

PERSONALIZED TRAINING SERVICE: THE INFLUENCE OF THE PERSONAL TRAINER ON CLIENT MOTIVATION-A SYSTEMATIC REVIEW

Dioneide Pereira da Silva^{*1}, Juliana Carla Mendes de Melo², Gertrudes Nunes de Melo³, Tiago José do Nascimento Caetano⁴, Glêbia Alexa Cardoso⁵, Iraquitan de Oliveira Caminha Correio³, António Fernando Boletto Rosado¹, Paulo Jorge Martins¹

¹Laboratory of Sports Psychology, CIPER, Faculty of Human Motricity-FMH, University of Lisbon-ULISBOA, Lisbon, Portugal; ²Research Centre in Physical Activity, Health and Leisure, Faculty of Sports, University of Porto-CIAFEL, Porto, Portugal; ³Graduate Programme in Physical Education, UFPB/UPE, Federal University of Paraíba, Paraíba, Brazil; ⁴Polytechnic Institute of Castelo Branco (IPCB), School of Education (ESE), Castelo Branco, Portugal; ⁵Department of Physical Education, Federal University of Piauí – UFPI, Teresina, Piauí, Brazil

Abstract

The relevance of motivation and motivational coaching in the context of personalized training services (PTS) has been the focus of increasing research. However, due to the scarcity of studies consolidating available information on this topic, this study investigated the scientific literature on the influence of personal trainers (PT) on clients/practitioners' motivation to use PTS. This systematic review was conducted using the following databases: Web of Science, the National Library of Medicine (MEDLINE) via PubMed, Embase, and Scopus. Three studies meeting the inclusion criteria were identified. Each study was assessed for quality, and results were thematically analyzed through meta-synthesis. The findings highlighted that intrinsic motivation was more prevalent among CrossFit practitioners than PTS clients, who exhibited health-related motivations. Motivational coaching strategies have been reported to enhance intrinsic motivation, which is associated with higher levels of competence and challenge perceptions. The importance of intrinsic motivation, motivational coaching, PTS quality and the trainer-client relationship was emphasized regarding clients/practitioners' engagement and satisfaction. Future research is needed to address gaps in understanding motivational mechanisms and to generalize findings to different training contexts, aiming to optimize PTS outcomes and promote practitioners' well-being.

Keywords: coaching; health; physical training, exercise adherence, behaviour change.

Resumen

La relevancia de la motivación y del coaching motivacional en el contexto de los servicios de entrenamiento personalizado (SEP) ha sido objeto de un creciente interés en la investigación. Sin embargo, debido a la escasez de estudios que consoliden la información disponible sobre este tema, este estudio investigó la literatura científica sobre la influencia de los entrenadores personales (EP) en la motivación de los clientes/practicantes

Manuscrito recibido: 12/06/2025

Manuscrito aceptado: 05/08/2025

*Corresponding Author: Dioneide Pereira da Silva, Laboratory of Sports Psychology, CIPER, Faculty of Human Motricity – FMH, University of Lisbon-ULISBOA, Lisbon, Portugal

Phone: (+44) 07931783614

Correo-e: F9o0l_1309@hotmail.com

para utilizar SEP. Esta revisión sistemática se llevó a cabo utilizando las siguientes bases de datos: Web of Science, National Library of Medicine (MEDLINE) vía PubMed, Embase y Scopus. Se identificaron tres estudios que cumplieran con los criterios de inclusión. Cada estudio fue evaluado en cuanto a su calidad, y los resultados fueron analizados temáticamente a través de una meta-síntesis. Los hallazgos destacaron que la motivación intrínseca era más prevalente entre los practicantes de CrossFit que entre los clientes de SEP, quienes mostraban motivaciones relacionadas con la salud. Se ha informado que las estrategias de coaching motivacional potencian la motivación intrínseca, la cual está asociada con mayores niveles de competencia y percepción de desafío. Se enfatiza la importancia de la motivación intrínseca, del coaching motivacional, de la calidad del SEP y de la relación entre entrenador y cliente para el compromiso y la satisfacción de los clientes/practicantes. Se necesitan futuras investigaciones para abordar las lagunas en la comprensión de los mecanismos motivacionales y para generalizar los hallazgos a diferentes contextos de entrenamiento, con el fin de optimizar los resultados del SEP y promover el bienestar de los practicantes.

Palabras clave: orientación motivacional; salud; entrenamiento físico; adherencia al ejercicio; cambio de comportamiento.

RESUMO

A relevância da motivação e do coaching motivacional no contexto dos serviços de treino personalizado (STP) tem sido alvo de crescente atenção na investigação. Contudo, face à escassez de estudos que consolidem a informação disponível sobre este tema, o presente estudo investigou a literatura científica sobre a influência dos personal trainers (PT) na motivação de clientes/praticantes para a utilização dos STP. Esta revisão sistemática foi realizada com recurso às seguintes bases de dados: Web of Science, National Library of Medicine (MEDLINE) via PubMed, Embase e Scopus. Foram identificados três estudos que cumpriram os critérios de inclusão. Cada estudo foi avaliado quanto à sua qualidade, e os resultados foram analisados tematicamente por meio de meta-síntese. Os achados evidenciaram que a motivação intrínseca era mais prevalente entre praticantes de CrossFit do que entre clientes de STP, que apresentaram motivações mais relacionadas com a saúde. Estratégias de coaching motivacional foram referidas como potenciadoras da motivação intrínseca, a qual está associada a maiores níveis de competência e percepção de desafio. Enfatiza-se a importância da motivação intrínseca, do coaching motivacional, da qualidade dos STP e da relação entre treinador e cliente para o envolvimento e satisfação dos clientes/praticantes.

Futuras investigações são necessárias para colmatar lacunas na compreensão dos mecanismos motivacionais e para generalizar os resultados a diferentes contextos de treino, visando otimizar os resultados dos STP e promover o bem-estar dos praticantes.

Palavras-chave: orientação motivacional; saúde; treino físico; adesão ao exercício; mudança comportamental.

Introduction

The World Health Organization has emphasized the importance of physical exercise with regard to efforts to promote an active lifestyle since such exercise can help reduce various diseases associated with sedentary behaviours and reduce the mortality rate associated with no communicable diseases (Araújo, 2020). In this context, the Institutional Programme established by the Portuguese government (2019) highlights the importance of political will with respect to promoting physical exercise, thus reflecting a government commitment in Portugal.

The reasons that lead individuals to continue to engage in physical exercise are crucial. However, extrinsic motivation plays an important role in the process of behavioural change because individuals often need external emotional encouragement to engage in activities. According to Nahas (2006), adherence to physical exercise is strengthened when practitioners understand the concrete benefits of such exercise for their health and the improvement of their quality of life. In light of these aspects, the personalized training service (PTS), which is in line with a variety of goals and interests, deserves particular attention in relation to the needs of clients/practitioners.

According to Monteiro (2002), PTS emerged on the basis of a model of private gymnastics and weight training classes in the 1990s; at present, gyms offer environments that are conducive to physical exercise under the guidance of personal trainers (PTs). The services provided to clients/practitioners at home or online are also notable due to the fact that they establish an environment that is characterized by convenience and comfort (Kings Fund, 2012), thus reflecting a global trend of expansion (ACSM, 2011).

