

THE MOTIVATION OF CROSSFIT PRACTITIONERS FOR COMPETITION

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ABSTRACT. CrossFit is an emerging trend that has captured the attention of many studies in recent years. Despite the high number of research papers covering different aspects of the sport, the motivation of participants in CrossFit competitions remains a topic that is not talked about enough. The purpose of this study is to analyze how competition influences the motivation of CrossFitters. We applied a questionnaire who contains a number of 27 items on a 5-point Likert scale to observe how the participants' motivation influences their view on the competition. The results indicate that all four variables used to define the motivation of competitors (enjoyment to compete, self-perception, challenges, CrossFit community) are significant, while loss of motivation is not a significant factor. Regarding gender, there is a significant difference between the groups in terms of CrossFit community perception ($p < 0.05$). In conclusion, competitive experience plays a crucial role in self-perception, competitive satisfaction, and appreciation of the CrossFit community.

Keywords: *enjoyment, self-perception, challenge, community.*

REZUMAT. *Motivația practicantilor de CrossFit pentru competiție.* CrossFit este o activitate sportivă nouă care a captat atenția multor studii în ultimii ani. În ciuda numărului mare de lucrări de cercetare care acoperă diferite aspecte ale sportului, motivația participanților la competițiile de CrossFit rămâne un subiect despre care nu se vorbește suficient. Scopul acestui studiu este de a analiza modul în care competiția influențează motivația practicantilor de CrossFit. S-a aplicat un chestionar care conține un număr de 27 de itemi pe o scară Likert de

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5 puncte pentru a observa modul în care motivația participanților le influențează viziunea asupra competiției. Rezultatele indică faptul că toate cele patru variabile utilizate pentru a defini motivația concurenților (plăcerea de a concura, percepția de sine, provocările, comunitatea CrossFit) sunt semnificative, în timp ce pierderea motivației nu este un factor semnificativ. În ceea ce privește genul, există o diferență semnificativă între grupuri în ceea ce privește percepția comunității CrossFit ($p < 0,05$). În concluzie, experiența competitivă joacă un rol crucial în percepția de sine, satisfacția competitivă și aprecierea comunității CrossFit.

Cuvinte cheie: plăcere, percepția de sine, provocare, comunitate

INTRODUCTION

CrossFit competitions have become an essential component of the culture and practice of this form of intense training. As this sport has grown in popularity, so has the importance of research that explores the motivation of the participants, to better understand the factors that influence their commitment, persistence and ultimately most importantly - their performance. Different studies talk about the various benefits that intense CrossFit training brings when it comes to physical health, improving six out of ten physical abilities of athletes as follows: cardiovascular and respiratory endurance, stamina, strength, flexibility, balance, strength (Gianzina and Gianzina, 2019; Meyer, Morrison, and Zuniga, 2017; Murawska-Cialowicz, Wojna, and Zuwala-Jagiello, 2015; Bellar et al., 2015). One of the main reasons why CrossFitters participate in competitions is the enjoyment they have during training and the high level of engagement. The diversity and challenging nature of CrossFit workouts encourages active engagement and keeps participants interested, creating a rewarding and engaging experience. For example, the variability in exercise routines has a positive impact on adherence and enjoyment during workouts (Sylvester, Jackson and Beauchamp, 2018; Schlegel, 2020; Meier, Schlie, and Schmidt, 2023; Dawson, 2017). In CrossFit, every workout is different, which provides a constant challenge. The risk of boredom or overfitting is reduced, which maintains the interest and motivation of the participants. Participants are motivated by a desire to continuously improve and surpass themselves, which makes participating in competitions an extremely rewarding experience. In Crossfit, self-efficacy, commitment and personal goal setting are significant elements of personal satisfaction and consequently sports performance (Theodorakis, 1996). The implications of self-efficacy in athletes' performance are very important and the results show that this factor has direct effects on their success (Rogowska et al., 2022; Patterson et al., 2021).

