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## Article

# Comprehensive Analysis of the Image of Group Fitness Instructors: Intra- and Inter-Country Comparison between Portugal and Romania

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**Abstract:** Physical fitness is a fundamental indicator of health, leading to increased interest in fitness activities under professional guidance. Fitness instructors play an essential role, requiring both technical and interpersonal skills. Their image significantly influences participants' perceptions and satisfaction. The objective of this study is to conduct a comparative analysis between Romania and Portugal regarding the quality of services offered within group fitness classes, focusing on instructors. It involved 133 group fitness instructors and 210 participants from Romania and Portugal. An adaptation of the Szumilewicz et al. (2008) questionnaire was used to assess the importance of the different attributes of fitness instructor image. Statistical analyses included descriptive statistics, t-tests, and effect size to compare perceptions between countries and groups. Romanian instructors and participants generally attributed higher importance to the fitness instructor's image compared to their Portuguese counterparts. Significant differences were found in attributes like physical fitness, technical execution and communication. Instructors tended to overestimate the importance of their image compared to participants. The fitness instructor image is crucial in determining participant satisfaction and perceptions of service quality. This study highlights the need for a balanced approach in instructor training, emphasizing both technical proficiency and interpersonal skills tailored to cultural contexts.

**Keywords:** fitness instructor; fitness industry; physical fitness

## 1. Introduction

Physical fitness is a fundamental indicator of our current and future health status [1]. In contemporary society, there is a growing emphasis on health and well-being, prompting individuals to adopt healthier lifestyles. A significant aspect of this trend is the pursuit of physical exercise under

the guidance of a personal trainer, or within group exercise programs led by fitness instructors [2]. In both cases, specialized fitness professionals are fundamental agents for optimizing individuals' physical fitness [3].

Certification authorities agree that, in addition to a solid background in anatomy, physiology or biomechanics, the essential skills of a fitness instructor should include social and relational skills [4,5]. Furthermore, fitness instructors may also benefit from understanding population lifestyles, knowledge of chronic diseases, the ability to develop exercise programs, program management, and providing nutritional advice, among other skills [6]. The increasing popularity of fitness activity, along with the professional training and certification of instructors, has attracted attention from international specialists. In the fitness industry, the image of the instructor is of paramount importance due to its significant impact in participants' perceptions [7,8], whether they are healthy participants or disabled individuals [9].

A study conducted by Glaveli et al. [10], on the quality of interaction of the fitness instructor in building trust with participants, refers that the communication skills of fitness instructors are essential for developing client trust in fitness centers, with a positive impact on satisfaction. In contrast, technical skills did not have significant impact. Furthermore, the study identified the clients' trust in the service provider as a key variable that partially mediates the relationship between instructors' social skills and client satisfaction, underscoring the importance of maintaining a positive image.

The positive image of a fitness instructor can be a good predictor of the quality of an instructor. The tone of voice [11], instruction style [12], pedagogical feedback [13], or the social and relational skills they possess [10,14], are key aspects that are used by participants to distinguish between an unprepared instructor and a well-prepared one [7,15]. Also, how the instructor observes the participants or class can influence pedagogical intervention, which involves making decisions based on those observations and the subsequent thought process [16].

Dobrich [17] examined group instructors, focusing on how fitness culture influences body norms and shapes instructors' self-perceptions of body image. The author emphasizes the importance of understanding how self-perception affects an instructor's performance and their ability to motivate class participants. Dobrich [17] notes that the prevalent ways body image is incorporated and represented in group fitness are often limiting and incorrect. She suggests that there are more effective methods of fitness instruction that professionals and the industry can follow. The review provides recommendations for practice and suggests interventions to encourage appropriate satisfaction group fitness instruction, at both individual and collective levels.

Currently, gyms and fitness centers serve as a fundamental pillar in the physical activity habits of people of all ages [18]. Over the past three decades, the fitness industry has experienced remarkable growth, evolving from small training facilities targeted at athletes to sports-oriented centers for the general population [19]. This industry has significant potential to attract members and contribute to the optimization of population health [20]. Due to this expansion, there is a high demand for fitness activities, and consequently, a challenge in educating and training well-prepared fitness instructors.