In Portugal, to serve as a PT, it is necessary to have obtained a degree in sports and/or the professional title of physical exercise technician (TPTEF) according to the regulations established by the Portuguese Institute of Sports and Youth (IPDJ). PTs are responsible for prescribing, supervising and guiding training in an individualized manner, thereby helping clients/practitioners continue

to engage in physical exercise (Santos & França, 2020). However, even highly qualified PTs (Garay, Silva & Beresford, 2008) face challenges, especially when their clients/practitioners report a lack of time to engage in regular physical exercise (Klain et al., 2016). In this context, leadership and interpersonal communication may be relevant factors that can help promote diligence among these individuals in the context of physical exercise.

In addition, PTs who exhibit more professional and scientific experience seem to find it easier to ensure that their clients/practitioners continue to engage in regular physical exercise, according to Garay, Silva and Beresford (2008), as training is relevant to the spiritual, mental and emotional dimensions. That is, in addition to prescribing exercise with the goal of improving the client's physical conditions, PTs are responsible for highlighting relevant psychological and social aspects that may encourage the client/practitioner to achieve their goals in various aspects of life (Abbott & O'Connell, 2021).

The WHO Global Plan of Action for the Promotion of Physical Activity (PA) 2018-2030 (2020), should also be considered in this context; this plan recommends and prioritizes the development of PA systems in the context of health services, specifically with regard to patients who should be viewed as priorities. These systems are implemented by health professionals who have received adequate training, such as exercise physiologists, as described by Lee, Shiroma, Lobelo, Puska, Blair, Katzmarzyk, et al. (2012).

The central determinants of health care practice may be related to environmental characteristics (for example, social, regulatory and political factors) or even organizational characteristics (for example, resources and incentives, decision-making processes, or even the capacity for change that characterizes each organization). Naturally, the personal characteristics of the individuals who bear practical responsibility in this context constitute a very important variable that may occasionally be attributed even more weight. Nevertheless, these determinants have been structured, resulting in several materials, such as checklists, tables, taxonomies and classification systems (Mäkelä & Thorsen, 1999; Grol & Wensing, 2004; Michie et al., 2005; Rainbird, Sanson-Fisher & Buchan, 2006; Wensing et al., 2005; Cabana et al., 1999)

To optimize our ability to reflect on the determinants of application and introduce quality improvements or new interventions in fields such as health care, it is essential to identify obstacles and facilitators that are specific to the intervention in question and to the particular context of each application (Sánchez-Oliveira et al., 2020). If this reflection is transferred to the organizational context, specifically with regard to the workplace of PTs, the satisfaction of motivational needs is closely related to the permanent continuance of the focal individual in physical exercise.

Despite the importance of the relationships between PTs and clients/practitioners, specifically with regard to the constant and fundamental interpersonal involvement between PTS coaches and users (Jowett, 2003; Olympiou, Jowett & Duda, 2008), studies regarding the motivational profiles of clients/practitioners, adherence to physical exercise, and the communication ability of the PT remain scarce (Horn, Bloom, Berglund, & Packard, 2011).

The literature has reported that sports motivation, namely, intrinsic-extrinsic motivation, is a strong determinant of the type of involvement with sport that an individual exhibits (Pelletier, et al., 1995; Li, Wright, Rukavina, & Peckering, 2008; Deci & Ryan, 2013), including in work environments that facilitate development processes at both the personal and social levels.

In this sense, the theory of self-determination offers a model for both intrinsic and extrinsic motivation in the context of physical exercise (Pelletier, et al., 1995; Deci & Ryan, 2013). Intrinsic motivation is viewed as fundamental with respect to commitment, whereas extrinsic motivation can be an important determinant of individuals' adherence to physical exercise (Carbonneau et al., 2012).

Thus, this systematic review aims to investigate the scientific literature on influence of PTs on the motivation of clients/practitioners of PTS. The concerns that have previously been outlined represent the fundamental elements that guide this research, thus highlighting the need to guide this investigation

towards various aspects that relevant to the promotion of health and physically active and healthy lifestyles.

Methods

Research strategy

A literature search was performed from November 2023 to March 2024 with the goal of exploring the repositories and directories contained in the following databases: Web of Science, the National Library of Medicine (MEDLINE) via PubMed, Embase and Scopus

In each database, the search strategy that we used involved a combination of the search descriptors (keywords) "personal trainer" OR "coach" OR "personal training" AND "motivation" AND "client", as indicated in Box 1. The search was performed in accordance with the specific search protocols used for each platform, and the keywords were based on relevant vocabularies in the field of health, including by using the terminology associated with the health science descriptors (DeCS) and medical subject headings (MeSH). This strategy aimed to improve our ability to identify studies that were relevant to the present study (Araújo WCO, 2020) (Table 1).

Furthermore, this systematic review, whose protocol is hosted on the website of the international prospective registry of systematic reviews, PROSPERO, under the number CRD42023486491, was structured according to the guidelines of the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) checklist (2020).

The PRISMA method involves four steps for the selection of articles: (1) identification; (2) triage, which involves reading titles and abstracts; (3) eligibility, which involves reading full texts; and (4) inclusion (Moher, et al., 2009). These phases are described in the flow diagram illustrated in (Figure 1).

Eligibility criteria

The studies included in this research met the following criteria: (1) studies that characterized the work of PTs in the context of the PTS; (2) studies that assessed client/practitioner motivation; (3) surveys that focused on adults (over 18 years of age); and (5) field research (including all types of field studies, without restrictions on language and/or date of publication). The following types of research were excluded: (1) studies that presented physical exercise outside the context of PTS; (2) studies that focused on subjects below the age of 18 years; (3) studies that did not assess client/practitioner motivation; (4) systematic reviews; (5) case studies; and (6) questionnaire validation surveys.

All studies thus identified were imported into the reference manager software Endnote, version 20 for Windows. An investigator removed duplicates via a tool provided by the software. Three investigators then independently selected titles and abstracts on the basis of their relevance. Finally, three independent researchers scanned the full texts of the remaining articles to determine their eligibility. Any discrepancies were addressed through discussion with a fourth researcher.

Data extraction

The following information was extracted from eligible studies by three independent investigators: lead author, year of publication, location (country/region), study period, study design, sample size, motivational assessment instruments/measures and outcomes. Any disagreements in data extraction were resolved through discussion with a fourth investigator.

Risk of bias

The risk of bias that characterized eligible studies was assessed via the methodological quality assessment checklists proposed in the method manual provided by the Joanna Briggs Institute (JBI). The relevant instruments consist of questions with 4 response options: "Yes (Y)", "No (N)", "It is not clear (NC)" or "Not applicable (NA)".

Verification was applied on the basis of the nature of each study (cross-sectional and quasi-experimental). Studies that met the JBI requirements (≥

Table 1. Search strategy.