CrossFit competitions are recognized for their intense challenges that test both the physical abilities and mental resilience of participants. They are motivated by a desire to push their limits and prove their skills in a competitive environment. Overcoming these challenges and achieving the goals set in competitions provides deep satisfaction and strengthens the determination to continue training, and in our case the desire to compete. Different studies describe how satisfaction is the materialization of achieving goals through effort (Slavinski et al., 2021; Nikitopoulos, 2020). Subjects who managed to fulfill a greater part of the targets showed a high level of satisfaction. Some studies about the CrossFit program listed 'challenge' as one of the fundamental factors that describe the training time, and also one of the reasons why practitioners choose it, as part of the process that brings them satisfaction and fulfillment (Simpson et al. 2017; Dominski et al., 2021; Marin et al., 2018). Another factor that contributes to the enjoyment of exercising in CrossFit is the competitive and supportive environment. A study emphasized the importance of social support in participation and continuity in physical activities (Lautner et al., 2021). It highlighted the relevance of social aspects for CrossFit participants and emphasized how community and social support contribute to participants' motivation and engagement. CrossFit competitions represent not only a test of physical capabilities, but also an opportunity to experience and strengthen strong social bonds within the CrossFit community (Bycura, Feito, and Prather, 2017; Claudino et al., 2018; Till and Ibrahim, 2024).

Loss of motivation and identification with a sport is a complex phenomenon, which can be influenced by multiple factors. Understanding these negative aspects is important to develop effective strategies to maintain engagement and motivation among CrossFitters. Several studies have analyzed these themes explaining how each case is different; some are related to intrinsic motivation, others to extrinsic motivation, sometimes there is no way back for an athlete who has gone down this path (Ginis, and Bray, 2004; Kellman, 2010; Schwanhausser, et al., 2021).

At the same time, positive psychological aspects can be observed, such as the pleasure of exercising, satisfaction, challenges and reaching your goals. Based on the results, CrossFit training includes both aerobic and anaerobic elements, which improve cardiovascular fitness - which means better heart and lung efficiency during exercise, a better body composition - thus contributing to a more toned and healthy physique, and last but not least, the anaerobic capacity of both men and women, regardless of their sports level. All these benefits have been shown to be factors that lead to high levels of athlete retention and participation in CrossFit training. Since we see so many positive aspects of playing sports, an obvious question arises: what happens if we move to the next step - competition, which means another level of involvement and dedication?

Given everything mentioned above, we will perform an in-depth examination on the relationship between the two variables (competition and motivation of CrossFit athletes), using empirical data to determine if this relationship is significant and will provide a clearer perspective on how this aspect affects the involvement and performance of athletes.

MATERIALS AND METHODS

Procedure

The purpose of this research is to understand the motivation of athletes participating in CrossFit competitions. An electronic questionnaire was developed using a Google-based form to allow for digital administration of the measure. Considering the international appeal of CrossFit, both Romanian and English versions of the survey were available. The survey was distributed via CrossFit gym owners and members of the CrossFit community in Timisoara, Romania. All participants provided informed consent prior to beginning the survey, and the study protocol was approved by the institution's ethics review board.

We applied a questionnaire who contains a number of 27 items on a 5-point Likert scale. The 27 items are classified into 5 categories : Enjoyment of competition (10 questions), Self-perception (7 questions), Challenges (5 questions), CrossFit community (2 questions) and Loss of motivation (2 questions).

For the questionnaire, the Cronbach alpha fidelity coefficient was calculated for the complete version of 27 items. The Cronbach Alpha coefficient of validity of the 27-item scale has a value of 0.915, with a strong percentage of 99.8%, which proves that the scale has a very good level of fidelity. A Cronbach's alpha coefficient greater than 0.800 is considered satisfactory.

