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RELATIONSHIP BETWEEN MOTIVATION OF CHILDREN AND YOUTH AND TIME SPENT IN FOOTBALL TRAINING (GRADE 5-9)

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Abstract. *The laws and regulations of Latvia on the professional education activity in football training state that as the age of the students increases, the number of contact hours per week that must be spent in football training also increases. Furthermore, scientific literature often mentions that as people age, their motivation to engage in physical activity and sports often decreases. The aim of this study was to determine the relationship between the motivation of children and youth for participation and time spent in football training in different age groups. Within the framework of the study, the opinion of the Ethics Commission of the Latvian Academy of Sport Education was received on the compliance of the survey with ethical norms, as well as the legal representative of each research participant had confirmed their participation in the study with a permission. As part of the study, 167 research participants from one Latvian school were surveyed in the grade groups from 5 to 9. The number of hours the research participants spend in football training sessions per year was determined, as well as their motivation to participate in the training. The results of the study showed that as the age of children and youth increases, they spend more time in football training sessions ($p \leq 0.001$), but their motivation decreases every year ($p \leq 0.01$).*
Keywords: *football, motivation of children and youth for participation in football, time spent in football training*

Introduction

Children and youth need physical activity to ensure a positive impact on their health in the current stage of their lives and also in the future, for instance, to be in good shape, prevent the risk of obesity and the possibility of developing various diseases, as well as reduce stress, improve concentration, increase energy, and improve sleep quality. These are just a few of the positive aspects of an active lifestyle. Physical activities can be any active body movements during which energy consumption is increased compared to the resting state (Centre for Disease Prevention and Control, 2023). Football is mentioned as the most popular sport

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both in Latvia and in the world (Dvorak, Junge, Graf-Baumann & Peterson, 2004). Motivation plays a very important role for children and youth to want to engage in physical activity, including football (Miller, Roberts & Ommundsen, 2004). In the Regulations of the Cabinet of Ministers No. 855 "Procedures by which the State Finances Vocational Orientation Sports Education Programmes" (CMRL, 2021), it is stated that as the training group in vocational orientation education institutions ages, the number of contact hours per week increases. It is important to understand whether the time spent in training can significantly affect the motivation of a child to engage in physical activity, more specifically – football. As part of the research, 167 children and youth from Grade 5 to Grade 9 were surveyed. During the survey, it was determined whether the child plays any sport outside of school, and if so, which sport. After that, focusing on children who play football outside of school, it was determined how much time is spent in training, what is the motivation of the child to engage in this sport, and correlations between these indicators were analysed.

The research aim of this study is to determine the relationship between the motivation of children and youth for participation and time spent in football training in different age groups.

Motivation Characteristics of Children and Youth in Football Training

Physical activities are necessary for children and youth to be able to develop comprehensively (Centre for Disease Prevention and Control, 2023). The study (Caspersen, Powell & Christenson, 1985) explores how physical activity is related to all activities performed by the body, which are carried out with the participation of human muscles, and which consume human energy. Physical activity is any movement, but usually this concept is applied to sports activities (Bouchard, Blair & Haskell, 2012) or physical activities are seen as active movements of the body, during which energy consumption is increased compared to a state of rest (Hardman & Stensel, 2009). One form of physical activity is sports games, for example, football.

Football is the most popular sport both in Latvia and around the world. This sports game is available to everyone (Dvorak, 2004). This type of sport also plays an important role in Latvia, as there has been a significant increase in the number of young footballers in recent years, as well as coaches and clubs, which means that every year the football family is numerically getting bigger (Latvian Football Federation, 2018).