Database	Search strategy	Results
PubMed	("personal trainer"[Title/Abstract]) OR ("coach"[Title/Abstract]) OR ("personal training"[Title/Abstract]) AND ("motivation"[Title/Abstract]) AND ("client"[Title/Abstract])	08
Scopus	(title-abs-key ("personal trainer")) OR title-abs-key ("coach") OR title-abs-key ("personal training") AND (title-abs-key ("motivation")) AND (title-abs-key ("client"))	75
Base	'personal trainer'/exp OR 'personal trainer' OR coach:ab,ti OR 'personal training':ab,ti AND 'motivation'/exp OR motivation AND 'clients'/exp OR clients	24
Web of Science	"personal trainer" (Topic) or "coach" (Topic) or "personal training" (Topic) AND "motivation" (Topic) AND "client" (Topic)	20
Total		127

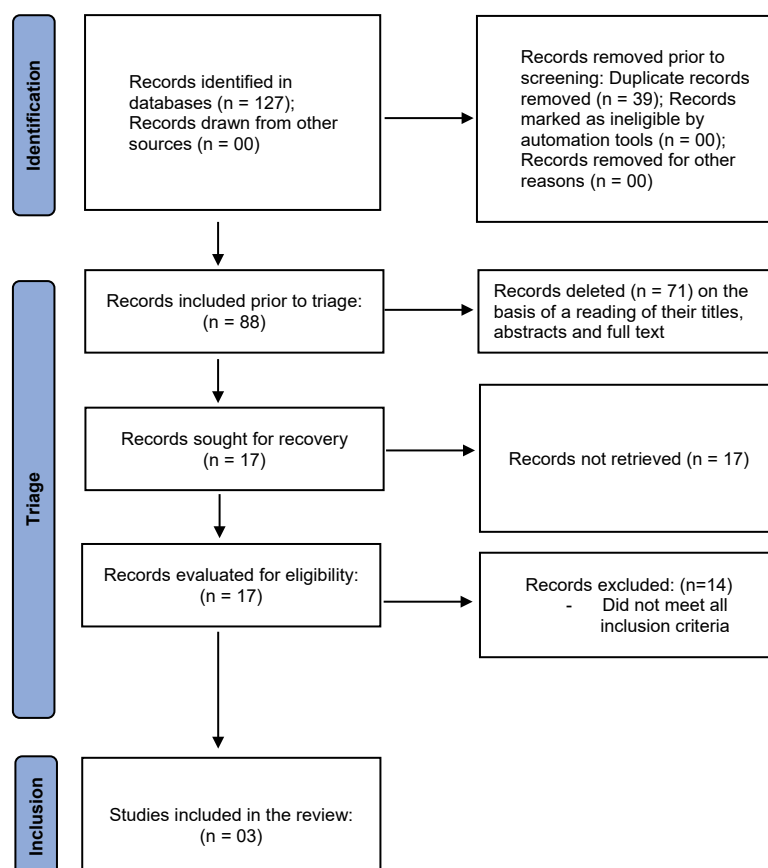


Figure 1. Flow diagram of the process of study selection.

7 points) were considered to exhibit a “high” level of quality and a low risk of bias. Studies that exhibited flaws that did not compromise their quality of were classified as exhibiting a “medium” level of quality and a moderate risk of bias (JBI 5 to 6 points). Finally, articles that exhibit serious flaws were classified as exhibiting a “low” level of quality and a high risk of bias (JBI 4 ≤ points) (Catalá-López et al., 2019; Higginbottom et al., 2015). Studies were not excluded on the basis of the analysis of their methodological quality, which was used only to generate quality profiles for the included studies.

We then assessed the quality of the included studies, and any disagreements were resolved through discussion with a fourth investigator.

The data related to this analysis are presented in the form of a narrative summary of the risk of bias in the eligible studies, which is supported by a table that presents the results of a critical evaluation.

Analysis of results

Evaluations of the main results of each eligible article were produced by categorizing the articles into subgroups that pertained to socioeconomic variables, modalities of personalized training service (indoor, outdoor or online) and the nature of care (group or individual). To analyse the textual content of the articles, we used the software IRAMUTEQ (Interface of R pour les Analyses multidimensionnelles de textes et de Questionnaires), which is a tool used to support the statistical analysis of textual corpora and qualitative data.

Due to the heterogeneity of the studies included in this research, no meta-analysis was performed.

Results

Selection of studies

As illustrated in Figure 1, the initial literature search led to the identification of 127 articles. After duplicate articles were removed, the titles of a total of 88 articles were evaluated. After selection by title, the abstracts of 55 articles were read. After these abstracts were read, the full texts of 17 relevant articles were reviewed, and 14 of these articles were excluded because they did not meet the eligibility criteria. Among the articles thus excluded, 11 addressed “Coaching and Psychology”, 11 were related to “Coaching Related to Health”, 9 addressed the topic “Coach and Client”, 6 focused on “Motivation”, 5 discussed

“Coaching and Motivation”, 4 discussed “Executive Coaching”, 2 were related to the “Personal Trainer”, 2 emphasized “Coaching and Leadership”, 1 highlight the development of a scale and 1 focused on Coaching Supervision.

Ultimately, a total of 3 articles were selected and included in this review.

Data synthesis and extraction

The basic characteristics and main results of the eligible studies are summarized in (Table 2).

The main objective of Study 1 by Fisher et al. (2016) was to investigate the intrinsic motivational factors that could be observed among participants in resistance exercises across four different modalities (i.e., CrossFit, resistance exercises in groups, individual accomplishment and personal training). The secondary objective of that study was to analyse the differences in intrinsic motivation among individuals who belonged to the four study groups. In addition, these authors analysed the differences in motivation among these groups and explored whether variables such as age and sex influenced these factors.

The authors employed a quantitative approach to investigate 314 individuals (men = 132, women = 182) in this study, which was conducted in both the United Kingdom and the United States of America (USA). The sample was divided into 4 distinct groups: CrossFit participants (FC), resistance exercise participants in a group (G), resistance exercise participants alone (S) and resistance exercise participants with PTS. All participants were required to be engaged in physical exercise in the corresponding modality for a period longer than 6 months.

To assess participants’ motivation, the authors used the Exercise Motivation Questionnaire-Version 2 (EMI-2). This instrument contains 51 items across 14 subscales: stress management (4 items), revitalization (3 items), pleasure (4 items), challenge (4 items), social recognition (4 items), and affiliation (4 items), competition (4 items), health pressures (3 items), avoidance of health problems (3 items), positive health (3 items), weight management (4 items), appearance (4 items), strength and endurance (4 items) and agility (3 items).

FC practitioners obtained higher intrinsic motivation ratings; Health-related pressures (prevention of pathologies) [analysis based on the entire sample and each sex] were the factors that were viewed as the most preponderant motivators of the practice of physical exercise among the clients receiving

Table 2. Descriptive summary of the selected studies.