A number of 65 athletes from Romania, that are CrossFit practitioners, have participated in this study. All of them have participated in CrossFit competitions. We have added questions that contextualize the scale to the chosen topic. ANOVA, Correlations (Pearson), and Descriptive Statistics were used for data analysis. All statistical analyses were performed using SPSS software, version 22 with a 5% significance level.

Research hypotheses

CrossFit competitions are not only a way to demonstrate physical skills, but also a source of motivation and fulfillment for practitioners. Understanding the reasons why they choose to compete can provide valuable insights into the

factors that contribute to engagement and satisfaction in this sport. Based on the specialized literature and empirical observations, we formulated the following hypotheses, which will be tested in this study:

Hypothesis 1: CrossFit practitioners participate in competitions because it gives them the pleasure of competing in a varied and stimulating environment that maintains a high level of engagement.

Hypothesis 2: Participants in CrossFit competitions are motivated by the personal satisfaction and positive self-perception achieved by reaching and exceeding personal goals.

Hypothesis 3: CrossFit practitioners are attracted to competitions because of the intense challenges they provide, which allows them to demonstrate their capabilities and reach their personal goals.

Hypothesis 4: A major factor motivating participation in CrossFit competitions is belonging to a strong and supportive community that provides social support and encouragement.

Hypothesis 5: There is a segment of CrossFit practitioners who, for various reasons, may end up losing motivation and falling out of the sport, which may lead to less participation or inconsistency in competitions.

Hypothesis 6: Factors such as gender, age or years of competition experience are very important and will determine different results from one individual to another.

RESULTS

The data to be presented were collected using the sociological survey (questionnaire) and aid to describe the data and evaluate the differences between them, understand the relationships and interdependencies between the motivational variables, and then the defined groups and between the genders.

Participants generally report high Enjoyment of competing, with an average close to 4 and a slightly higher median than average (4.10). It has reached maximum value, which suggests that many participants gave high scores for the enjoyment of competing. Self-perception is more variable than Enjoyment of competing, with an average just below 3.5 and a significant standard deviation (.773). The value reached is 4, indicating a significant concentration of scores in this area. We can observe a strong appreciation for the Challenges involved in fitness, with a high mean (3.92) and median (4.00). Standard deviation indicates moderate variation in responses (.841). Scores for the CrossFit Community are lower compared to the other motivation variables, with a mean below 3.

Table 1. Descriptive statistics

		Enjoyment of competing	Self-perception	Challenges	CrossFit community	Loss of motivation
N	Valid	65	65	65	65	65
	Missing	0	0	0	0	0
Mean		3.99	3.45	3.92	2.58	1.59
Median		4.10	3.33	4.00	2.33	1.00
Mode		5	4	5	3	1
Std. Deviation		.767	.773	.841	1.111	.918
Minimum		2	2	2	1	1
Maximum		5	5	5	5	5

Participants show significant variation in their perception of the Cross-Fit Community, as shown by the standard deviation (1.111). Overall, Loss of Motivation is not a significant factor, having a very low mean (1.59) and median (1.00) and situating at minimum value. The standard deviation suggests moderate variation in responses, but with a general trend toward lower scores (.918). The descriptive statistics provided indicate a wide range of motivation levels for each variable studied in CrossFit competitions. Enjoyment of competing, Challenges and Self-perception are significant aspects for participants, while the CrossFit Community appears to be perceived less positively. In addition, concern about Loss of Motivation is generally low among participants. These observations will form a solid foundation for further analysis to gain a deeper understanding of the factors that influence motivation in the context of CrossFit fitness and competition.

