

Millenium, 2(Edição Especial Nº21)

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**PERCEÇÕES DOS PARTICIPANTES SOBRE OS COMPORTAMENTOS DOS INSTRUTORES DE FITNESS: FOCO NAS AÇÕES DE FEEDBACK EM AULAS DE GRUPO**

**PARTICIPANTS' PERCEPTIONS OF FITNESS INSTRUCTORS' BEHAVIORS: FOCUS ON FEEDBACK ACTIONS IN GROUP CLASSES**

**PERCEPCIONES DE LOS PARTICIPANTES SOBRE LOS COMPORTAMIENTOS DE LOS INSTRUTORES DE FITNESS: ENFOQUE EN LAS ACCIONES DE RETROALIMENTACIÓN**

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RECEIVED: 19<sup>th</sup> December, 2024

REVIEWED: 19<sup>th</sup> January, 2026

ACCEPTED: 12<sup>th</sup> February, 2026

PUBLISHED: 09<sup>th</sup> March, 2026

DOI: <https://doi.org/10.29352/mill0221e.39635>

## RESUMO

**Introdução:** O instrutor de Fitness desempenha um papel de reconhecida importância, cuja intervenção se estende desde a orientação técnica, por meio de encorajamento e atenção, à criação de estratégias motivacionais e estilo de comunicação.

**Objetivo:** Analisar a eficácia e qualidade das aulas de grupo em contexto de *health club*, focado nas percepções dos praticantes acerca dos comportamentos dos instrutores, especificamente nas ações de feedback oferecidas.

**Métodos:** O grupo de estudo foi composto por cinquenta frequentadores regulares de dois *health clubs* localizados nas regiões de Viseu e Castro Daire. O questionário QFIF-AG foi aplicado para o contexto específico e, para os processos de análise descritiva e inferencial, recorreu-se à versão 29 do software de estatística SPSS.

**Resultados:** Elevados níveis de concordância foram encontrados em todas as dimensões do feedback. Proximidade, forma, momento de ocorrência e direção correspondem às dimensões mais valorizadas, enquanto a afetividade e a orientação obtiveram avaliações mais baixas. Foram identificadas diferenças significativas em função do género ( $p = .04$ ), da idade ( $p = .04$ ) e da experiência de prática ( $p \leq .01$ ), indicando variações na importância percebida de dimensões específicas do feedback.

**Conclusão:** Compreender os mecanismos que podem melhorar a adesão e fidelização dos clientes é fundamental para manter e aumentar os seus níveis de atividade física.

**Palavras-chave:** atividade física; aulas de grupo; bem-estar; feedback; instrutores de fitness

## ABSTRACT

**Introduction:** The Fitness instructor plays a role of recognized importance, whose intervention ranges from technical guidance, through encouragement and attention, to the creation of motivational strategies and communication style.

**Objective:** To analyze the effectiveness and quality of group fitness classes, focusing on practitioners' perceptions of instructor behaviors, specifically in relation to the feedback actions delivered.

**Methods:** The study group consisted of fifty regular attendees from two health clubs located in Viseu and Castro Daire's regions. The QFIF-AG questionnaire was applied for this specific context, and descriptive and inferential data analyses were performed using version 29 of SPSS software.

**Results:** High levels of agreement across all feedback dimensions were found. Proximity, form, moment of occurrence, and direction were the most highly valued dimensions, whereas affectivity and orientation received lower ratings. Significant differences were found according to gender ( $p = .04$ ), age ( $p = .04$ ), and practice experience ( $p \leq .01$ ), indicating variations in the perceived importance of specific feedback dimensions.

**Conclusion:** Understanding the mechanisms that can enhance client adherence and loyalty is crucial to maintaining and increasing their regular physical activity levels.

**Keywords:** physical activity; group classes; wellbeing; feedback; fitness instructors

## RESUMEN

**Introducción:** El instructor de fitness desempeña un papel de reconocida importancia, cuya intervención abarca desde la orientación técnica, a través del ánimo y la atención, hasta la creación de estrategias motivacionales y el estilo de comunicación.

**Objetivo:** Analizar la efectividad y calidad de las clases de fitness en grupo, centrándose en las percepciones de los practicantes sobre los comportamientos de los instructores, específicamente en relación con las acciones de retroalimentación ofrecidas.

