, suggesting a potential inconsistency between motivation and behaviour(Chen et al., 2025). However, the tendency for students to exercise actively decreases as their academic responsibilities increase, especially among final-year students (Wahyu Mubaraq, Sapulete, Muhammad Sukron Fauzi, & Cahyaningrum, 2022). Final assignments for graduation, job preparation, and internships often make exercise a low priority(Bailey & Fernandez-Chung, 2021). These conditions can lead to negative effects such as decreased physical fitness, sleep disturbances, high stress levels, and decreased motivation to study (Paraschiv, 2024). This is important to study and analyze the psychological factors that influence final-year students in exercising in an effort to improve their lifestyle (Hoan, Thi, Minh, Kien, & Hoan, 2025).

Motivation is one of the factors that influence the psychological aspect of continuing to exercise. Humans fall within a spectrum that includes amotivation (lack of drive), external drive, internal drive, identified drive, and intrinsic motivation, which is self-determination theory (SDT) developed by Deci and Ryan (1985)(Ryan & Deci, 2000). People with intrinsic motivation tend to exercise for pleasure and personal value, while individuals with external motivation tend to be driven by rewards or the demands of their environment (Bandhu et al., 2024). In studying this level of motivation, it is necessary to provide an overview of the quality of student involvement in sports activities (Setiawan, Ermawan, & Fanani, 2025).

The Behavioral Regulation in Sport Questionnaire-2 (BREQ-2) developed by Markland and Tobin (2004) is one of the instruments widely used to measure the dimensions of motivational regulation in the context of exercise (Moustaka, Vlachopoulos, Vazou, Kaperoni, & Markland, 2010). The main dimensions in BREQ-2 are amotivation, external regulation, introjected regulation, identified regulation, and intrinsic motivation, which originate from SDT theory. This instrument has been widely used to evaluate exercise motivation in various populations such as students, athletes, and the general public (Kovács & Kovács, 2021). Its validity and reliability have been tested in various countries and cultural contexts (Kovács & Kovács, 2021). Within the framework of Self-Determination Theory, this study aims to examine whether final-year students motivation is dominated by autonomus or controlled regulation.

In the context of final-year students, this phase often becomes a critical point in the change to an active lifestyle due to academic pressure and the transition to the world of work (Alamsyah, Widhiastuti, & Dewi, 2025). Final-year students represent a critical transition phase where lifestyle habits may either be maintained or decline, making them an important group for investigation. Although many studies have discussed exercise motivation in the general population or among new students, studies that specifically map the profile of exercise motivation regulation among final-year students are still limited (Redondo-Flórez, Ramos-Campo, & Clemente-Suárez, 2022). Therefore, this study aims to describe the profile of exercise motivation regulation among final-year students based on the BREQ-2 instrument and to identify the most dominant form of motivation regulation in their sports exercise activities. The results of this study are expected to provide empirical contributions to the development of strategies for increasing exercise motivation in academic settings.

METHOD

This study uses a quantitative approach with a descriptive design. This approach was chosen to objectively describe the regulatory profile of exercise motivation among final-year exercise students without manipulating variables (Septiawan, Suryana Nasution, & Nurwansyah Sumarsono, 2023). Descriptive design allows researchers to obtain a clear picture of exercise motivation trends based on the dimensions contained in Self-Determination Theory (SDT) (Mappanasingam, Madigan, Kalu, Maximos, & Dal Bello-Haas, 2024)

The population in this study was students of the Faculty of Sports and Health Education. Sampling was conducted using convinience purposive sampling with the following criteria: final-year sports students (semester ≥7) who were still actively attending classes and had experience in sports. This technique was used because the study did not focus on the quantity of respondents, but rather on the suitability of the subjects' characteristics to the research objectives. In addition, a convenience purposive approach was used because the selected respondents were the group most easily accessible to the researcher (Andrade, 2021). Sports students were specifically selected because they are expected to have higher engagement in physical activity, making them a relevant group for examining patterns of exercise motivation regulations. The number of samples involved in this study was 35 sports students (Zuriaturizky & Ghasya, 2024).