Moreover, other studies (Dvorak et al., 2004) also mention that football is recognized as one of the world's favourite sports, during which dynamic play, skills and a competitive spirit are displayed. However, despite all the positive things associated with football, it is important to realized that motivation plays a very important role in children and youth football (Miller, Roberts &

Ommundsen, 2004). Motivation serves as an incentive to have the desire to engage in the training process and to continuously face new challenges (Cresswell, Rogers, Halvorsen & Bonfield, 2019). This means that motivation can change under the influence of various factors, which accordingly affect both engagement during training and effort (Ryan & Deci, 2017). The study by Rodrigues et al. (2023) assessed changes in motivation in 108 football players (average age 14) during a season. Three reference points were set: 2 weeks before the season, mid-season, and at the end of the season. It was concluded that there is a significant decrease in motivation between the beginning of the season and the end of the season. The study noted that it is important to consider the motivation of children and youth to better understand their engagement in football training. The study by Stults-Kolehmainen, Ciccolo, Bartholomew, Seifert & Portman (2013) also confirmed that motivation is very important during physical activity, but the results showed that engagement in physical activity decreases with increasing age group.

The number of hours in football training groups is defined in the regulatory acts that regulate the operation of vocational orientation education - the Regulations of the Cabinet of Ministers No. 855 "Procedures by which the State Finances Vocational Orientation Sports Education Programmes" (CMRL, 2021). This regulatory act stipulates that as a person gets older (is included in a higher training group), the time spent in football training increases.

Table 1 ***Number of Hours in Football Training Groups***

No	Group Qualification*	Number of Contact Hours per Week	Participation in Competitions from the Number of Hours per Week
1.	SSG	6	-
2.	MT-1	8	-
3.	MT-2	9	up to 3*
4.	MT-3	11	up to 3
5.	MT-4	13	up to 3
6.	MT-5	15	up to 5
7.	MT-6	17	up to 6
8.	MT-7	19	up to 6
9.	SMP-1	20	up to 7
10.	SMP-2	20	up to 7
11.	SMP-3	21	up to 8
12.	ASM	23	up to 8

*
SSG – initial preparation group.
MT-1 – group of the first year of training.
MT-2 – group of the second year of training.
MT-3 – group of the third year of training.
MT-4 – group of the fourth year of training.
MT-5 – group of the fifth year of training.
MT-6 – group of the sixth year of training.
MT-7 – group of the seventh year of training.
SMP-1 – group of the first year of improving sportsmanship.
SMP-2 – group of the second year of improving sportsmanship.
SMP-3 – group of the third year of improving sportsmanship.
ASM – group of the highest sportsmanship.

In the initial preparation group, the number of contact hours is set to 6 contact hours per week. In astronomical time, it is 240 minutes or ~ 34 minutes per day. In the MT-1 group, it is set to 8 contact hours per week, which is 320 astronomical minutes per week or ~ 46 minutes per day. In the MT-2 group, it is set to 9 contact hours per week, which is 360 astronomical minutes or ~ 51 minutes per day. In the MT-3 group, it is set to 11 contact hours per week, which is 440 astronomical minutes or ~ 63 minutes per day. Therefore, the time recommended by the CDPC centre that a person should devote to physical activities per day is fulfilled only starting with the MT-3 group. In the MT-4 group, it is set to 13 contact hours per week, which is 520 astronomical minutes or ~ 74 minutes per day. In the MT-5 group, it is set to 15 contact hours per week, which is 600 astronomical minutes or ~ 86 minutes per day. In the MT-6 group, it is set to 17 contact hours per week, which is 680 astronomical minutes or ~ 97 minutes per day. In the MT-7 group, it is set to 19 contact hours per week, which is 760 astronomical minutes or ~ 109 minutes per day. In both the SMP-1 and the SMP-2 group, it is set to 20 contact hours per week, which is 800 astronomical minutes or ~ 114 minutes per day. In the SMP-3 group, it is set to 21 contact hours per week, which is 840 astronomical minutes or ~ 120 minutes per day. In the ASM group, it is set to 23 contact hours per week, which is 920 astronomical minutes or ~ 131 minutes per day.

Considering that in vocational orientation education institutions, as the qualification of the group increases, the time spent in training also increases, a question arises – could this lead to a decrease in motivation and the termination of the training processes?