**Métodos:** El grupo de estudio estuvo compuesto por cincuenta asistentes regulares de dos clubes de salud ubicados en las regiones de Viseu y Castro Daire. Se aplicó el cuestionario QFIF-AG para este contexto específico y se realizaron análisis de datos descriptivos e inferenciales utilizando la versión 29 del software SPSS.

**Resultados:** Se encontraron altos niveles de acuerdo en todas las dimensiones del feedback. La proximidad, la forma, el momento de ocurrencia y la dirección fueron las dimensiones más valoradas, mientras que la afectividad y la orientación recibieron valoraciones más bajas. Se hallaron diferencias significativas según el género ( $p = .04$ ), la edad ( $p = .04$ ) y la experiencia de práctica ( $p \leq .01$ ), lo que indica variaciones en la importancia percibida de dimensiones específicas del feedback.

**Conclusión:** Comprender los mecanismos que pueden mejorar la adherencia y lealtad de los clientes es crucial para mantener e incrementar sus niveles regulares de actividad física.

**Palabras clave:** actividad física; clases grupales; bienestar; comentarios; instructores de fitness

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## INTRODUCTION

The globally accepted definition of physical activity, as established by the World Health Organization (2004), is "any bodily movement produced by skeletal muscles that results in energy expenditure." This concept encompasses everything from everyday activities to those structured around specific objectives, as it aims to improve health (both physical and mental), serve as a preventive measure against diseases, and simultaneously contribute to enhancing the quality of life. By including both structured and unstructured movement strategies integrated into individuals' daily routines, physical activity plays a crucial role in their longevity, lifestyle choices, and even in the "cult of the body."

In this regard, Rodrigues et al. (2020) highlight health clubs and gyms as privileged means of structuring physical activity, supported by data from the Eurobarometer (2018), which, at the time of its interpretation, showed that most Portuguese people engage in physical activity in these spaces. In fact, in this context, Campos et al. (2023) note that Portuguese fitness trends mirror those of Europe (Franco et al., 2022). Among the many factors influencing the choice of these fitness and wellness service providers, recent literature points to the need for social integration. It is estimated that participants turn to gyms for a sense of belonging to a community (Huang et al., 2019), for the services' variety, modalities, and exercises offered (Legrand et al., 2020), which tends to increase intrinsic motivation, and for their commitment to health and well-being (Meyer et al., 2019; Scully et al., 2020).

As these topics reflect a combination of social, psychological, physical, and practical factors that influence adherence to these spaces, and in alignment with the central aim of this study, we emphasize the factor of professional support, which pertains to the presence of qualified instructors providing close guidance, supervision, and safety during exercise. This is crucial for the individual's overall experience and the achievement of their goals (García et al., 2021).

Based on the assumption that all practitioners are unique and, as such, possess specific characteristics and individual needs, the symbiosis between instructor and client/practitioner, within the scope of their professional relationship, has been a subject of significant analysis in the Sports Psychology field, as evidenced by studies from Batista et al. (2019), Sosa et al. (2021), Flores et al. (2022), and López-Gajardo et al. (2022), among other important research.

In this context, group activities represent one of the primary domains of an instructor's role, as they are the spaces where instructors directly engage with the interpreters, going beyond simply prescribing exercises or correcting postures (Ramos et al., 2021). According to Franco and Simões (2017), customer retention and satisfaction are largely based on the group fitness instructors' profile across four quality key areas (Campos et al., 2016): professional (characterized by commitment, dedication, punctuality, and attendance), relational (the empathy established with clients), technical (the ability to perform movements, control timing, and synchronize with musical rhythms), and pedagogical (instruction, class management, and feedback delivery). Campos et al. (2019; 2021), Damásio et al. (2016), Fernández et al. (2012), Gomes et al. (2020), and Ortega-Martínez et al. (2021), among other researchers, have dedicated their studies to the service quality provided by instructors over time, aiming for continuous improvement to enhance practitioner satisfaction. Based on research, development, and validation for Portugal, various instruments have been designed to assess the performance of instructors in their specific roles. Among these, the QIF-AG - Quality of Fitness Instructor in Group Activities, developed by Campos et al. (2016), the Q-CIF - Questionnaire on the Pedagogical Behavior of Fitness Instructors (Franco et al., 2013), and the QFIF - Questionnaire on Feedback from Fitness Instructors, created by Simões et al. (2013), stand out.