Considering the development of the fitness industry in both Romania and Portugal, driven by an increasing population demand, it becomes essential to assess the quality of services provided by fitness centers. This evaluation includes the quality of materials, equipment, services, location and quality of human resources, particularly of the fitness instructors. This study focuses on the latter aspect – specifically, the image of group fitness instructors (GEFI) – as a quality indicator, assessed from both their perspective and that of the participants who use and pay for these services.

While the image of GEFI has already been addressed in Portugal [3] this issue is novel and significant for Romania. As fitness activities become more popular and diverse, training specialists in fitness face increasingly numerous challenges. The importance of the instructor's image in their professional success has been addressed in Poland [8], in a qualitative study that examined aspects related to the instructor's profile, in general areas (e.g., rhythm and musical domain), and specific aspects related to image (e.g., toned body and well-defined muscles).

Based on the instrument development by Szumilewicz et al. [8] this study aims to: a) characterize the importance attributed to the GEFI image in Romania, and compare perspectives between instructors and participants; and b) compare the importance attributed to GEFI image by instructors and participants between Romania and Portugal.

Several studies in Romania focus on improving physical fitness and health through different methods such as weight [21–23], bodyweight [24,25] and functional training [26]. Nationwide research in Romania highlights the importance of fitness activities for maintaining overall health and achieving optimal physical fitness, listing several group exercise activities (e.g., Zumba, Tae-Bo, Cycling, Batuka, Step-Aerobics, Aqua Fitness, Body Toning, Pilates, Tabata, HIIT, Kangoo Jumps, Jukari) that engage an increasing number of participants. The importance of professional training, both theoretical and practical, preferably through long-term studies (e.g., bachelor's, master's), is fundamental and very important.

Although the fitness industry continues to develop in Romania and Portugal, with strong scientific approaches to training, our investigation represents a novelty in the two countries, as no studies have been identified that analyze fitness instructors' self-satisfaction with their work or customer satisfaction related to the image and behavior of the instructors in gyms and fitness centers. This research may lay the groundwork for future research focusing on these aspects. The significance of this research is further heightened by conducting both an intra-country analysis and an inter-country comparison between Romania and Portugal.

## 2. Materials and Methods

### 2.1. Participants

A total of 133 group fitness instructors and 210 fitness participants of group fitness activities participated in this study. The sample was divided as follows: 102 Portuguese instructors (45.09% female; age:  $29.66 \pm 5.95$  years; experience:  $5.26 \pm 4.59$  years) and 31 Romanian instructors (58.06% female; age:  $32.10 \pm 10.45$  years; experience:  $7.70 \pm 7.91$  years); 150 Portuguese participants in group fitness activities (79.33% female; age:  $37.72 \pm 15.14$  years; experience:  $7.16 \pm 7.66$  years) and 60 Romanian participants (58.06% female; age:  $37.36 \pm 8.52$  years; experience:  $4.78 \pm 3.79$  years).

### 2.2. Instruments

For data collection, the questionnaire developed by Szumilewicz et al. [8], was translated, adapted and validated (face validity) for Romanian and Portuguese language, as described in Campos et al. [3], and according to specialized literature [27–30]. The instrument presents 15 items and is answered in a 7-items Likert importance scale, from 1 (not important at all) to 7 (absolutely important).

### 2.3. Procedures

The fitness centers were previously contacted by phone to obtain authorization to approach the GEFI and proceed with the study. After this, the GEFI were also contacted by phone, and later by e-mail, explaining the content, scope and objectives of the study. After explained what was intended, they were asked to inform and sensitize participants to the importance of their collaboration.

The space (e.g., sound, luminosity, comfort), material (e.g., print quality, supply of pen for filling, instructions provided clearly and precisely), participants condition (e.g., clarification and informed consent, physical/mental well-being) were all standardized and controlled, to limit the factors that could affect the quality, validity and reliability of data collection [27].

Subsequently, collection dates were set and, on the same day, all participants were reminded about the study's theme and objective, the procedures and instruments used (application of a questionnaire), the importance of honesty of their responses, anonymity and confidentiality in the use and dissemination of the information. After clarifying all doubts and signing the informed consent, the questionnaire was administered at the end of the session, near the place where the session took place. Both the participants and their GEFI completed the questionnaire.