Methodology

In order to investigate the nature of participation in sports, football and the subject of physical education at school, a survey was conducted. The questions of the survey conducted as part of the research were theoretically justified. The first four questions of the survey were demographic; therefore, they have no theoretical basis. For the theoretical basis of the survey, see Table 2.

In total, the survey consisted of 19 questions, but the answers to questions No. 1, 2, 3, 4 and 5 were not used as part of this publication. An opinion was received for the survey from the Ethics Commission of the Latvian Academy of Sport Education, which confirmed that the content of the survey complies with ethical norms. Consent was obtained from a parent of each survey participant, in which the parent confirmed the participation of their child in the survey. The research participants completed the survey electronically with the help of the Google Forms survey tool. Survey participants completed the surveys during computer classes. A total of 167 participants participated in the study. The survey took place in 2022, from November 21 to November 25.

Taking into account that the research participants who play football are students of a vocational orientation education institution (football (Educational programme code 20V 813001)), permission was received from the vocational education institution that the attendance of the research participants who are engaged in football training during the study year 2021/2022 will be examined, using the database available in e-class. Based on these data, it was possible to determine how many hours each research participant who is involved in football spent in football training during the year.

Table 2 ***Theoretical Framework of the Survey Content***

Question No./ Theoretical Basis	Vossoughi & Bevan, 2014	Morgan et al., 2005	Audas & Willms, 2002	Willms, 2003	Cope et al., 2013	Gulbe, 2010	MoES, 2014	Robazza et al., 2004
1.								
2.								
3.								
4.								
5.	x							x
6.	x							
7.	x							
8.			x	x				
9.		x						
10.		x						
11.	x							
12.					x			
13.						x		
14.							x	
15.	x							x
16.	x							
17.		x						
18.		x						
19.	x							

The research sample consisted of 167 children and youth, who studied in Grades 4-8 in 2022. Out of all study participants, 23 study participants attend football training, 80 participants attend other sports training, and 64 study participants do not attend sports training outside of school.

Mathematical statistics was used to investigate the correlations and reliability in children and youth at different age stages between the time spent in football and their motivation.

Using the data processing programme Microsoft Excel, the information/data obtained during the survey and document analysis was compiled. These data were entered into the SPSS (Statistical Package for the Social Sciences) programme, where the answers were calculated in percentages, the Kruskal-Wallis H-test

criterion test and the statistical error probability was determined, and the Spearman's rank correlation coefficients were calculated.

The significance of the difference between the indicators has been evaluated with 5% and 1% probability of statistical error, thus, if the p-value in the test results was less than or equal to 0.05, then the results were considered statistically significant. During the Kruskal-Wallis H-test if the value of statistical significance (Asymp. Sig. - p) is less than 0.05, then there is a statistically significant difference between the analysed grades in relation to the studied variable. Taking into account that the research data were non-parametric, the Spearman's rank correlation method was used in the correlation analysis, which determines that if the indicators is in the range of 0.0 to 0.4, the correlation coefficient indicates weak, insignificant correlations; 0.4-0.7 correlations can be considered as moderately close, but the correlations are considered close only when r=0.8-0.9 (Krastiņš, 1998).

At the beginning of the study, the author of the paper collected the information available in the literature about the characteristics of the motivation of children and youth during football training. By performing this task, a theoretical understanding of the researched topic was obtained. By studying how much time children and youth spend in football training during the school year and their motivation, mutually comparable data were obtained, then these data were mutually analysed, and conclusions were drawn.

Research results

A total of 167 children and youth participated in the study, of which 41 research participants (24.6%) studied in Grade 5, 27 students (16.2%) studied in Grade 6, 40 research participants (24.0%) were students of Grade 7, 38 research participants (22.8%) studied in Grade 8, while 21 research participants (12.6%) studied in Grade 9.