The instrument used in this study was the Behavioral Regulation in Exercise Questionnaire-2 (BREQ-2) developed by Markland and Tobin (2004). This questionnaire consisted of 19 statements with a Likert scale of 0–4 (0 = strongly disagree to 4 = strongly agree). BREQ-2 has five dimensions there are analyzed, namely amotivation, external regulation, internalized regulation, identified regulation, and intrinsic motivation. This instrument has been proven to be valid and reliable with Cronbach's alpha results (0.73-0.86) (Carvas Junior et al., 2021). The reliability analysis showed Cronbach alpha values of 0.86 for

intrinsic motivation, 0.73 for identified regulation, 0.80 for intrijected regulation, 0.79 for external regulation, and 0.83 for amotivation(Markland & Tobin, 2004).

The development of instruments and distribution of research permits were the initial stages of this research. Next, the questionnaire was distributed to respondents using Google Forms online to respondents who in to criteria. The data collection process was conducted over a period of approximately two to three weeks. Respondents required around 5-7 minutes to complete the questionnaire. During the data collection, the researcher was present to assist and supervise participant while they complete the google form to ensure that all items were clearly understood and answered properly. The researcher explained how to fill out the questionnaire and asked for consent from the respondents, as stated on the Google form, as a form of participation in this study. All participant provided informed consent prior to participation, and the study adhered to general ethical research standards regarding voluntary participation, confidentiality and data use. The next step that researchers take is to select data to ensure its completeness and accuracy before further analysis.

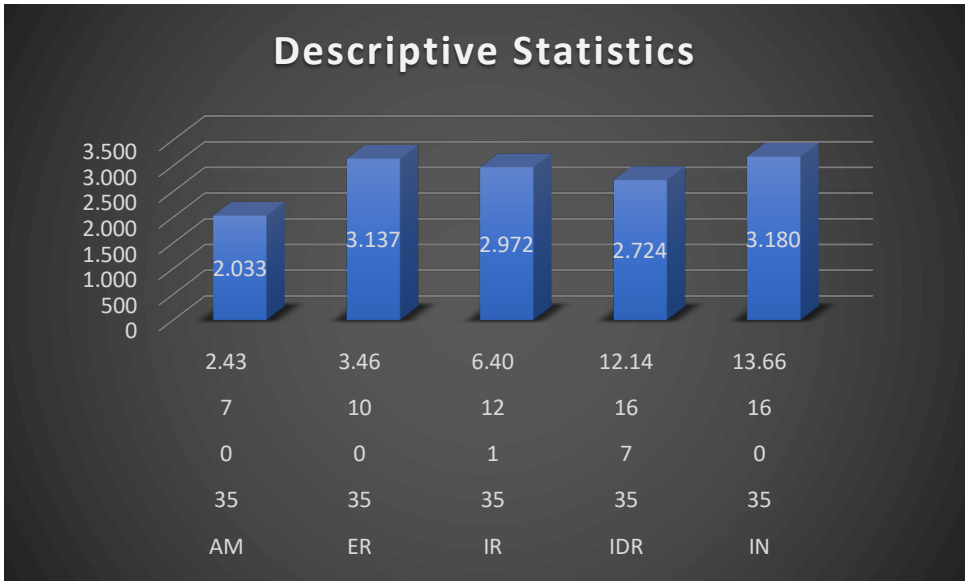
The collected data was then analyzed using descriptive statistics with IBM SPSS Statistics 22. This analysis calculates the average, minimum value, maximum value, standard deviation, percentage, and distribution of scores for each dimension of exercise motivation regulation. The results of the analyzed data provide an overview of the exercise motivation of final-year sports students and aim to identify the most dominant regulation, ranked from amotivation to intrinsic motivation.