2.4. Analysis

The characterization of the importance give to GEFI image by the participants and the instructors was conducted using descriptive statistics ( $M \pm SD$ ). Group comparisons were performed using the independent samples t-test, following the assumptions of normality and homogeneity [31]. Given that the sample size exceeds 30 subjects ( $n > 30$ ), the normality assumption of each univariate dependent variable was assessed using the Kolmogorov-Smirnov normality test. In cases where this assumption was not confirmed, recourse was made to the Central Limit Theorem [31,32], employing same criterion ( $n > 30$ ), and the assumption was made. Levene's test was employed to verify homogeneity assumption [32]. Regarding comparison, effect size was calculated using Cohen's d index, with classification as follows [31]: very large ( $d > 1.0$ ); large ( $.5 < d \leq 1.0$ ); medium ( $.2 < d \leq .5$ ); and small ( $d \leq .2$ ). Considering the application of a questionnaire, the confidence degree is determined by the internal consistency assessed using Cronbach's Alpha coefficient [32], which is classified as follows: very good ( $\alpha \geq .9$ ); good ( $.8 \leq \alpha < .9$ ); reasonable ( $.7 \leq \alpha < .8$ ); poor ( $.6 \leq \alpha < .7$ ); unacceptable ( $\alpha < .6$ ). All statistical analysis were performed using IBM SPSS Statistics software (v.28, IBM USA), with a significance level of 5.00% ( $p < .05$ ).

3. Results

Table 1 characterizes and compares Romanian instructors and participants regarding their perception of importance given to the GEFI image attributes. Firstly, it is important to emphasize the high levels of importance attributed to every item, considering the answer scale (from 1 to 7). For the instructors, the perception ranges from  $5.66 \pm 1.40$  (attractive dress and footwear) to  $7.00 \pm .001$  (good hygiene). Regarding participants, the perception ranges from  $5.13 \pm 1.59$  (attractive dress and footwear) to  $7.00 \pm .001$  (good hygiene). Highlight also for the item's good physical fitness ( $7.00 \pm .01$ ), education and cordiality towards the participants ( $7.00 \pm .01$ ), good technical execution ( $7.00 \pm .01$ ) and clear and objective communication ( $7.00 \pm .01$ ), for the instructors, and good technical execution ( $7.00 \pm .01$ ), for the participants.

**Table 1.** Characterization of the importance attributed to the GEFI image in Romania, and comparison between instructors and participants.

Item	Instructors	Participants	t	p	d
1. Nice sounding voice.	6.58 ± .59	6.00 ± 1.19	3.059	.003*	.407
2. Well toned body, with clearly defined musculature.	6.27 ± .69	5.83 ± 1.21	2.172	.033*	.412
3. Good physical fitness.	7.00 ± .01	6.74 ± .46	4.370	.001*	.690
4. Education and cordiality towards the participants.	7.00 ± .01	6.91 ± .29	2.491	.016*	.379
5. Good hygiene.	7.00 ± .001	7.00 ± .001	-	-	-
6. Good technical execution.	7.00 ± .01	7.00 ± .01	1.447	.151	.001
7. Attractive dress and footwear.	5.66 ± 1.40	5.13 ± 1.59	1.528	.130	.346
8. Empathy and affinity with the participants.	6.76 ± .43	6.63 ± .61	1.130	.262	.233
9. Sense of humor.	6.07 ± 1.02	6.39 ± .70	-1.551	.128	.391
10. Good energy and dynamic.	6.92 ± .25	6.84 ± .40	1.035	.303	.224
11. An original style.	6.60 ± .68	5.98 ± 1.16	3.187	.002*	.604
12. Good rhythmic and musical dominance.	6.50 ± .81	6.41 ± .67	.547	.586	.125
13. Clear and objective communication.	7.00 ± .01	6.87 ± .32	3.013	.004*	.496

14. A pleasant, attractive and good-looking appearance.	6.50 ± .72	6.00 ± 1.12	2.223	.029*	.497
15. Dress according to the type of class that is teaching.	6.10 ± 1.30	6.02 ± 1.03	.329	.743	.071

\*statistically significant for  $p < .05$ .

Of all 15 items, only one was considered more important by the participants (sense of humor), compared to the instructors, although there were no significant differences between groups ( $t = -1.551$ ;  $p = .128$ ;  $d = .391$ ; medium effect size).