In order to understand how many of the research participants are engaged in some type of sports, the question "Do you engage in sports (apart from school)?" was put forward (see Fig. 1). Out of all 167 research participants, the majority (62.05%) noted that they play some kind of sport outside of school, of which 48.19% noted that it is a different sport, while 13.86% stated that they attend football training outside of school (see Fig. 1).

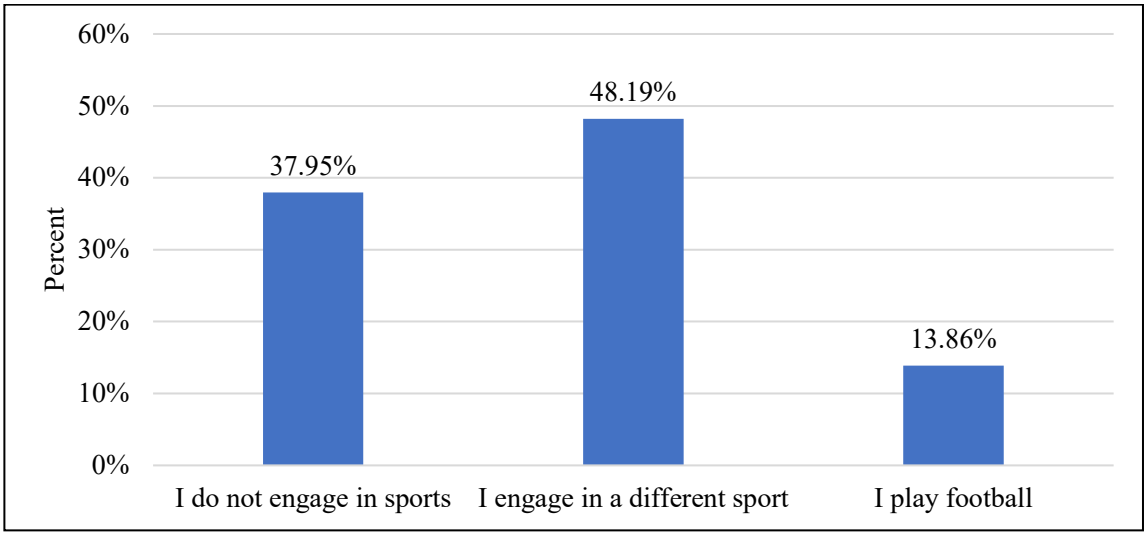

Figure 1 ***Answers of Research Participants to the Question "Do you engage in sports (apart from school)?"***

In order to understand which sports are the most popular among students, the question "What kind of sport are you engaged in?" was put forward (see Fig. 2).