Table 2. Correlations of motivational variables

		Enjoyment of competing	Self-perception	Challenges	CrossFit community	Loss of motivation
Enjoyment of competing	Pearson Correlation	1	.769	.907	.269	-.163
	Sig. (2-tailed)		.000	.000	.030	.195
	N	65	65	65	65	65
Self-perception	Pearson Correlation	.769	1	.734	.654	.050
	Sig. (2-tailed)	.000		.000	.000	.693
	N	65	65	65	65	65
Challenges	Pearson Correlation	.907	.734	1	.238	-.155
	Sig. (2-tailed)	.000	.000		.056	.216
	N	65	65	65	65	65
CrossFit Community	Pearson Correlation	.269	.654	.238	1	.228
	Sig. (2-tailed)	.030	.000	.056		.067
	N	65	65	65	65	65
Loss of motivation	Pearson Correlation	-.163	.050	-.155	.228	1
	Sig. (2-tailed)	.195	.693	.216	.067	
	N	65	65	65	65	65

In table 2 we have the results regarding the correlations of the motivation variables. Based on the Pearson correlations plotted above, we can draw some important conclusions about the relationships between different aspects of participants' motivation:

There is a strong positive correlation between the Enjoyment of competing and Self-perception ($r = 0.769, p < 0.01$). This suggests that participants who enjoy to compete tend to have a better self-perception. There is a very strong positive correlation between the Enjoyment of competing and the Challenge variable ($r = 0.907, p < 0.01$). Participants who find enjoyment in competition also tend to be motivated by existing challenges. Between the Enjoyment of exercise and the CrossFit Community there is a moderate positive correlation ($r = 0.269, p < 0.05$). This indicates a positive link between Enjoyment of competing and sense of belonging to the CrossFit Community. Between the Enjoyment of competing and the Loss of Motivation there is a weak negative correlation ($r = -0.163, p > 0.05$).

There is a strong positive correlation between Self-perception and Challenges ($r = 0.734, p < 0.01$). This tells us that participants with a better self-perception tend to be more motivated by challenges. Between Self-perception and the CrossFit community there is a strong positive correlation ($r = 0.654, p < 0.01$) which indicates that a better self-perception is associated with a strong sense of belonging to the CrossFit community. There is a very weak correlation between Self-perception and Loss of Motivation ($r = 0.050, p > 0.05$).

Table 3. ANOVA Analysis Motivation – Gender

		N	Mean	Std Deviation	ANOVA
Enjoyment of competing	Masculine	34	4.03	.790	F(1, 63) = 0.224, p = 0.637
	Feminine	31	3.94	.750	
	Total	65	3.99	.767	
Self-perception	Masculine	34	3.57	.762	F(1, 63) = 1.712, p = 0.195
	Feminine	31	3.32	.777	
	Total	65	3.45	.773	
Challenges	Masculine	34	4.00	.877	F(1, 63) = 0.634, p = 0.429
	Feminine	31	3.83	.804	
	Total	65	3.92	.841	
CrossFit community	Masculine	34	2.84	.996	F(1, 63) = 4.219, p = 0.044
	Feminine	31	2.29	1.173	
	Total	65	2.58	1.111	
Loss of motivation	Masculine	34	1.55	.828	F(1, 63) = 0.138, p = 0.711
	Feminine	31	1.63	1.020	
	Total	65	1.59	.918	

There is a weak positive correlation ($r = 0.238$, $p > 0.05$) between the Challenges and the CrossFit Community as well as the correlation with the Loss of Motivation which is a weak negative correlation ($r = -0.155$, $p > 0.05$). Between the CrossFit Community and the Loss of Motivation there is also a weak positive correlation ($r = 0.228$, $p > 0.05$).

Table 3 shows significant differences between groups for five dependent variables: enjoyment of competing, self-perception, challenges, CrossFit community, and loss of motivation. While there are no statistically significant differences between groups on enjoyment of competing, self-perception, challenges, or loss of motivation, there is a significant difference between groups on the perception of the CrossFit community ($p < 0.05$). To find out what it is, we will analyze the table below.