Significant differences in seven items: nice sounding voice ( $t = 3.059$ ;  $p = .003$ ;  $d = .407$ ; medium effect size); well toned body, with clearly defined musculature ( $t = 2.172$ ;  $p = .033$ ;  $d = .412$ ; medium effect size); good physical fitness ( $t = 4.370$ ;  $p = .001$ ;  $d = .690$ ; large effect size); education and cordiality towards the participants ( $t = 2.491$ ;  $p = .016$ ;  $d = .379$ ; medium effect size); an original style ( $t = 3.187$ ;  $p = .002$ ;  $d = .604$ ; large effect size); clear and objective communication ( $t = 3.013$ ;  $p = .004$ ;  $d = .496$ ; medium effect size); a pleasant, attractive and good-looking appearance ( $t = 2.223$ ;  $p = .029$ ;  $d = .497$ ; medium effect size).

Table 2 compares the Romanian and the Portuguese contexts both for Instructors and Participants. For the instructors, it is possible to verify that in 13 of the 15 items, the importance attributed to the GEFI image is higher in Romania. Although with no significant differences there are only two items where the importance attributed is higher in Portugal [good rhythmic and musical dominance (Portugal:  $6.61 \pm .62$ ; Romania:  $6.50 \pm .81$ ;  $t = .789$ ;  $p = .431$ ;  $d = .165$ ; small effect size); dress according to the type of class that is teaching (Portugal:  $6.19 \pm .88$ ; Romania:  $6.10 \pm 1.30$ ;  $t = .371$ ;  $p = .712$ ;  $d = .091$ ; small effect size)].

**Table 2.** Comparison of the importance attributed to the GEFI image, by instructors and participants, between Romania and Portugal.

Item	Instructors					Participants				
	Romania	Portugal	<i>t</i>	<i>p</i>	<i>d</i>	Romania	Portugal	<i>t</i>	<i>p</i>	<i>d</i>
1.	6.58 ± .59	6.34 ± .71	-1.630	.106	.350	6.00 ± 1.19	6.12 ± 1.04	.702	.484	.111
2.	6.27 ± .69	5.03 ± 1.22	-7.074	.001*	1.104	5.83 ± 1.21	4.49 ± 1.70	-6.403	.001*	.850
3.	7.00 ± .01	6.20 ± .80	-10.164	.001*	1.135	6.74 ± .46	5.99 ± 1.25	-6.291	.001*	.691
4.	7.00 ± .01	6.80 ± .50	-3.968	.001*	.454	6.91 ± .29	6.70 ± .56	-3.606	.001*	.421
5.	7.00 ± .00	6.68 ± .59	-5.438	.001*	.615	7.00 ± .00	6.59 ± .72	-6.932	.001*	.673
6.	7.00 ± .01	6.72 ± .54	-5.168	.001*	.588	7.00 ± .01	6.66 ± .58	-7.208	.001*	.693
7.	5.66 ± 1.40	5.15 ± 1.41	-1.724	.091	.362	5.13 ± 1.59	4.31 ± 1.84	-3.028	.003*	.463
8.	6.76 ± .43	6.62 ± .64	-1.108	.270	.234	6.63 ± .61	6.61 ± .67	-.219	.827	.031
9.	6.07 ± 1.02	5.91 ± .65	-.802	.428	.214	6.39 ± .70	6.15 ± .95	-1.999	.047*	.271
10.	6.92 ± .25	6.62 ± .55	-4.188	.001*	.601	6.84 ± .40	6.54 ± .63	-4.119	.001*	.523

11.	6.60 ± .68	5.92 ± 1.14	-4.060	.001*	.645	5.98 ± 1.16	5.48 ± 1.21	- 2.763	.006*	.418
12.	6.50 ± .81	6.61 ± .62	.789	.431	.165	6.41 ± .67	5.89 ±1.17	- 3.991	.001*	.494
13.	7.00 ± .01	6.59 ± .63	-6.486	.001*	.738	6.87 ± .32	6.58 ± .63	- 4.494	.001*	.518
14.	6.50 ± .72	6.08 ± .84	-2.469	.015*	.516	6.00 ± 1.12	5.24 ± 1.52	- 3.996	.001*	.536
15.	6.10 ± 1.30	6.19 ± .88	.371	.712	.091	6.02 ± 1.03	5.54 ± 1.54	- 2.574	.011*	.339

\*statistically significant for  $p < .05$ .