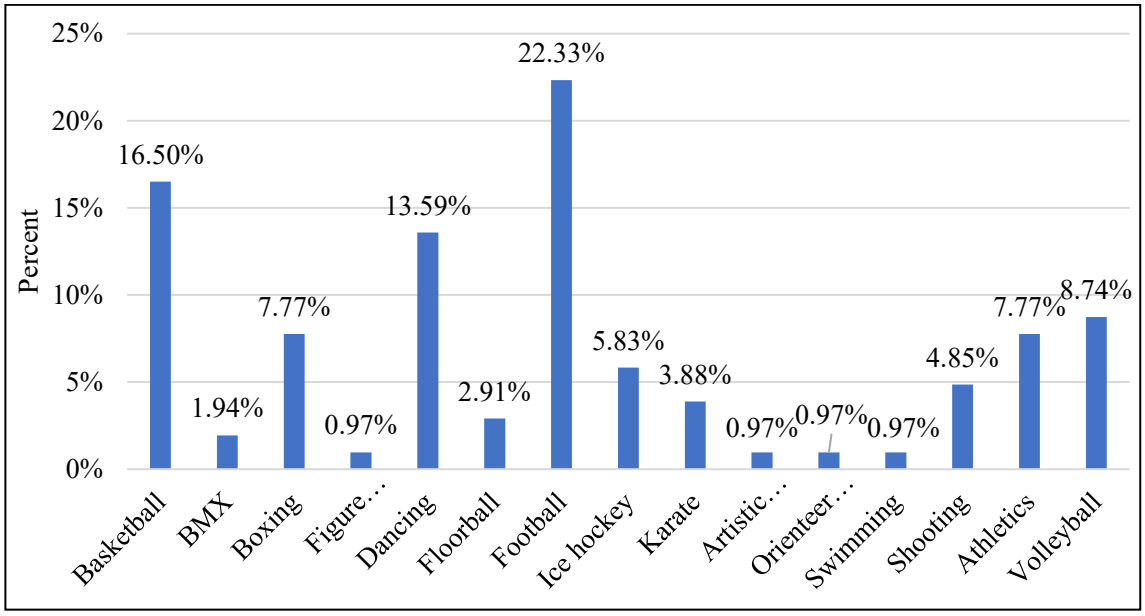

Figure 2 ***Answers of Research Participants to the Question "What kind of sport are you engaged in?"***

Looking at Figure 2, it can be observed that out of 62.05 % or 104 students, who engage in sports outside of school, the majority or 22.33 % play football. The next most attended sport is basketball, followed by dancing.

In order to be able to assess the motivation of the research participants, they were asked to mark how often they feel motivated during training (see Figure 3).

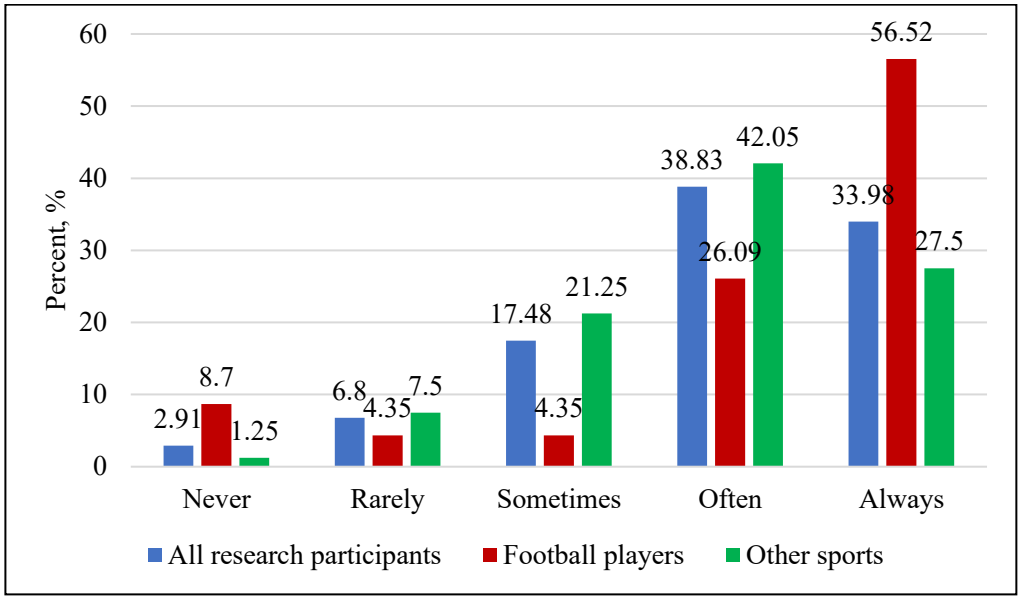

Figure 3 ***Answers of Research Participants to the Question "Please mark how often you feel motivated during training"***