Study/ Country	Purpose(s)	Method (s)			Results	Conclusion
		Sample	Duration of intervention	Instrument		
Fisher et al. (2016)/	Comparison of the motivational factors associated with CrossFit participants and resistance exercise practitioners.	314 participants (CrossFit = 68; resistance exercise in group = 55; alone = 125; with personal trainer = 66).	NA	Exercise Motivation Inventory Questionnaire - Version 2	Significant differences in several items of the EMI-2.	CrossFit participants were more likely to report higher levels of intrinsic motivation, such as pleasure, challenge, and affiliation, while clients receiving personalized training obtained higher scores with respect to health-related motivation, such as the prevention of health problems and weight control.
United Kingdom				(EMI-2)	FC practitioners obtained higher intrinsic motivation ratings; Health-related pressures (prevention of pathologies) [analysis based on the entire sample and each sex] were the factors that were viewed as the most preponderant motivators of the practice of physical exercise among the clients receiving personalized training. The item "Appearance, weight control and strength and endurance" was also classified as a substantial motivator for clients receiving personalized training [analyses based on both sexes and a specific analysis for males].	
Gaesser et al. (2020)/ United States	Measurement of intrinsic motivation after the implementation of motivational coaching strategies in the context of a personalized adult physical conditioning programme.	60 participants (40 women, 20 men); $\pm$ 48 years	14 Weeks.	Inventory of Intrinsic Motivation (IMI) Customer Motivational Scale (MCS)	Customer IMI scores increased from 3.38 to 3.58 ($p < 0.001$); MCS scores also increased from 3.47 to 3.87 ($p < 0.001$). Mean "perceived competence" increased significantly from 3.01 to 3.41 ($p < 0.001$). The Customer Motivational Scale (MCS) scores increased from 3.47 to 3.87 ($p < 0.001$); the responses of clients to the "challenge" increased from 3.48 to 4.15 ($p < 0.001$).	It is possible to improve the intrinsic motivation of adult populations who are enrolled in a supervised physical conditioning programme through the implementation of motivational strategies.
(Lorenzo & Luján, 2024)/Spain	Analysis of the profiles of premium clients of personal training and evaluation of their motivations for engaging in physical activity and contracting the service; verification of perceptions of the quality and evaluations of this service.	92 participants (34 men; 58 women); $\pm$ 40 years	NA	The questionnaire used for data collection was prepared by the authors on the basis of validated scale.	Tenures with a personal trainer ranged from 2 months to 20 years; 62% of participants chose the coach due to their "professional attitude", 45% "because it was recommended to them", 41% "due to their character", 40% "due to their academic background", 34% "due to their experience", 25% "due to the results observed among other clients of that coach"; 10% due to the search for a professional who was specialized in a specific need, and 12% for other reasons. Regarding the interpersonal bond established with the coach, 20% of the participants claimed that it was "important" to them, 25% that it was "very important" and 47% that it was "extremely important"; Regarding the aspects of the coach that were most important from the possibilities of image, experience and academic background, 73% of participants chose experience, 27% chose academic training and none chose image.	Customers of premium personal training exhibited high levels of motivation in relation to health improvement, a high degree of demand regarding the provision of the contracted service and a strong tendency towards loyalty.

personalized training. The item "Appearance, weight control and strength and endurance" was also classified as a substantial motivator for clients receiving personalized training [analyses based on both sexes and a specific analysis for males]. CrossFit participants were more likely to report higher levels of intrinsic motivation, such as pleasure, challenge, and affiliation, while clients receiving personalized training obtained higher scores with respect to health-related motivation, such as the prevention of health problems and weight control.

Gaesser et al. (2020)/United States Measurement of intrinsic motivation

after the implementation of motivational coaching strategies in the context of a personalized adult physical conditioning programme. 60 participants (40 women, 20 men); $\pm$ 48 years 14 Weeks. Inventory of Intrinsic Motivation (IMI) Customer Motivational Scale (MCS) Customer IMI scores increased from 3.38 to 3.58 ($p < 0.001$); MCS scores also increased from 3.47 to 3.87 ($p < 0.001$). Mean "perceived competence" increased significantly from 3.01 to 3.41 ($p < 0.001$). The Customer Motivational Scale (MCS) scores increased from 3.47 to 3.87 ($p < 0.001$); the responses of clients to the "challenge" increased from 3.48 to 4.15 ($p < 0.001$). It is possible to improve the intrinsic motivation

of adult populations who are enrolled in a supervised physical conditioning programme through the implementation of motivational strategies.

(Lorenzo & Luján, 2024)/Spain Analysis of the profiles of premium clients of personal training and evaluation of their motivations for engaging in physical activity and contracting the service; verification of perceptions of the quality and evaluations of this service. 92 participants (34 men; 58 women); ± 40 years NA: The questionnaire used for data collection was prepared by the authors on the basis of validated scale.Tenures with a personal trainer ranged from 2 months to 20 years; 62% of participants chose the coach due to their "professional attitude", 45% "because it was recommended to them", 41% "due to their character", 40% "due to their academic background", 34% "due to their experience", 25% "due to the results observed among other clients of that coach"; 10% due to the search for a professional who was specialized in a specific need, and 12% for other reasons. Regarding the interpersonal bond established with the coach, 20% of the participants claimed that it was "important" to them, 25% that it was "very important" and 47% that it was "extremely important"; Regarding the aspects of the coach that were most important from the possibilities of image, experience and academic background, 73% of participants chose experience, 27% chose academic training and none chose image Customers of premium personal training exhibited high levels of motivation in relation to health improvement, a high degree of demand regarding the provision of the contracted service and a strong tendency towards loyalty.

Data analysis was performed via the Statistical Package for the Social Sciences (SPSS) software (version 20 for Windows). Two analyses—i.e., one that included both sexes together and one that included each sex separately—were performed. The results revealed significant differences in several items of the EMI-2. With regard to the broader aspects of the study, the main conclusions concerning intrinsic motivation indicate that FC practitioners obtained higher ratings. However, with respect to the personalized training group, the authors noted that health-related pressures, namely, the prevention of pathologies, were significantly stronger motivators with regard to engagement in physical exercise than was the case in the other groups (FC, G and S). Additionally, with respect to the item "Appearance, weight control and strength and endurance", the group of PTS participants rated control of appearance and body weight as more substantial motivators than was the case among members of the other groups (FC, G and S) in both the analyses including both sexes and those that were specific to the male sex.

The second eligible article, which was produced by Gaesser et al. (2020) in the USA, was characterized as a quasi-experimental study that aimed to evaluate the intrinsic motivation of the participants. This evaluation occurred after the implementation of strategies in the context of a physical conditioning programme that targeted adults who were engaged in personalized training; this programme lasted approximately one university semester.

To conduct the study, 60 volunteers (20 men and 40 women) whose mean age was 48 years were subjected to a training protocol. This protocol was applied by 46 undergraduate students and coaches, including 21 men and 25 women, for a period of 14 weeks. In addition to comprehensive assessments of the cardiovascular risk, strength, and cardiorespiratory and muscular endurance of the participants, individualized goals were established, and motivational coaching strategies were applied during each training session.

Intrinsic motivation was assessed via a questionnaire that was developed on the basis of the Inventory of Intrinsic Motivation (IMI) and the Customer Motivation Scale (CSM). In addition, as this study was conducted in the context of a religious institution, the authors developed a scale to assess spiritual well-being. The scale, which was created on the basis of the literature on the fundamental principles of spiritual health, included 56 items; possible responses were assessed on a Likert scale ranging from 1 to 5, and relevant items included "Preceptor and extender of grace", "Integrity" and "Practicing the presence of God". This scale was applied both before and after the completion of the training period.

When the results of the IMI were analysed, the authors reported a significant increase in the mean values from 3.38 before the training to 3.58 after the training ($p < 0.001$). Similarly, the mean "perceived competence" scores changed significantly from 3.01 to 3.41, while the MCS scores also changed significantly from 3.47 to 3.87 ($p < 0.001$). Finally, the response of clients to the

"challenge" increased significantly from 3.48 to 4.15 ($p < 0.001$). On the basis of these results, the authors noted that it is possible to improve intrinsic motivation in the context of a supervised physical conditioning programme for adults by implementing motivational strategies.