The diversity of studies thus highlights the impact of an instructor's behavior in creating an environment conducive to the development and maintenance of healthy habits within the community they engage with, influencing not only the participants' physical performance but also their emotional and psychological well-being. Among the various aspects of their role, communication skills stand out as a key competency for the success of the session the instructor leads, as it goes beyond the simple transmission of content and information, forming the core of interaction, motivation, and guidance for a positive training experience.

Feedback, in the context of group classes, is a critical tool for the practitioners' development and progression, as it shapes their learning (Magill, 2020; Schmidt & Lee, 2019), while also serving as a preventive action against injuries (Wrisberg, 2019). At the same time, appropriate feedback strengthens the relationship between instructor and individual, contributing to the practice's success (Goodwin & Becker, 2016).

In the fitness context, feedback is widely recognized as a critical pedagogical tool that supports motor learning, motivation, and performance enhancement. In motor learning theory, feedback is categorized into intrinsic and extrinsic types: intrinsic feedback refers to sensory information naturally produced by the participant's own movement (e.g., proprioceptive and visual cues), whereas extrinsic feedback is information provided by an external source, such as an instructor or technology, to supplement intrinsic awareness and guide performance adjustments (Magill, 2020; Otte et al., 2020).

Within the realm of extrinsic feedback, it is important to distinguish knowledge of results (KR) and knowledge of performance (KP) as two fundamental categories. KR provides information about the outcome of an action relative to a goal (e.g., completion time or accuracy), offering participants a clear understanding of success or failure, whereas KP focuses on movement's quality and mechanics, directing attention to performance technique-specific aspects (Sharma et al., 2016).

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In Fitness settings such as group classes, instructors commonly integrate these feedback types to meet both learning and motivational needs. Additionally, the feedback can vary from verbal cues, which are often utilized to articulate corrective or reinforcing information, to visual demonstrations and physical proximity that are employed to enhance comprehension and engagement (Campos et al., 2020).

Research in group Fitness contexts also highlights feedback's social and motivational functions, as demonstrated by Koka and Hein's work (2005). Instructor behaviors shape participant preferences and outcomes. Thus, positive and motivational feedback (e.g., affirmations of effort or encouragement to maintain technique) can significantly enhance participants' intrinsic motivation and satisfaction, which are key determinants of sustained exercise adherence and engagement.

In this regard, the present study aims to analyze the effectiveness and quality of group fitness classes, focusing on practitioners' perceptions of instructor behaviors, specifically in relation to the feedback actions delivered.

## 1. METHODS

This section outlines the methodology used for data collection and analysis, followed by a brief interpretation of the results regarding the participants' perceptions of instructor feedback in group fitness classes. These findings will inform conclusions about which instructor behaviors and feedback dimensions are most important for practitioners.

### 1.1 Participants

The study group consisted of 50 regular attendees from two health clubs located in Viseu and Castro Daire's regions. Of these, 74% were female, and 26% were male, with ages ranging from 21 to 51 years (mean age =  $34 \pm 8$ ). The inclusion criteria included membership for at least six months, attendance of at least two group classes per week, and an age of 16 years or older. These criteria ensured that all participants had relevant experience in the context of group classes in health clubs and, simultaneously, guaranteed the relevance and applicability of the collected data.

### 1.2 Instrument

Data were collected using the Fitness Instructor Feedback Questionnaire – Group Classes (QFIF-AG), developed by Simões et al. (2013). The instrument was validated and developed to assess the effectiveness and quality of group fitness classes, specifically focusing on practitioners' perceptions of instructor behaviors, particularly the delivered feedback actions. This instrument's choice was based on its widespread recognition for robustness and validity in evaluating the instructor's teaching skills, their interaction with practitioners, the quality, relevance, and variety of proposed tasks, as well as the space (context) and available materials. It measures overall satisfaction based on these factors' combination.

The instrument is divided into two main parts. The first part is dedicated to the participant's characterization, gathering essential demographic and contextual information relevant to the study's objectives, which includes variables such as health club membership, gender, age, educational background, practice experience (membership duration), participation frequency, and types of attended group classes.