Among all study participants who do sports training outside of school, the answer "Often" was chosen most often (38.83%), the answer "Always" was chosen by 33.98% of the research participants, while 17.48% of children and youth selected the answer "Sometimes", 6.80% of the study participants selected the answer "Rarely", and only 2.91% stated that they never feel motivated during training. Among the research participants who attend football training outside of school, the most frequently chosen answer was "Always" (56.52%), the answer option "Often" was selected by 26.09% of football players, 8.70% of football players chose the answer "Never", and the answer options "Rarely" and "Sometimes" were selected by 4.35% of football players. Representatives of other sports most often chose the answer option "Often" (42.50%), while the answer option "Always" was chosen by 27.50%, the answer "Sometimes" was selected by 21.25% of children and youth, the answer option "Rarely" was chosen by 7.50% of the representatives of other sports, while the answer option "Never" was selected by only 1.25% of the research participants, who engage in another sport in their free time. According to these results, it can be concluded that more than half (56.52%) of the research participants who play football feel motivated during the training, which is a higher rate compared to the rest of the study participants.

Taking into account the fact that every research participant who plays football is a student of a vocational orientation educational institution and, in order to determine how many hours per year the research participants spend in football training, the data available in the e-class on the training attendance of students were analysed (see Fig.4).

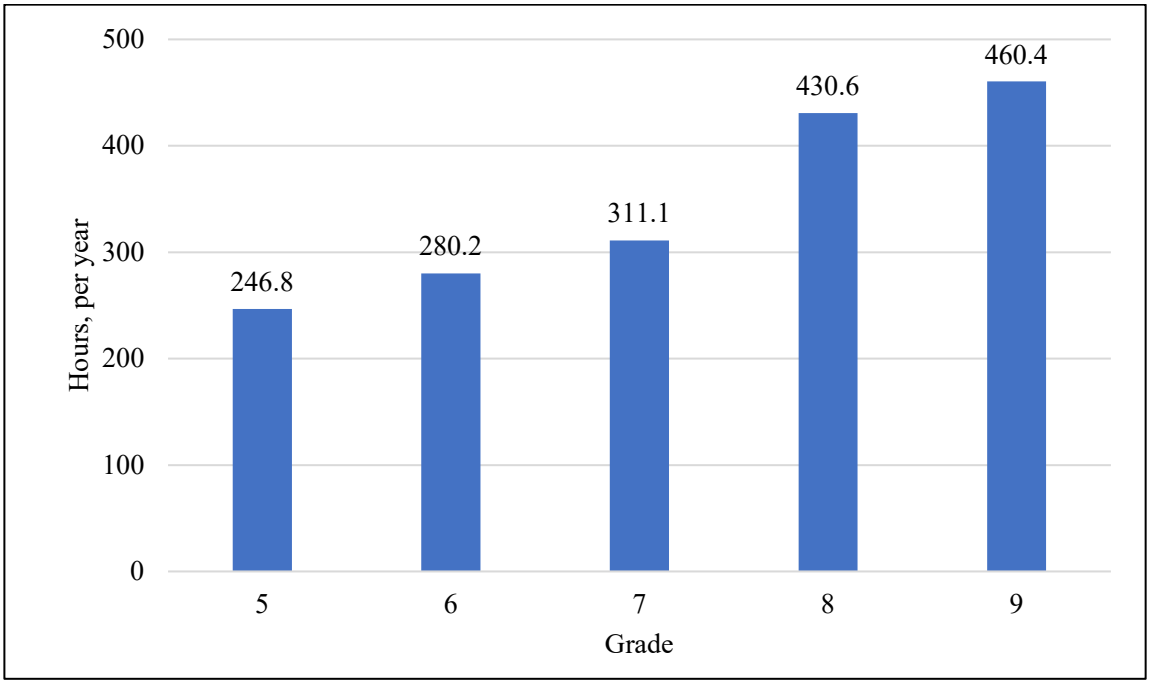

Figure 4 ***"Average hours spent in football training per year?"***

According to the data obtained, the average number of hours spent in football training in classes and the Kruskal-Wallis H-test criterion was determined, which determines whether there is a statistically significant difference between the time spent in football training and their age in children and youth.

The Kruskal-Wallis H-test criterion test showed that there were statistically significant differences between the time spent in football training by children and youth and their age ($\chi 2=19.243$, $p \leq 0.001$).