Table 4. Tukey Test

		N	Mean	Std Deviation	ANOVA
CrossFit community	1	17	2.82	1.008	F(3.61) = 0.616, p = 0.608
	2	30	2.50	1.253	
	3	16	2.56	.994	
	4	2	1.83	.236	
	Total	65	2.58	1.111	
Enjoyment of competing	1	17	4.00	.809	F(3. 61) = 1.045, p = 0.379
	2	30	3.95	.800	
	3	16	4.14	.669	
	4	2	3.15	.212	
	Total	65	3.99	.767	
Self-perception	1	17	3.63	.766	F(3. 61) = 1.285 p = 0.288
	2	30	3.34	.814	
	3	16	3.55	.702	
	4	2	2.67	.157	
	Total	65	3.45	.773	
Challenges	1	17	4.05	.731	F(3. 61) = 1.342 p = 0.269
	2	30	3.88	.938	
	3	16	4.00	.745	
	4	2	2.83	.236	
	Total	65	3.92	.841	
Loss of motivation	1	17	1.67	1.124	F(3. 61) = 0.158 p = 0.924
	2	30	1.59	.896	
	3	16	1.48	.760	
	4	2	1.83	1.179	
	Total	65	1.59	.918	

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Tukey’s post hoc test confirms this difference, indicating that men ($M = 2.84$, $SD = 0.996$) and women ($M = 2.29$, $SD = 1.173$) have different perceptions of the CrossFit community, with men having a better perception. This could mean that the communities they belong to are better defined and therefore better perceived, or that they are better integrated than women.

Table 5. ANOVA Analysis Motivation – Age groups

		N	Mean	Std Deviation	ANOVA
Enjoyment of competing	1 - 5	49	3.97	.797	F(3, 61) = 0.531, p = 0.663
	6 - 10	14	3.97	.689	
	11+	1	4.30	.	
	Total	65	3.99	.767	
Self-perception	1 - 5	49	3.45	.797	F(3, 61) = 0.332, p = 0.802
	6 - 10	14	3.36	.744	
	11+	1	4.00	.	
	Total	65	3.45	.773	
Challenges	1 - 5	49	3.94	.839	F(3, 61) = 0.713, p = 0.548
	6 - 10	14	3.76	.874	
	11+	1	4.50	.	
	Total	65	3.92	.841	
CrossFit community	1 - 5	49	2.63	1.121	F(3, 61) = 2.137, p = 0.105
	6 - 10	14	2.38	.923	
	11+	1	4.67	.	
	Total	65	2.58	1.111	
Loss of motivation	1 - 5	49	1.59	.999	F(3, 61) = 0.201, p = 0.895
	6 - 10	14	1.62	.652	
	11+	1	2.00	.	
	Total	65	1.59	.918	

Table 5 shows that there is no significant difference between the age groups regarding the 5 analyzed variables. The average values are relatively close. This suggests that motivation is consistent, so age does not significantly influence the variables.

These results indicate that there are no significant differences between age groups for enjoyment of competing, self-perception, challenges, and loss of motivation. Regarding the CrossFit community, there is a trend towards marginal significance ($p = 0.105$), but not strong enough to be considered conventionally significant ($p < 0.05$).

DISCUSSIONS

If we compare the results to the proposed hypotheses, we notice that the Enjoyment of competition, self-perception and challenges are closely related. This suggests that participants who enjoy competing more and have a better self-perception are also more motivated by challenges. The overall mean of enjoyment of competing is 3.99 with a standard deviation of 0.767, indicating relatively high enjoyment. The greatest enjoyment of competition is seen among younger participants, and this enjoyment declines slightly with age. Different studies reported also high levels of the enjoyment in exercise, challenge and community for CrossFit practitioners (Fisher et al., 2016; Pickett et al., 2016).

Similar to CrossFit training community, the CrossFit competition created a community in which the sense of belonging it is important characteristic (Pickett et al., 2016). Also, there is a correlation between intrinsic motivation and sense of community (Blenkarn, 2018). The feeling of belonging to the community varies significantly, being lower for participants with less experience (standard deviation of 1.111.) Community plays a crucial role in maintaining motivation and satisfaction. It is essential to create an environment of support and camaraderie among competitors.