The second part consists of forty-five categories designed to infer feedback, analyzing the "what", "how", "when", and "who", according to the 11 dimensions outlined by the questionnaire:

- Objective (evaluative, prescriptive, descriptive, or interrogative);
- Content (focused on specific topics such as exercise, breathing, muscle action, and/or the perception of body segments in space, rhythm, or, conversely, the absence of content);
- Retrospective (accumulated and/or separate);
- Form (auditory, visual, kinesthetic, or mixed);
- Affectivity (positive, negative, or neutral);
- Exercise (with or without);
- Proximity (instructor close to or distant from the practitioner(s));
- Orientation (instructor's position in relation to the practitioner(s), which may be in mirror, corresponding, or from the side);
- Moment of Occurrence (concurrent or terminal – immediate and/or delayed);
- Follow-up of Practice After Feedback (isolated, followed by observation, continuous feedback, or feedback cycle);
- Direction (individual, group, class).

Each of these dimensions allows for a detailed and multidimensional analysis of factors that influence the quality of instruction. At the same time, due to its comprehensive structure, they provide a solid foundation for collecting data on health club participants' perceptions, facilitating subsequent results' analysis and the formulation of relevant conclusions for the study. The questionnaire utilizes a Likert scale composed of five levels, ranging from 1 ("strongly disagree") to 5 ("strongly agree"), allowing the participants' perceptions analysis based on the degree of agreement expressed with each statement presented.

DOI: <https://doi.org/10.29352/mill0221e.39635>

### 1.3. Procedures

Up to the point of data collection, the research process involved several essential steps to ensure the study's integrity and validity. Initial contact with the health clubs was made to explain the study's objectives and, most importantly, to obtain the necessary authorization for participation, which involved direct communication with the facilities' responsible managers.

Subsequently, the questionnaires were prepared in paper format and carefully distributed to ensure that all potential participants had access to the aforementioned documents. Informed consent forms, which ensured participants' confidentiality and anonymity, accompanied the questionnaires. Each health club was assigned a letter, "A" or "B," to prevent any identification of the involved institutions. The consent form also explained in detail the study's objectives, procedures, the participants' rights (including the right to withdraw at any time), and the measures taken to protect the privacy of the responses. A deadline for questionnaire collection was established, and the process was carried out in person to ensure the security and integrity of the data. It was ensured that all distributed questionnaires were retrieved and that the data were kept confidential throughout the process.

### 1.4 Statistical Analysis

Data analysis was conducted using version 29 of the IBM Statistical Package for the Social Sciences (SPSS). The analysis approach included both descriptive and inferential procedures to obtain a detailed and comprehensive understanding of the collected information. The use of parametric tests for comparison of means (T-Test and ANOVA) and non-parametric tests (Mann-Whitney and Kruskal-Wallis) was determined based on the (non)compliance with normality and homogeneity assumptions. The confidence interval was set at 95%, establishing the significance level of the study (*p-value*) at 0.05.

## 2. RESULTS

The results presented in Table 1 show that, of the eleven dimensions analyzed, none displayed missing values, indicating that all participants responded in full. Although the scale was not fully explored in any of the dimensions, the values reveal an elevated level of agreement across all dimensions (ranging from "agree" to "strongly agree"), as corroborated by the modal values. The exceptions were "affectivity" and "exercise," which exhibited moderate mean values. The most highly valued dimensions were "proximity," "form," "moment of occurrence," and "direction." On the other hand, "affectivity" and "orientation" were the least valued dimensions.

**Table 1 - Analysis Dimensions and Assigned Scores**

Dimension	N		Mean	Mode	Min	Max
	valid	missing				
Objective	50	0	3.74	3.63	3.38	4.00
Content	50	0	3.84	3.75	3.50	4.13
Retrospective	50	0	3.32	3.00	3.00	4.50
Form		0	4.36	4.14	4.00	4.71
Affectivity	50	0	2.99	3.00	2.67	3.67
Exercise	50	0	3.04	2.50	2.50	4.00
Proximity	50	0	3.68	3.00	3.00	5.00
Orientation	50	0	3.09	3.00	3.00	3.67
Moment of occurrence	50	0	3.72	3.67	3.33	4.67
Follow-up of Practice After Feedback	50	0	3.53	3.50	3.00	4.00
Direction	50	0	4.60	4.00	4.00	4.67

Regarding the inferential analysis process, the following results were highlighted:

- Significant gender differences: Female participants placed significantly more value on the "content" dimension than male participants ( $p = .04$ ).
- Significant age differences: Younger participants valued the "form" dimension significantly more than older participants ( $p = .04$ ).
- Significant differences based on practice experience: Participants with 6 months to 1 year of experience valued the "retrospective" dimension significantly more than those with less than 6 months of experience ( $p = .01$ ).
- Participants with 3 to 5 years of experience valued the "retrospective" dimension significantly more than those with 6 months to 1 year of experience ( $p = .00$ ).