RESULT AND DISCUSSION

Result

Table 1. Descriptive Statistics BREQ-2

	Descriptive Statistics				
	n	Min.	Max.	M	Std. D
amotivation	35	0	7	2.43	2.033
External_Regulation	35	0	10	3.46	3.137
Introjected_regulation	35	1	12	6.40	2.972
Identified_regulation	35	7	16	12.14	2.724
Intrinsic_Reulation	35	0	16	13.66	3.180



Picture 1. Graphic Descriptive Statistics BREQ-2

Describe the profile of regulation of motivation in exercise among final-year students based on the BREQ-2 instrument, and identify the most dominant form of regulation of motivation in their exercise activities. The results of this study are expected to provide empirical contributions to the development of strategies for increasing motivation on exercise in academic settings.

Table 2. Amotivational Dimensions

	Amotivation				
	n	Min.	Max.	M	Std. D
AM_1	35	0	4	1.63	1.437
AM_2	35	0	4	.34	.838
AM_3	35	0	3	.23	.598
AM_4	35	0	1	.23	.426

In terms of amotivation, the average score for each item indicates a very low level of disinterest in exercise activities. Item AM_1 has the highest average score (1.63), while AM_2, AM_3, and AM_4 are much lower, indicating that most students do not experience confusion, indifference, or lack of purpose when participating in exercise activities. These results show that the final-year students in this study are not unmotivated, so they still have clear reasons for participating in sports exercise and do not simply exercise aimlessly or without interest.

Tabel 3. External Reguation Dimension

	External Regulation				
	n	Min.	Max.	M	Std. D
E_1	35	0	4	1.00	1.188
E_2	35	0	4	.94	1.162
E_3	35	0	3	.89	.932
E_4	35	0	3	.63	.910

The scores on the external regulation dimension were in the low category, with all items having an average below 1.00. This shows that final-year students tend not to exercise due to external pressures or demands, such as requirements from others, certain obligations, or

rewards. The low scores on this dimension reinforce the finding that student participation in sports exercise is more internal in nature and not merely a result of following rules, encouragement from the environment, or formal obligations that must be fulfilled.

Table 4. Introjected Regulation Dimensions

	Introjected Regulation				
	n	Min.	Max.	M	Std. D
I_1	35	0	4	2.43	1.145
I_2	35	0	4	1.77	1.165
I_3	35	0	4	2.20	1.302

In the introjected regulation dimension, the item values indicate a moderate to fairly high category, with the highest score on I_1 (M = 2.43). This illustrates that some students exercise due to internal motivation in the form of a sense of personal obligation or the need to maintain their self-image. Although not as high as the two dimensions of autonomous motivation, this form of regulation still shows that emotional aspects—such as the desire to feel better about oneself—still play a role in the participation of final-year students in sports exercise.

Table 5. Identified Regulation Dimensions

	Identified Regulation				
	n	Min.	Max.	M	Std. D
ID_1	35	2	4	3.66	.591
ID_2	35	1	4	3.00	.970
ID_3	35	0	4	3.26	1.067
ID_4	35	0	4	2.23	1.114

The identified regulation dimension shows a fairly strong tendency, with the highest average score on ID_1 (3.66). This value reflects that final-year students feel that exercise have important benefits and are a choice that is in line with their personal values. Although ID_4 has a lower score (2.23), in general, students consider exercise to be a valuable activity, so they do it based on an awareness of its benefits, not external pressure. This shows that value-based motivation is one of the main drivers of sports exercise participation.

Table 6. Intrinsic Regulation Dimensions

	Intrinsic Regulation				
	n	Min.	Max.	M	Std. D
IN_1	35	2	4	3.54	.657
IN_2	35	2	4	3.51	.612
IN_3	35	2	4	3.66	.591
IN_4	35	1	4	3.34	.765

The intrinsic regulation dimension had the highest value among all forms of regulation, with all items ranging from 3.34 to 3.66. These data show that final-year students tend to exercise because of feelings of pleasure, interest, and personal satisfaction. The highest average on IN_3 (3.66) shows that students greatly enjoy the sports exercise activities they do. The main motivation for exercising is driven more by personal enjoyment and emotional satisfaction, not just a sense of obligation or external benefits.