The third and final eligible study, which was conducted by Lorenzo & Luján (2024) in Spain, ed to analyse the profile of premium personal training customers with the goal of assessing their motivations for engaging in physical exercise and contracting PTS as well as verifying their perceptions of the quality and evaluations of PTS.

This study involved 92 participants (including 34 men and 58 women), whose mean age was 40 years. The questionnaire used for data collection was prepared by the authors on the basis of validated scales, and the researchers collected information regarding the participants' sociodemographic data, perceptions of the personal trainer (8 items), reasons for hiring a PTS (as assessed via 10 items that were scored on a Likert scale ranging from 1 to 7 points), perceptions of the subject in relation to the quality of the contracted service (12 items) and reasons for engaging in physical activity (as assessed via 30 items that were scored on a Likert scale ranging from 1 to 7 points).

Data analysis was performed via SPSS software (version 26). With respect to adherence, the participants indicated a time for which they had contracted PTS; these times ranged from 2 months to 20 years. Regarding the reasons why the participants chose their current coach, 62% did so because of the coach's "professional attitude", 45% did so "because it was recommended to them", 41% did so "because of the coach's character", 40% did so "because of the coach's academic background", 34% did so for the sake of "experience" and 25% "due to the results observed in other clients". Other reasons, such as the random assignment of the fitness centre itself, the client's image or social networks, received scores of only 9%, 2% and 1%, respectively, and 10% of the participants indicated they had chosen their current coach because they were looking for a new coach who was professionally specialized in a specific need.

With respect to the interpersonal bond established with the coach, 20% of the participants noted that it was "important" to them, 25% that it was "very important" and 47% that it was "extremely important". When participants were asked to choose which aspect of the coach was most important from the possibilities of image, experience and academic background, 73% selected experience, 27% selected academic training, and none prioritized image.

Ultimately, the authors concluded that customers of premium personal training are characterized by high levels of motivation pertaining to health improvement, a high degree of demand regarding the provision of the contracted service and a strong tendency towards loyalty.

Methodological quality of the included studies

Fisher et al. (2016) and Gaesser et al. (2020) were categorized as exhibit a high level of methodological quality, thus suggesting a low risk of bias. However, the search indicated that Fisher et al. (2016) did not specifically address the characteristics of PTS, focusing instead on comparing the motivation of CrossFit participants with those of members of other resistance exercise groups. In contrast, Lorenzo & Luján, (2024) did not consider the characteristics of the training service, instead exclusively prioritizing customers' perceptions of service quality.

Fisher et al. (2016) provided details concerning the data collection procedures, and the only procedure performed was the remote application of a questionnaire. Similarly, Lorenzo & Luján, (2024) also used a single, remote collection strategy involving a questionnaire, which these authors justified because of the context of the global COVID-19 pandemic in which that study was conducted.

In light of the aforementioned circumstances and taking into account the methodological design of the included studies, item 9 of the risk of bias checklist presented in Table 2 was found to be inapplicable to the articles of Fisher et al. (2016) and Lorenzo & Luján, (2024); in conclusion, the article by Lorenzo & Luján, (2024) was classified as exhibiting a medium level of quality, thus indicating a moderate risk of bias (Table 3).

Discussion

The role played by motivation in the commitment of PTS clients/practitioners

Table 3. Risk of bias assessment.

Author(s)/Year of publication/Study type	Issues									Total score
	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	
Fisher et al. (2016)/UK and USA/Cross-sectional	Y	N	Y	Y	Y	Y	Y	Y	N/A	7
Gaesser et al. (2020)/United States/Quase experimental	Y	Y	Y	N	Y	Y	Y	Y	Y	8
Lorenzo & Luján, (2024)/Spain/Transversal	Y	Y	NC	N	Y	N	Y	Y	N/A	5

Legend: Y = Yes; N = No; NC = Not clear; NA = Not applicable.

has been the subject of increasing interest in the scientific literature on this topic. In this context, motivational coaching strategies have emerged as a promising approach that can be used to stimulate the motivation of PTS clients/practitioners. The present article critically examined the impact of these strategies on the motivation and engagement of PTS clients/practitioners on the basis of a systematic review of previous studies on this topic.

The results of the studies included in the present research may offer a comprehensive overview of the motivations and perceptions of clients/practitioners regarding PTS.

Fisher et al. (2016) compared CrossFit practitioners with other participants in resistance exercise and highlighted the prevalence of intrinsic motivation among CrossFit practitioners, which stood in contrast to the emphasis of PTS clients on health-related motivation. This difference suggests that CrossFit practitioners may be driven by factors such as pleasure, challenge and affiliation, whereas PTS clients seem to be more concerned with health benefits, namely, the prevention of health problems and body weight control, as these factors are extrinsic.

Intrinsic motivation is defined as involvement in an activity for the sake of the pleasure and satisfaction derived from the activity itself; this type is the most self-determined form of motivation. On the other hand, extrinsic motivation originates in various aspects that are external to the subject and involves participation in an activity for the sake of receiving rewards or avoiding punishments. Thus, extrinsic motivation may reflect a level of motivation that involves a conscious appreciation of activities that are considered to be important to the subject, thus implying a level of identification with the corresponding goals (Deci & Ryan, 2013; Martins, Rosado, Ferreira & Biscaia, 2017). In this case, extrinsic motivation may represent an important construct that can explain individuals' level of adherence to physical exercise (Carbonneau, Vallerand, & Lafrenière, 2012).

Hollembeak & Amorose (2005) reported that intrinsically motivated individuals usually experience a strong sense of autonomy, competence and connectedness. Autonomy refers to the need to perceive one's behaviour as a choice rather than as the result of an external mandate. Ekkekakis & Lind (2006) investigated the different intensities of self-selected and imposed exercise and suggested that the inverse relationship between externally imposed exercise intensity and positive feelings revealed in that study could be the result of a loss of control over the situation (i.e., a lack of autonomy).

In a study based on interviews conducted with successful Canadian college basketball and volleyball coaches, Vallee & Bloom (2005) focused on certain autocratic behaviours and a series of democratic training behaviours. The findings of this study highlighted the need for student athletes to have a sense of control or autonomy in the context of some decision-making processes.

Competence refers to the need for an individual to consider effective behaviour Chiviacowsky, (2020). The ability of an individual to view a given behaviour as effective is closely linked to the individual's self-efficacy. Self-efficacy refers to an individual's belief that he or she can perform a task competently (Khan & Iqbal, 2020). People who exhibit low levels of self-efficacy drop out of exercise programmes at a higher rate than do people who exhibit high levels of self-efficacy (Strandberg, et al., 2022).

Furthermore, Ferrer-Caja & Weiss (2000) reported that the willingness of a student/athlete to try new activities and continue to practice them often depends on their levels of perceived competence. In addition, coaches often emphasize the development of perceived competence or confidence among students/athletes as a way to develop their intrinsic motivation (Fransen et al., 2018) also claimed that the most effective way of promoting perceived competence is by providing frequent, positive and appropriate feedback Fransen et al., 2018); (Chiviacowsky, (2020).