Also for the instructors, significant differences were found in nine of the 15 items: well toned body, with clearly defined musculature ( $t = -7.074$ ;  $p = .001$ ;  $d = 1.104$ ; very large effect size); good physical fitness ( $t = -10.164$ ;  $p = .001$ ;  $d = 1.135$ ; very large effect size); education and cordiality towards the participants ( $t = -3.968$ ;  $p = .001$ ;  $d = .454$ ; medium effect size); good hygiene ( $t = -5.438$ ;  $p = .001$ ;  $d = .615$ ; large effect size); good technical execution ( $t = -5.168$ ;  $p = .001$ ;  $d = .588$ ; large effect size); good energy and dynamic ( $t = -4.188$ ;  $p = .001$ ;  $d = .601$ ; large effect size); original style ( $t = -4.060$ ;  $p = .001$ ;  $d = .645$ ; large effect size); clear and objective communication ( $t = -6.486$ ;  $p = .001$ ;  $d = .738$ ; large effect size); a pleasant, attractive and good-looking appearance ( $t = -2.469$ ;  $p = .015$ ;  $d = .516$ ; large effect size).

For the participants, it is possible to verify that 14 of the 15 items showed a higher importance attributed to the GEFI image in Romania. There was only one item where the importance attributed was higher in Portugal, although without statistically significant meaning [nice sounding voice (Portugal:  $6.12 \pm 1.04$ ; Romania:  $6.00 \pm 1.19$ ;  $t = .702$ ;  $p = .484$ ;  $d = .111$ ; small effect size)].

Statistically significant differences in 13 of the 15 items, for the participants group: well toned body, with clearly defined musculature ( $t = -6.403$ ;  $p = .001$ ;  $d = .850$ ; large effect size); good physical fitness ( $t = -6.291$ ;  $p = .001$ ;  $d = .691$ ; large effect size); education and cordiality towards the participants ( $t = -3.606$ ;  $p = .001$ ;  $d = .421$ ; medium effect size); good hygiene ( $t = -6.932$ ;  $p = .001$ ;  $d = .673$ ; large effect size); good technical execution ( $t = -7.208$ ;  $p = .001$ ;  $d = .693$ ; large effect size); attractive dress and footwear ( $t = -3.028$ ;  $p = .003$ ;  $d = .463$ ; medium effect size); sense of humor ( $t = -1.999$ ;  $p = .047$ ;  $d = .271$ ; medium effect size); good energy and dynamic ( $t = -4.119$ ;  $p = .001$ ;  $d = .523$ ; large effect size); an original style ( $t = -2.763$ ;  $p = .006$ ;  $d = .416$ ; medium effect size); good rhythmic and musical dominance ( $t = -3.991$ ;  $p = .001$ ;  $d = .494$ ; medium effect size); clear and objective communication ( $t = -4.494$ ;  $p = .001$ ;  $d = .518$ ; large effect size); a pleasant, attractive and good-looking appearance ( $t = -3.996$ ;  $p = .001$ ;  $d = .536$ ; large effect size); dress according to the type of class that is teaching ( $t = -2.574$ ;  $p = .011$ ;  $d = .339$ ; medium effect size).

4. Discussion

Soekmawati et al. [33,34], corroborated by Campos et al. [3], highlight the importance of GEFI image. Szumilewicz et al. [8], on the other hand, claims that the image has little to average importance for the participants when they choose a particular group exercise fitness activity, concluding that the instructors overestimate the importance of their image. The present research confirms this assumption, showing that Romanian instructors place a higher importance in most of the GEFI image attributes, when compared to the participants (14 of 15 items).

Sense of humor is underestimated by the instructors, when compared with the participants' perceptions. It is important that the GEFI prioritize this indicator (sense of humor) in their professional intervention, with more interactions at this level. This trait may be defined as "a cheerful, fun and smiling person, with sense of humor" [7] (p. 14). Other studies emphasized the importance of developing aspects, somehow related with communication [35,36], empathy [37–39], sympathy [38–40] and good mood [7,41].