Overall, a comparison of the average scores across the five dimensions of the BREQ-2 reveals a clear pattern along the self-determination continuum. The lowest scores were found in amotivation and external regulation, while the highest scores were found in identified regulation and intricnsic motivation. This suggest that the exercise behavior of final year student is dominated by autonomus motivation regulation, which is generally associated with more stable and sustained participation in physical activity.

Discussion

This study found that final-year students have very strong internal motivation for sports. These results are based on their tendency to exercise because they find it enjoyable, meaningful, and personally satisfying. This theory (self-determination theory) shows that student motivation is dominated by autonomous motivation. These findings are consistent with previous research showing that university students tend to display higher levels of intrinsic and identified regulation in physical activity (Kovács & Kovács, 2021). Stable and continuous activity in exercise is supported by autonomous motivation, which arises from a sense of personal freedom, active involvement, and a belief that the activity is in line with one's personal values.

The predominance of intrinsic motivation may also be interpreted as an adaptive response to the heightened academic pressures experienced at the final stage of study. Faced with the demands of completing final projects and fulfilling graduation requirements, students may view physical activity as a form of psychological restoration and a constructive outlet for stress management, helping them maintain overall life balance. Their understanding of the physical and mental health benefits associated with exercise fosters voluntary participation, rather than engagement driven by obligation or external influences. Within this framework, exercise is not merely a supplementary activity but serves as an integral personal strategy to sustain academic performance and well-being. This pattern could indicate a supportive role of exercise in coping with academic demands, despite the absence of direct measurement.

Although external forms of motivation remain present, their influence on students' engagement in exercise appears to be minimal. This indicates that elements such as external expectations, institutional requirements, or incentive-based rewards are not the primary drivers of students' participation in physical activity. Even regulatory mechanisms associated with feelings of obligation or guilt function merely as secondary influences rather than decisive factors. Consequently, motivation derived from pressure whether originating internally or externally does not play a substantial role in shaping the exercise behavior of final-year students.

This situation reflects a favorable quality of students' engagement in physical activity. When individuals participate in an activity out of personal interest and free choice, their involvement is generally more sustained and yields more positive psychological outcomes. This aligns with Self-Determination Theory, which highlights that autonomous motivation

fosters motivational resilience—the capacity to persist in an activity despite encountering challenges. For final-year students, such resilience is particularly crucial for sustaining regular exercise habits amid intense academic pressures.

In practical terms, this motivational profile can serve as the basis for developing sports promotion programs on campus. An approach that emphasizes positive experiences, freedom, and personal relevance will be more effective than an approach that is directive or coercive. Programs that give students the opportunity to choose the types of activities they enjoy, create a pleasant atmosphere, and connect sports with students' well-being needs can strengthen intrinsic motivation and identified regulation that has already developed well. Campuses has an important role in maintaining students' motivation to exercise while improving their holistic well-being.

CONCLUSION

This study shows that although final-year students still have forms of motivation that are oriented towards personal values and positive experiences—such as identified regulation and intrinsic motivation—the level of regulation is not high,so in general their motivation is predominantly autonomus but remains at a moderate level. The dominance of scores that are only in the moderate category, as well as low external regulation and the emergence of introjection elements, indicate that final year students do not yet have a strong and consistent drive to maintain exercise activities amid increasing academic demands. These findings show that academic busyness, final assignments, and the pressure of transitioning into the world of work have the potential to reduce the priority given to physical activity. This condition makes exercise involvement less stable, even though its benefits are recognized. Therefore, efforts are needed to develop support programs on campus that focus on increasing exercise motivation in a more sustainable manner, for example through the provision of flexible activity spaces, fun activities, and integrated stress management strategies. Thus, final year students can be more encouraged to maintain their exercise habits even though they are in a busy academic phase.

AI DISCLOSURE STATEMENT

The authors declare that no generative AI tools were used to generate, analyze, interpret, synthesize, or write the scientific content of this manuscript.

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