Gaesser et al. (2020) explored these issues in further depth, revealing that motivational coaching strategies can contribute to research on this topic by demonstrating that motivational coaching strategies can effectively increase the intrinsic motivation of participants in personalized physical training programmes. This increase in intrinsic motivation seems to be associated with a higher level of competence and challenge perceptions on the part of clients/practitioners, and the results of this study suggested that personalized coaching approaches may effectively improve the motivation and engagement of clients/practitioners who participate in exercise programmes.

In light of the increasing attention given to individual well-being and prosperity, professional coaching has become a popular intervention in both the workplace and the private domain. Coaching can be defined as "a systematic and results-oriented process in which the coach facilitates the improvement of the life experience and the achievement of goals in the personal and/or professional life of normal and non-clinical clients" (Grant, 2003, p. 254).

Research on the effects of coaching has supported the popularity of this

approach; studies have repeatedly demonstrated the positive effects of coaching on both well-being (e.g., reduced stress and burnout) and performance outcomes (e.g., goal achievement) (Theeboom et al., 2014; Jones et al., 2014; Jones et al., 2016; McGonagle et al., 2020).

However, although research on coaching has become increasingly common in recent years, many aspects of this topic remain to be understood. First, relatively little is known regarding coaching techniques and the psychological mechanisms that underlie positive coaching outcomes. Second, most experimental studies on this topic have focused on the immediate effects of questions related to coaching (Theeboom et al., 2014). However, because coaching appears to be a temporary investment, investigating whether issues pertaining to coaching can promote goal-oriented changes (e.g., action planning) beyond these immediate effects may be important. Third, previous experimental research on the effectiveness of coaching—a way of supporting causal conclusions—has been conducted exclusively among undergraduate students (Grant, 2012; Theeboom et al., 2016; Grant and O'Connor, 2018).

This intersection between motivation theory and coaching practice reveals the complexity underlying client engagement processes. Understanding the nuances of individual motivations and their connections to the quality of service offered in this context is essential for coaches' efforts to adapt their approaches more effectively. While Grant (2020), highlighted the need to obtain a deeper understanding of the mechanisms of motivation in this context, Lorenzo & Luján (2024) expanded this discussion by highlighting the importance not only of intrinsic motivations but also of the quality of service and interpersonal relationships with respect to the satisfaction and retention of PTS customers.

This finding indicates that, in addition to the intrinsic and health-related motivations discussed by Gaesser et al. (2020), the quality of service and interpersonal relationships with the PT seem to play key roles in the satisfaction and retention of PTS clients/practitioners.

The identification of specific motivational factors is important for individuals seeking to initiate, maintain and adhere to a systematic exercise programme with the aim of achieving specific health and fitness goals. Previous research has suggested that motivation is associated with many positive behavioural outcomes, such as higher levels of participation and persistence, positive emotions and higher levels of satisfaction (Koivula; Williams, Bezner, Chesbro & Leavitt, 2005). In addition, some authors have reported that several motivational factors can influence individuals' adherence to physical exercise as well as their participation and achievement of physical conditioning goals Kilpatrick, Hebert & Bartholomew (2005); Koivula (1999); Williams, Bezner, Chesbro & Leavitt, 2005).

Nonetheless, the role played by motivation in exercise and physical performance has been extensively researched. Hubbard and Mannell (2001) suggested that "whether or not motivation is an immediate antecedent and plays a direct and stronger role in combating the effects of restrictions on other types of leisure activities, motives and circumstances are involved is not clear and will have to be determined by future research". However, further investigation is required to clarify this direct role.

In summary, intrinsic motivation is clearly a key factor in the engagement of clients/practitioners in physical exercise programmes, regardless of the context. Motivational coaching strategies can effectively increase such intrinsic motivation, and the quality of PTS and the client's relationship with the PT are also important factors for efforts to ensure the satisfaction and loyalty of clients/practitioners. However, importantly, the ideal approach may vary according to the individual needs and preferences of clients/practitioners, thus highlighting the importance of personalization in PTS.

The comprehensive analysis performed as part of this study reveals the critical importance of motivation and motivational coaching strategies in the context of PTS. By highlighting the intersection between motivation and coaching practice, the underlying complexity of the motivation processes of PTS clients/practitioners is revealed. Intrinsic motivation emerges as a key factor in the involvement of clients/practitioners in physical exercise programmes, whereas motivational coaching strategies offer a promising way of strengthening this aspect. In addition, the quality of service and interpersonal relationships with PTs prove to be fundamental elements of the task of ensuring the satisfaction and retention of PTS customers/practitioners. However, we recognize that certain gaps remain to be filled, especially regarding the mechanisms that underlies the results of coaching and the task of generalizing the findings of this research to different training contexts. Therefore, future studies should continue to explore this topic with the goals of optimizing the results of PTS and promoting the health and well-being of clients/practitioners.

This study employed a robust approach based on the extant scientific literature to offer valuable insights into the impact of motivational coaching strategies on the engagement of PTS clients/practitioners. However, it is essential to recognize some limitations of this research. Because this study takes the form

of a systematic review, it may be influenced by study selection bias, as not all available studies may have been included in the analysis; furthermore, this factor may ultimately have implications regarding the representativeness of the results. In addition, the studies analysed in this context may have some methodological limitations that we did not evaluate but that may affect the validity and generalizability of the results. Additionally, the results presented in these studies may not be directly generalizable to all contexts of personalized physical training since the characteristics of participants, coaches and training programmes can vary significantly. Despite these limitations, this study offers important insights into the impacts of motivational coaching strategies on PTS clients/practitioners. However, more research should be conducted to deepen our understanding of these processes as well as to promote improvements in the results of personalized physical training.

Ethics approval and consent to participate

Not applicable

Consent for publication

The authors confirm that they have approved the final version of the present article and consent to its submission and potential publication.

Availability of data and materials

This study is a systematic review based on publicly available data retrieved from scientific databases. All sources of data, including articles and other materials analyzed, are properly cited in the manuscript. No original datasets were generated or used in this study beyond those already published in the literature.

Competing interests

The authors have no conflicts of interest to declare.

Authors' contributions

Dioneide Pereira da Silva, Juliana Carla Mendes de Melo, Gertrudes Nunes de Melo, Antônio Fernando Boleto Rosado, and Paulo Jorge Martins contributed to the conception and design of the research project, data analysis and interpretation, and manuscript writing.

Dioneide Pereira da Silva, Juliana Carla Mendes de Melo, Gertrudes Nunes de Melo, Tiago José do Nascimento Caetano, Glêbia Alexa Cardoso, and Iraquitã de Oliveira Caminha Correio were responsible for the critical revision of the manuscript.

Acknowledgment

The authors would like to thank the Laboratory of Sports Psychology, CIPER, Faculty of Human Motricity – FMH, University of Lisbon-ULISBOA, Lisbon, Portugal, for their support in the development of this study.