Significant differences were found between Romanian instructors and participants, regarding the importance attributed to the GEFI image, in the items nice sounding voice; well-toned body, with clearly defined musculature; good physical fitness; education and cordiality towards the participants; original style; clear and objective communication; a pleasant, attractive and good-looking appearance. Generally, the instructors present a higher perception of importance attributed to the GEFI, which is in line with the results of Szumilewicz et al. [8] and Campos et al. [3].

When comparing Romania and Portugal, in general, the importance attributed to GEFI image is higher in Romania, with significant differences in nine items: well-toned body, with clearly defined musculature; physical fitness; education and cordiality towards the participants; good hygiene; good technical execution; good energy and dynamic; original style; clear and objective communication; a pleasant, attractive and good-looking appearance. The participants showed significant differences in 13 items: well-toned body, with clearly defined musculature; good physical fitness; education and cordiality towards the participants; good hygiene; good technical execution; attractive dress and footwear; sense of humor; good energy and dynamic; original style; good rhythmic and musical dominance; clear and objective communication; a pleasant, attractive and good-looking appearance; dress according to the type of class that is teaching. These results allow us to affirm that, in Romania, the GEFI image is overestimated both by instructors and participants, when compared with Portugal [3].

In Romania, as in Portugal, the image of the GEFI is an essential characteristic that directly relates to the perceived quality of service in gyms and fitness centers [41]. Significant differences were found between the two countries in the perceptions of both instructors and participants, influenced by various factors such as cultural and educational differences, and the evolution of each country fitness market. The results of this study provide valuable insights into managing GEFI interventions by adapting promotion/marketing, communication and training strategies to optimize perception and active involvement of participants fitness instructors.

A detailed understanding of these differences can contribute to the development of a robust and appropriate personal and institutional GEFI image, thereby improving and consolidating the professional relationship with the clients in Romanian gyms and fitness centers. Most importantly, in both countries GEFI must adjust and adapt to the characteristics, needs and preferences of the participants, as suggested in other studies [e.g., 3,7,41].

Recently, gyms and fitness centers have undergone through a digitalization process. Among the elements of digitalization, mobile applications [42,43], devices for monitoring effort parameters or body developments [44–46], whole-body functional training equipment based on muscular electrostimulation [26], among others [e.g., 47], bring a new dimension to GEFI training and certification. Regardless of whether we recognize the importance of these aspects or not, for us, the relational and pedagogical component of GEFI continues and will continue to deserve our attention, being aware that it can be the differentiating characteristic regarding perception of quality and satisfaction with the service, which will positively interfere with loyalty rates [7].

## 5. Conclusions

The findings of this study not only underscore the significance of image attributes of the GEFI in Romania and Portugal, but also create the possibility for future cross-sectional or longitudinal investigations, which can delve deeper into these attributes and simultaneously offer practical solutions for optimizing organizational strategies.

This study presents some limitations. The first is sample representativeness, as full representativity was not possible to ensure neither in Romania nor in Portugal. Cultural and contextual diversity is also a limitation, as specific differences can influence the perception of GEFI image in the two countries. The economic, social, and cultural aspects are important aspects related to local culture and influence respondents' perception. There may be some subjectivity in the participants' answers, as their perception of each item addressed may vary depending on several criteria: individual and/or collective life experience or certain contexts from their personal life, which could affect the objectivity of the results.



Future studies should explore specific factors that can influence the differences highlighted in this research. These factors include, but are not limited to, aspects of cultural, educational, formative and communicative nature, which are relevant in the specific context of the fitness industry. Regarding cultural aspects, we believe it would be interesting to deeply analyze how cultural and social values can influence the perceptions and the best practices related to GEFI. Furthermore, it would be essential to evaluate how educational system contributes to professionals' development of GEFI in the two countries, identifying possible discrepancies or similarities that could influence the study results.

Additionally, concerning communication in the fitness industry, an analysis of how instructors and participants (clients) interact during the practice, as well as preferred communication channels, could provide a comprehensive understanding of the specific dynamics of each participating country in the study. We believe that this detailed perspective on the factors mentioned above could facilitate a much more comprehensive and precise approach to interpreting these obtained results.

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