DOI: <https://doi.org/10.29352/mill0221e.39635>

### 3. DISCUSSION

Feedback is a crucial social tool that plays an essential role in personal growth, both individually and collectively, as it allows for the identification of nuances and, most importantly, promotes improvements regardless of the context. In the realm of group fitness classes, this is no exception. The constructive power of feedback enables participants to enhance their performance, with the instructor playing a key role in mediating this progress. The instructor is responsible for providing clear, concise, and objective information that fosters the strengthening of interpersonal relationships.

Naturally, the instructor's behavior varies according to their level of training and experience (Franco et al., 2020; Ramos et al., 2021), with feedback being one of the predictive indicators of the quality perceived by participants (Campos et al., 2020). In this regard, more experienced instructors with higher levels of training tend to pay special attention to the instruction's content and form, aiming to establish a closer relationship with the participants. This approach creates a more positive and friendly environment, as pointed out by Campos et al. (2023).

These findings support the previous studies of Berliner (2001) and Moreira and Januário (2004), demonstrating a proportional relationship between experience and the quality of instruction, typically characterized by clear and consistent communication (with a high degree of repetition), succinctness, objectivity, and supported by demonstration actions. Melo and Campos (2021) also emphasize the importance of kinesthetic feedback in ensuring the correct execution of techniques/exercises, stressing posture correction as a preventative measure against injuries.

Considering this study's analyzed dimensions, the data extrapolation revealed significant results, particularly in the "retrospective" dimension. It can be inferred that providing feedback for each exercise individually, rather than giving feedback for a series of exercises collectively, is preferred by participants. According to Padrão et al. (2019), this preference is due to the ease of processing information in smaller portions, which, in turn, allows for more effective posture correction.

As participants' age increases, the preference for the feedback's direction shifts towards the group setting. Padrão et al. (2019) demonstrated that older participants prefer the instruction to be directed towards the entire group, accompanied by the appropriate demonstration.

In fact, the study by Franco (2009) already suggested that correction is considered as important, if not more important, than the information being conveyed, provided it is done in a positive manner. In this regard, positively evaluating the practice is viewed as an ongoing process of reinforcement, which motivates participants and encourages them to continue progressing in their fitness journey. When feedback is framed in a constructive and positive way, it not only improves physical performance but also enhances the participants' emotional and psychological well-being, strengthening their commitment to the activity.

Furthermore, the findings also highlight that affectivity - the emotional tone of feedback - was one of the least valued dimensions in this study. This could suggest that, while feedback is important for performance improvement, the emotional or interpersonal aspects of the interaction may not be as critical to the participants' experience in group fitness settings. However, this does not diminish the potential impact of positive affectivity, which can contribute to a more supportive and motivating environment, particularly for newer or less experienced participants.

Ultimately, the study reinforces the feedback's significance as an essential component of the teaching process in fitness settings. The way feedback is delivered, the timing, and the level of detail provided play a fundamental role in improving the practitioners' engagement and outcomes. The findings also underline the need for instructors to adapt their feedback strategies to suit the needs of different age groups, experience levels, and individual preferences, ensuring a more personalized and effective training environment.

The evaluation and correction through positive reinforcement is a crucial aspect, as it significantly influences the motivation levels of participants. As noted by Piéron (1999) and Schmidt and Lee (1999), the act of praise is intrinsically linked to satisfaction and, consequently, to motivation and performance progression in practice. Franco (2009) demonstrated that participants are more likely to easily understand exercise descriptions when accompanied by additional information. Conversely, participants express a preference for feedback that is specific and actionable, rather than general feedback that does not highlight any specific component of execution (Padrão et al., 2019).

Regarding the form dimension, younger participants tend to place more importance on auditory, visual, and mixed feedback styles. This preference is likely related to a lack of experience or insecurity during the exercises, as older participants, who generally have greater comfort with the exercises due to more frequent repetition, are less reliant on such sensory cues. Nonetheless, considering that the perception of quality is intricately linked to a higher perception of satisfaction (Campos et al., 2019; Fernández et al., 2012; Pedragosa & Correia, 2009), older participants may require more focused attention from instructors, particularly in terms of clarity and appropriateness of the information provided. As emphasized by Campos et al. (2019), it is crucial for instructors to encourage, motivate, and engage all participants, particularly younger ones, to promote higher levels of adherence to exercise.