References

- American College of Sports Medicine. (2011). Recursos do ACSM para o Personal Trainer. 3. ed. Guanabara: Koogan.
- Araújo, W. C. O. (2020). Recuperação da informação em saúde. *Convergências em Ciência da Informação*, 3 (2), 100-34.
- Cabana, M. D., Rand, C. S., Powe, N. R., Wu, A. W., Wilson, M. H., Aboud, P. A. C., & Rubin, H. R. (1999). Why don't physicians follow clinical practice guidelines? A framework for improvement. *Jama*, 282(15), 1458-1465. <https://doi.org/10.1001/jama.282.15.1458>.
- Carbonneau, N., Vallerand, R. J., & Lafrenière, M. A. K. (2012). Toward a tripartite model of intrinsic motivation. *Journal of personality*, 80(5), 1147-1178. <https://onlinelibrary.wiley.com/doi/abs/10.1111/j.1467-6494.2011.00757.x>
- Catalá-López, F., Ridao, M., Hurtado, I., Núñez-Beltrán, A., Gènova-Maleras, R., Alonso-Arroyo, A., ... & Tabarés-Seisdedos, R. (2019). Prevalence and comorbidity of autism spectrum disorder in Spain: study protocol for a systematic review and meta-analysis of observational studies. *Systematic Reviews*, 8, 1-7. <https://link.springer.com/article/10.1186/s13643-019-1061-1>
- Chiviacowsky, S. (2020). The motivational role of feedback in motor learning: evidence, interpretations, and implications. In *Advancements in mental skills training* (pp. 44-56). Routledge. <https://doi.org/10.4324/9780429025112>
- Deci, E. L., & Ryan, R. M. (2013). Intrinsic motivation and self-determination in human behavior. Springer Science & Business Media.
- Ekkekakis, P., & Lind, E. (2006). Exercise does not feel the same when you are overweight: the impact of self-selected and imposed intensity on affect and exertion. *International journal of obesity*, 30(4), 652-660. <https://www.nature.com/articles/0803052>
- Ferrer-Caja, E., & Weiss, M. R. (2000). Predictors of intrinsic motivation among adolescent students in physical education. *Research quarterly for exercise and sport*, 71(3), 267-279. <https://www.tandfonline.com/doi/abs/10.1080/02701367.2000.10608907>
- Fisher, J., Sales, A., Carlson, L., & Steele, J. (2016). A comparison of the motivational factors between CrossFit participants and other resistance exercise modalities: a pilot study. *J Sports Med Phys Fitness*, 57(9), 1227-1234. https://www.researchgate.net/profile/James-Fisher-25/publication/302969640_A_comparison_of_the_motivational_factors_between_CrossFit_participants_and_other_resistance_exercise_modalities_A_pilot_study/links/57569cc808ae0405a5780c38/A-comparison-of-the-motivational-factors-between-CrossFit-participants-and-other-resistance-exercise-modalities-A-pilot-study.pdf
- Fransen, K., Boen, F., Vansteenkiste, M., Mertens, N., & Vande Broek, G. (2018). The power of competence support: The impact of coaches and athlete leaders on intrinsic motivation and performance. *Scandinavian Journal of Medicine & Science in Sports*, 28(2), 725-745. <https://onlinelibrary.wiley.com/doi/abs/10.1111/sms.12950>
- Gaesser, V. J., Maakestad, W. M., Hayes, E. S., & Snyder, S. J. (2020). Motivational coaching improves intrinsic motivation in adult fitness program participants. *International Journal of Exercise Science*, 13(5), 1167. <https://pmc.ncbi.nlm.nih.gov/articles/PMC7449323/>
- Garay, L. C., Lima, Í., & Beresford, H. (2008). O treinamento personalizado: Um enfoque paradigmático da performance para o do bem-estar. *Arquivos em Movimento*, 4(1), 144-159. https://www.researchgate.net/profile/Laura-Castro-86/publication/251824895_O_TREINAMENTO_PERSONALIZADO_UM_ENFOQUE_PARADIGMATICO_DA_PERFORMANCE_PARA_O_DO_BEM-ESTAR/links/575ef84708aec91374b42dddf/O-TREINAMENTO-PERSONALIZADO-UM-ENFOQUE-PARADIGMATICO-DA-PERFORMANCE-PARA-O-DO-BEM-ESTAR.pdf
- Grant, A. M. (2003). The impact of life coaching on goal attainment, metacognition and mental health. *Soc. Behav. Pers. Int. J.* 31, 253-263. doi: 10.2224/sbp.2003.31.3.253
- Grant, A. M. (2012). Making positive change: a randomized study comparing solution focused vs. problem-focused coaching questions. *J. Syst. Ther.* 31, 21-35. doi: 10.1521/jsyt.2012.31.2.21.
- Grant, A. M., and O'Connor, S. A. (2018). Broadening and building solution-focused coaching: feeling good is not enough. *Coach. Int. J. Theory Res. Pract.* 11, 165-185. doi: 10.1080/17521882.2018.1489868.
- Grant, A. M. (2020). "An integrated model of goal-focused coaching: An evidence-based framework for teaching and practice" in *Coaching Researched: A Coaching Psychology Reader*, eds J. Passmore and D. Tee (Hoboken, NJ: Wiley), 115-139. doi: 10.1002/9781119656913.ch7.
- Grol, R., & Wensing, M. (2004). What drives change? Barriers to and incentives for achieving evidence-based practice. *Medical journal of Australia*, 180, S57-S60. <https://doi.org/10.5694/j.1326-5377.2004.tb05948.x>.
- Hollembeak, J., & Amorose, A. J. (2005). Perceived coaching behaviors and college athletes' intrinsic motivation: A test of self-determination theory. *Journal of applied sport psychology*, 17(1), 20-36. <https://doi.org/10.1080/10413200590907540>
- Horn, T. S. (2008). Advances in sport psychology. *Human kinetics*.
- Hubbard, J., & Mannell, R. C. (2001). Testing competing models of the leisure constraint negotiation process in a corporate employee recreation setting. *Leisure sciences*, 23(3), 145-163. <https://doi.org/10.1080/014904001316896846>
- Jones, R. J., Woods, S. A., & Guillaume, Y. R. (2016). The effectiveness of workplace coaching: A meta-analysis of learning and performance outcomes from coaching. *Journal of occupational and organizational psychology*, 89(2), 249-277. <https://doi.org/10.1111/joop.12119>
- Jowet, S. (2003). When the "honeymoon" is over: a case study of a coach-athlete dyad in crisis. *The Sport Psychologist*, 17(4), 444-460. <https://doi.org/10.1123/tsp.17.4.444>
- Khan, A. S., & Iqbal, N. (2020). Self-efficacy: a predictor of success. *VFAST Transactions on Education and Social Sciences*, 8(1), 30-35. <https://doi.org/10.21015/vtess.v6i2.226>
- Kilpatrick, M., Hebert, E., & Bartholomew, J. (2005). College students'