Given the positive correlations with self-perception and enjoyment of competition, fostering a strong sense of community can help improve overall motivation. Different studies suggested that competing at the adult age provide space for older people to begin sport in later life, can provided also goals which can structured their future training and how the competition enabled them to compare themselves with others (Dionigi, Baker, and Horton, 2011). CrossFit offer this possibility too.

Positive self-perception can positively influence sports performance (Jiménez-Díaz, Morera-Castro and Araya-Vargas, 2018). In CrossFit, the self perception's importance increases with age and years of experience, these are the groups of people that should be targeted by coaches who should encourage positive self-evaluation.

Older and more experienced participants in CrossFit competitions tend to feel the impact of the challenges and perceive their importance more intensely. The competitions should be challenging enough to maintain interest, but not so difficult as to discourage them (Vogl, 2024). Providing mental and emotional support can help participants cope better with challenges and maintain long-term commitment. However, the years of experience seem to bring with them a self-confidence that compensates for other shortcomings.

A slight general increase in the impact of these motivational factors is observed for older competitors. As with anything, it takes an increase of motivation to keep doing it, especially when we're talking about physically demanding activities like CrossFit competitions.

CONCLUSIONS

The proposed hypotheses are confirmed. According to them, all four variables used to define the motivation of competitors are significant, while the loss of motivation is not a significant factor. Competition experience was found to play a crucial role in self-perception, competition satisfaction and appreciation of the CrossFit community. The more experienced tend to have a better self-perception and to be more satisfied with competitions and the CrossFit community. Age has a significant impact on perceptions and motivation. Younger participants report greater enjoyment of practicing, while older and more experienced participants report higher levels of self-perception and satisfaction in competitions, but perceived challenges may vary.

Overall, gender differences are minimal, but there are slight trends showing that women, in certain age groups and experience levels, have lower self-perceptions and may perceive the challenges and CrossFit community differently compared to men. The loss of motivation is relatively constant between groups, hardly significant, but tends to be slightly higher as competitors get older. This suggests that specific interventions may be needed to maintain motivation in this experienced group.

Self-perception plays a more important role for participants with more experience and for those in more advanced age groups. Thus, we see how as age and years of experience increase, there is a slight transition in the set of values that underlie the motivation of competitors: if at first the pleasure of practicing comes first, along with self-perception and then the perceived challenges, in time, the level and importance of enjoyment of exercise decreases. On the other side, the importance of self-perception, perceived challenges, and community belonging increases. We can call this process competitor maturation.

STUDY LIMITATIONS

In carrying out the analysis of this data set and the conclusions drawn, it is important to acknowledge and mention the limitations of the study. These limitations help contextualize the results and highlight areas where further research is needed.

Imbalance between genders and years of experience: Some age categories and years of experience have very few participants, which may skew the results and make meaningful analysis of these subgroups difficult. With so many overlapping filters, it was obvious that we were going to have big differences and that some categories were going to be underrepresented. After all, the questionnaire was applied without knowing how much experience the respondents had.

Possible response biases: The data are based on self-report, which may involve response biases, such as the desire to present a positive self-image or influence by other subjective factors. We also need to consider context influence: participants may be influenced by the context in which they filled out the questionnaires (for example, in a competitive or relaxed atmosphere), which may affect their responses.

Consequently, we have the Subjective Nature of the Variables: Variables such as “enjoyment of exercise”, “self-perception” and “challenges” are measured based on the subjective perceptions of the participants, which can vary significantly from person to person.

Another factor is that the study has a cross-sectional design, capturing data at a single point in time. This means that causality cannot be established and long-term changes in participants’ perceptions and motivation cannot be observed.

Last but not least, lack of an in-depth analysis of covariates: Other potentially relevant variables (eg training level, lifestyle, psychological factors) that could influence the results were not included.

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