On the other hand, Padrão et al. (2019) found that the auditory, visual, and mixed categories of feedback, in descending order, were the most preferred by participants. The lack of preference for kinesthetic feedback may stem from participants' lack of receptivity to touch or the discomfort that it may provoke. It could also be that the dynamics of group fitness classes do not always allow sufficient time for corrections, which limits the opportunity for kinesthetic feedback.

Regarding the content dimension, the same authors inferred that most participants preferred feedback to be provided "frequently" or "always", which implies the need for constant monitoring and communication from the instructor. Interestingly, this preference was particularly strong among female participants, as indicated by the results in the current study. This highlights the importance of maintaining consistent and clear communication during the session to ensure that participants remain engaged and understand how to perform the exercises correctly.

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It is important to note that the type of feedback (whether individual or group-based) was not specified in this context. However, the general preference for feedback that addresses specific topics rather than vague or generic comments can be explained by the fact that non-specific feedback does not enable participants to correct their postures or progress in their practice effectively. Feedback that focuses on particular areas of performance is far more valued, as it allows for a more personalized approach to improvement (Padrão et al., 2019).

These findings align with the broader literature on feedback in group exercise settings, highlighting the importance of clarity, specificity, and a tailored approach in delivering feedback that resonates with participants. Providing feedback that is both clear and actionable enables participants to improve more rapidly, enhancing their motivation and the overall quality of their workout experience.

The category "breathing", according to the above-mentioned authors, is considered by participants to be the most appropriate type of feedback, as they perceive breathing to be the aspect that most contributes to the quality of execution.

In sum, the results of this study suggest that the effectiveness of feedback is influenced by factors such as the feedback's form and content, as well as practitioners' age and experience. Tailoring feedback to the individual needs and preferences - whether through auditory, visual, or kinesthetic cues - can lead to better outcomes in terms of learning, motivation, and performance. For instructors, understanding the varying preferences of their clients and adapting feedback strategies accordingly can create a more supportive and effective learning environment that fosters continued engagement and improvement.

Finally, it is important to address a limitation that concerns the unequal distribution of female and male participants in the sample. Given that gender differences have been reported in variables related to the constructs under investigation, this imbalance could influence the results and limit the generalizability of the findings. Although gender was not the primary focus of the present study, future research should aim to recruit more balanced samples and explicitly examine potential gender effects, either through stratified analyses or by including gender as a covariate in statistical models.

## CONCLUSION

The teaching-learning process in the fields of education, training, exercise, and health is a fundamental dynamic for the development of individuals' knowledge and skills. It involves continuous interaction between its agents - teachers and students. In the context of fitness group activities, the role of the fitness instructor is crucial in delivering the service and engaging with practitioners. The instructor serves as an important model and mediator of knowledge, particularly influencing individuals' perception of quality, satisfaction, and retention.

This study allowed for an analysis of the effectiveness and quality of group fitness classes, focusing on participants' perceptions of the feedback provided by instructors. The findings contribute to understanding the mechanisms that can enhance client adherence and loyalty, as the more positive the atmosphere created in the class, the higher the likelihood that participants will continue attending health clubs and, consequently, maintain regular physical activity.

To maximize the benefits of health clubs' offered activities, it is suggested that the instrument be applied at multiple time points in the future, allowing for the assessment of response consistency over time, thereby enhancing the robustness of these perceptions. Similarly, it is advisable to expand the geographical scope of the instrument's use, as each environment has its own dynamics and characteristics. Therefore, replicating the study in different demographic contexts becomes essential to validate the conclusions' applicability.