- motivation for physical activity: differentiating men's and women's motives for sport participation and exercise. *Journal of American college health*, 54(2), 87-94. <https://doi.org/10.3200/JACH.54.2.87-94>
26. King's Fund. (2012). Leadership and engagement for improvement in the NHS: Together we can. King's Fund.
 27. Klain, I. P., Rombaldi, A. J., Matos, D. G. D., Leitão, J., Cid, L., & Moutão, J. (2016). Adesão e desistência de programas de treino personalizado. *Revista Iberoamericana de Psicología del Ejercicio y el Deporte*, 11(1), 15p-21p. <http://hdl.handle.net/10400.15/1447>
 28. Koivula, N. (1999). Sport Participation: Differences in Motivation and Actual. *Journal of Sport Behavior*, 22(3). <https://openurl.ebsco.com/EPDB%3Agcd%3A6%3A9253414/detailv2?sid=ebsco%3Aplink%3Ascholar&id=ebsco%3Agcd%3A2116276&cr1=c>
 29. Lee, I. M., Shiroma, E. J., Lobelo, F., Puska, P., Blair, S. N., & Katzmarzyk, P. T. (2012). Effect of physical inactivity on major non-communicable diseases worldwide: an analysis of burden of disease and life expectancy. *The lancet*, 380(9838), 219-229. [https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(12\)61031-9/abstract?cc=y%3D](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(12)61031-9/abstract?cc=y%3D)
 30. Li, W., Wright, P. M., Rukavina, P. B., & Pickering, M. Personal and Social Responsibility Questionnaire. *Journal of Teaching in Physical Education*. <https://doi.org/10.1037/t71437-000>
 31. Lorenzo, L. V., & Luján, J. F. G. (2024). Motivos de práctica, contratación y percepción del servicio de entrenamiento personal en clientes premium. *Retos: nuevas tendencias en educación física, deporte y recreación*, (51), 149-158. <https://dialnet.unirioja.es/servlet/articulo?codigo=9126193>
 32. Mäkelä, M., & Thorsen, T. (1999). A framework for guidelines implementation studies. *Changing professional practice. Theory and practice of clinical guidelines implementation*, 23, 53.
 33. Martins, P., Rosado, A., Ferreira, V., & Biscaia, R. (2017). Personal and social responsibility among athletes: The role of self-determination, achievement goals and engagement. *Journal of human kinetics*, 57(1), 39-50. doi: <http://doi.org/10.1515/hukin-2017-0045>
 34. McGonagle, A. K., Schwab, L., Yahanda, N., Duskey, H., Gertz, N., Prior, L., ... & Krieger, G. (2020). Coaching for primary care physician well-being: A randomized trial and follow-up analysis. *Journal of occupational health psychology*, 25(5), 297. doi: 10.1037/ocp0000180
 35. Melinda B. A. (2021). Emotional Intelligence as a predictor of success in personal training. *Sport Journal*; 4/2/2021, pn.pag-n.pag,1p. Ed. D4 Bogardus Place, 4DNew York, NY 10040mba2122@tc.columbia.edu917-854-2818.
 36. Abbott, M. B., O'Connell, K. A., & Abbott, M. (2021). Emotional Intelligence as a predictor of success in personal training. *The Sport Journal*. <https://thesportjournal.org/article/emotional-intelligence-as-a-predictor-of-success-in-personal-training>
 37. Michie, S., Johnston, M., Abraham, C., Lawton, R., Parker, D., & Walker, A. (2005). Making psychological theory useful for implementing evidence based practice: a consensus approach. *BMJ quality & safety*, 14(1), 26-33. <https://doi.org/10.1136/qshc.2004.011155>
 38. Moher, D., Liberati, A., Tetzlaff, J., Altman, D. G., & PRISMA Group*, T. (2009). Preferred reporting items for systematic reviews and meta-analyses: the PRISMA statement. *Annals of internal medicine*, 151(4), 264-269. <https://www.acpjournals.org/doi/full/10.7326/0003-4819-151-4-200908180-00135>
 39. Monteiro, A. G. (2002). Treinamento personalizado. São Paulo: Phorte.
 40. Nahas, M. V. (2001). Atividade física, saúde e qualidade de vida. *Londrina: Midiograf*, 3, 278.
 41. Olympiou, A., Jowett, S., & Duda, J. L. (2008). The psychological interface between the coach-created motivational climate and the coach-athlete relationship in team sports. *The sport psychologist*, 22(4), 423-438.
 42. Pelletier, L. G., Tuson, K. M., Fortier, M. S., Vallerand, R. J., Briere, N. M., & Blais, M. R. (1995). Toward a new measure of intrinsic motivation, extrinsic motivation, and amotivation in sports: The Sport Motivation Scale (SMS). *Journal of sport and Exercise Psychology*, 17(1), 35-53. <https://doi.org/10.1123/jsep.17.1.35>
 43. Preferred Reporting Items for Systematic Reviews and Meta-Analysis Protocols PRISMA (2019).
 44. Preferred Reporting Items for Systematic Reviews and Meta-Analyses – PRISMA (2020).
 45. Programa Institucional do Governo Português XXI. (2015-2019).
 46. Rainbird, K., Sanson-Fisher, R. W., & Buchan, H. (2006). Identifying barriers to evidence uptake. *National Institute of Clinical Studies*.
 47. Sánchez-Oliva, D., Palmeira, A. L., Carraça, E. V., Teixeira, P. J., Markland, D., & Silva, M. N. (2021). Motivational strategies used by exercise professionals: A latent profile analysis. *Journal of Physical Activity and Health*, 18(8), 895-903. DOI: <https://doi.org/10.1123/jpah.2020-0338>.
 48. Santos, T. S., & de França, J. V. S. (2020). Personal Trainer: A look at the Management of the Quality of the Services provided. *Revista Intercontinental de Gestão Desportiva-RIGD (Intercontinental Journal of Sport Management)* ISSN 2237-3373, 10(3), 0-1. <https://app.periodikos.com.br/journal/rigd/article/5fc836c80e8825dc6a23ae0f>
 49. Strandberg, E., Bean, C., Vassbakk-Svindland, K., Brooke, H. L., Sjövall, K., Börjeson, S., ... & Demmelmaier, I. (2022). Who makes it all the way? Participants vs. decliners, and completers vs. drop-outs, in a 6-month exercise trial during cancer treatment. Results from the Phys-Can RCT. *Supportive Care in Cancer*, 1-10. <https://link.springer.com/article/10.1007/s00520-021-06576-0>
 50. Theeboom, T., Beersma, B., & van Vianen, A. E. (2014). Does coaching work? A meta-analysis on the effects of coaching on individual level outcomes in an organizational context. *The journal of positive psychology*, 9(1), 1-18. doi: 10.1080/17439760.2013.837499.
 51. Theeboom, T., Beersma, B., & Van Vianen, A. E. (2016). The differential effects of solution-focused and problem-focused coaching questions on the affect, attentional control and cognitive flexibility of undergraduate students experiencing study-related stress. *The Journal of Positive Psychology*, 11(5), 460-469. doi: 10.1080/17439760.2015.1117126
 52. Vallée, C. N., & Bloom, G. A. (2005). Building a successful university program: Key and common elements of expert coaches. *Journal of applied sport psychology*, 17(3), 179-196. <https://doi.org/10.1080/10413200591010021>
 53. Wensing, M., Bosch, M., Foy, R., Eccles, M., & Grol, R. (2005). Factors in theories on behaviour change to guide implementation and quality improvement in healthcare.
 54. WHO Guidelines on Physical Activity and Sedentary Behaviour: at a glance]. *Genebra: Organização Mundial da Saúde; [2020]. Licença: CC BY-NC-SA 3.0 IGO será a edição vinculativa e autêntica.*
 55. Williams, B. R., Bezner, J., Chesbro, S. B., & Leavitt, R. (2005). The effect of a behavioral contract on adherence to a walking program in post-menopausal African American women. *Topics in Geriatric Rehabilitation*, 21(4), 332-342. https://journals.lww.com/topicsingeriatricrehabilitation/abstract/2005/10000/the_effect_of_a_behavioral_contract_on_adherence.10.aspx