## ACKNOWLEDGEMENTS

This work is funded by National Funds through the FCT - Foundation for Science and Technology, I.P., within the scope of the project Ref<sup>a</sup> UIDB/05507/2020 and DOI identifier <https://doi.org/10.54499/UIDB/05507/2020>. Furthermore, we would like to thank the Centre for Studies in Education and Innovation (Ci&DEI) and the Polytechnic of Viseu for their support

## AUTHORS' CONTRIBUTION

Conceptualization, A.R., A.A. and P.E.; data curation, A.R. and P.E.; formal analysis, A.A. and P.E.; funding acquisition, A.A. and P.E.; investigation, A.R., A.A. and P.E.; methodology, A.R., A.A. and P.E.; project administration, A.R., A.A. and P.E.; resources, A.R., A.A. and P.E.; software, A.R. and A.A.; supervision, A.A. and P.E.; validation, A.R., A.A. and P.E.; visualization, A.R., A.A. and P.E.; writing – original draft, A.R., A.A. and P.E.; writing – review & editing, A.A. and P.E.

## CONFLICT OF INTERESTS

The authors declare no conflict of interests.

DOI: <https://doi.org/10.29352/mill0221e.39635>

## REFERENCES

- Azevedo, A., Eira, P., & Pereira, A. (2021). Desporto: espaço de formação, motivação e bem-estar. Estudo com jovens praticantes de natação. *Millenium - Journal of Education, Technologies, and Health*, 2(9e), 227–239. <https://doi.org/10.29352/mill029e.22287>
- Batista, F., Cardoso, V., & Nicoletti, L. (2019). O professor de Educação Física escolar e a influência da motivação em sua prática pedagógica. *Educação em Debate*, 41(80), 172-184. <https://doi.org/10.24933/horizontes.v36i2>
- Campos, F., Craveiro, D., Alves, D., Bernardo, F., Cardoso, F., Martins, F., Mendes, R., & Gomes, R. (2019). A percepção dos praticantes de Hidroginástica em relação à qualidade do instrutor. *Revista Iberoamericana de Psicología del Ejercicio y el Deporte*, 14(1), 28-34. <http://hdl.handle.net/10400.26/46731>
- Campos, F., Franco, S., & Simões, V. (2020). Preferências dos idosos em relação ao feedback dos instrutores, em aulas de grupo de Hidroginástica. *UIIPS*, 7(2), 144–156. <https://doi.org/10.25746/ruiips.v7.i2.19313>
- Campos, F., Martins, F., Gomes, R., Zylberberg, T., Mendes, S., & Damásio, A. (2021). Importância atribuída no fitness segundo o rendimento líquido mensal dos praticantes. *Retos*, 40, 336-343. <http://hdl.handle.net/10400.26/46869>
- Campos, F., Sá, P., Costa, R., & Martins, F. (2023). Os comportamentos do instrutor de Aeróbica: Caracterização e comparação segundo a sua formação e experiência. *Retos*, 49, 614-622. <https://doi.org/10.47197/retos.v49.98809>
- Campos, F., Simões, V., & Franco, S. (2016). A qualidade em atividades de grupo de fitness: construção e validação do questionário "Qualidade do Instrutor de Fitness - Atividades de Grupo (QIF-AG)". *Revista Psicologia*, 30(1), 37-48. <https://encurtador.com.br/nulu>
- Damásio, A., Campos, F., & Gomes, R. (2016). Importance given to the reasons for sport participation and to the characteristics of a fitness service. *ARENA - Journal of Physical Activities*, 5, 46-56. <https://doi.org/10.62591/ajpa.2016.5.02>
- Eurobarometer (2018). *Special Eurobarometer 472 - Sport and Physical Activity*. European Commission. <https://shre.ink/Ay9P>
- Fernández, J., Carrión, G., Ruíz, D. (2012). La satisfacción de clientes y su relación con la percepción de calidad en centro de fitness: Utilización de escala CALIDFIT. *Revista de Psicología del Deporte*, 21(2), 309-319. <https://shre.ink/Ay94>
- Flores, R., Riera, J., & Garcia-Mas, A. (2022). El estilo de comunicación del entrenador como predictor de la carga de trabajo percibida en jóvenes futbolistas. *Retos*, 43, 868-874. <https://doi.org/10.47197/retos.v43i0.88340>
- Franco, S., Santos-Rocha, R., Ramalho, F., Simões, V., Vieira, I., & Ramos, L. (2022). Fitness trends in Portugal for 2022. *Motricidade*, 18(1), 61-72. <https://doi.org/10.6063/motricidade.25847>
- Franco, S. & Simões, V. (2017). Fitness professionals' pedagogical intervention. *European Journal for Exercise Professionals - Europe Active*, 1, 29-38. <http://hdl.handle.net/10400.15/2391>
- Franco, S., Simões, V., Alves, S., Moutão, J., & Rodrigues, J. (2013). *Development of the questionnaire Instructors' Pedagogical Behavior in group fitness classes* [Conference session]. XII ENSSEE Forum, Groningen, Netherlands. <http://hdl.handle.net/10400.15/899>
- Gomes, R., Franco, D., Dias, M., Martins, F., Damásio, A., & Campos, F. (2020). Relação entre frequência de prática e importância atribuída pelos praticantes. *Journal of Sport Pedagogy Research*, 6(1), 20-25. <http://hdl.handle.net/10400.26/46918>
- Koka, A., & Hein, V. (2005). The effect of perceived teacher feedback on intrinsic motivation in physical education. *International Journal of Sport Psychology*, 36(2), 91-106. <https://shre.ink/Ay9T>
- López-Gajardo, M., Díaz-García, J., Rubio-Morales, A., Batista, M., Llanos-Muñoz, R., & Ponce-Bordón, J. (2022). Influye el liderazgo del entrenador sobre la resiliencia de equipo? Efecto mediador de los conflictos intragrupo. *Revista Latinoamericana de Psicología*, 54(24), 214-221. <https://doi.org/10.14349/rlp.2022.v54.24>
- Magill, R. A. (2020). *Motor Learning and Control: Concepts and Applications* (12th ed.). McGraw-Hill.
- Ortega-Martínez, J., Martins, F., González-Víllora, S., & Campos, F. (2021). Estudio sobre la calidad percibida de usuarios de fitness, a partir de sus características y preferencias según sexo y edad. *Retos*, 39, 477-482. <http://hdl.handle.net/10400.26/46843>
- Otte, F. W., Davids, K., Millar, S. K., & Klatt, S. (2020). When and how to provide feedback and instructions to athletes? How Sport Psychology and Pedagogy insights can improve coaching interventions to enhance self-regulation in training. *Frontiers in Psychology*, 11, 1444. <https://doi.org/10.3389/fpsyg.2020.01444>
- Pedragosa, V., & Correia, A. (2009). Expectations, satisfaction and loyalty in health and fitness clubs. *International Journal of Sport Management and Marketing*, 5(4), 450-464. <https://doi.org/10.1504/IJSM.2009.023371>

DOI: <https://doi.org/10.29352/mill0221e.39635>

- Ramos, L., Esteves, D., Vieira, I., Franco, S., & Simões, V. (2021). Vidaprofit: Caracterização dos profissionais de fitness em Portugal. *Motricidade*, 17(1), 42-53. <https://doi.org/10.6063/motricidade.20727>
- Rodrigues, F., Monteiro, D., Teixeira, D., & Cid, L. (2020). O papel dos instrutores de fitness na adesão à prática de exercício físico em Portugal: A importância dos comportamentos de suporte e dos climas motivacionais. *Motricidade*, 16(4), 420-431. <https://doi.org/10.6063/motricidade.21120>
- Schmidt, R. A., & Lee, T. D. (2019). *Motor Learning and Performance: From Principles to Application* (6th ed.). Human Kinetics.
- Sharma, D. A., Chevidikunnan, M. F., Khan, F. R., & Gaowgzeh, R. A. (2016). Effectiveness of knowledge of result and knowledge of performance in the learning of a skilled motor activity by healthy young adults. *Journal of Physical Therapy Science*, 28(5), 1482-1486. <https://doi.org/10.1589/jpts.28.1482>
- Simões, V., Rodrigues, J., Alves, S., & Franco, S. (2013). Validação do questionário de feedback de instrutores de fitness em aulas de grupo. *Revista da Unidade de Investigação do Instituto Politécnico de Santarém*, 1(1), 227-246. <http://hdl.handle.net/10400.15/899>
- Sosa, J., Vota, A., Tarango, J., Meraz, G., & Alonzo, S. (2021). Educación física: Referentes y nociones conceptuales del personal docente en Educación Primaria. *Retos*, 39, 298-305. <https://doi.org/10.47197/retos.v0i39.58114>
- World Health Organization (2004). *Global Strategy on Diet, Physical Activity and Health*. <https://www.who.int/publications/i/item/9241592222>
- Wrisberg, C. A. (2019). *Motor Learning and Performance: A Situation-Based Learning Approach*. Human Kinetics.