Research participants of Grade 6 spent an average of 33.4 hours more in football practice than students of Grade 5. Students of Grade 7 spend an average of 30.9 hours more in football training than students of Grade 6. The largest within-year difference is between research participants of Grade 7 and Grade 8. In Grade 8, the average study participant spent 199.5 hours more in football training than the student of Grade 7, while students of Grade 9 spent an average of 29.8 hours more in football training than research participants of Grade 8. According to these data, it can be observed that the higher the grade of the research participant, the more hours the person spends in football training on average (see Fig. 3). These data could indicate that as the study participants get older, there is less time during the day for other activities, which could contribute to the lack of motivation to attend training sessions. However, in order to assess whether there is a correlation between these factors, the motivation of children and youth to attend training sessions was determined.

Table 3 ***Spearman's Rank Correlation Analysis for Motivation During Training According to Hours Spent in Football Training or Grades***

	Motivation During Training
Hours spent in football training per year	-.356*
Age of football players	-.490**
**. Correlation is significant at the 0.01 level *. Correlation is significant at the 0.05 level	

A negative, weak, statistically significant correlation (r_s= -.356, p≤0.05) was observed between the hours spent in football training during the school year, and how often the study participants feel motivated during football training. This result suggests that the more time children and youth spend in football training, the less motivated they feel. Taking into account that a close, statistically significant correlation was also determined between the time spent in football training during the school year and the grade in which they study (r_s= .914, P≤0.01), the results may indicate that the higher the grade of the child or youth, the less motivated they feel to train. This was further verified by conducting Spearman's rank correlation analysis for motivation during training and the grade in which the child studies. A negative, moderately close, statistically significant correlation (r_s= -.490, p≤0.01) was shown between the grade of the research participants who play football, study and how often they feel motivated during football training. This result indicates that the older the study participant becomes, the less motivated the participant is during football training. This is probably related to the fact that as the research participants get older, they develop other interests and the belief that they will succeed in becoming a professional athlete decreases.

Conclusions and discussion

The results highlighted:

1. As part of the study, it was concluded that more than half (56.52%) of the research participants who played football feel motivated during training.
2. The Kruskal-Wallis H-test criterion test showed that there were statistically significant differences between the time spent by children and youth in football practice and the grade in which the child and youth is studying ($\chi 2$=19.243, p≤0.001). Among the research participants, children and youth of Grade 5 spent an average of 246.8 hours in football training during the school year, while children and youth of Grade 6 spent an average of 280.2 hours in football training, students of Grade 7 spent 311.1 hours, research participants of Grade 8 spent an average of 430.6 hours in football training, while study participants of Grade 9 – 460.4 hours. These data show that the

higher the grade of the study participant, the more hours the participant spends in football training on average per year.

3. The more hours a football player spends in training, the less motivated the person feels during training (r_s= -.356, p≤0.05). Furthermore, the older the research participant who plays football, the less motivated the person is during training (r_s= -.490, p≤0.01).

These study results are in line with previous research about players' inherent enjoyment and interest in football declined (Miller et al., 2004; Cresswell et al., 2019; Rodrigues et al., 2023). The high frequency of football training, regardless of workload, presents challenges in providing athletes adequate motivation. We recommend that future studies focus on investigation of psychological skills training content and its potential motivational effect.

References

Audas, R., & Willms, J. D. (2002). *Engagement and dropping out of school: A life-course perspective.* Applied Research Branch, Human Resources Development Canada.

Bouchard, C., Blair, S. N., & Haskell, W. L. (2012). *Physical activity and health.* Human Kinetics.

Caspersen, C.J., Powell, K.E., & Christenson, G.M. (1985). Physical activity, exercise, and physical fitness: definitions and distinctions for health-related research. *Public Health Reports*, *100*(2), 126.

CMRL. (2021). *Procedures by which the State Finances Vocational Orientation Sports Education Programmes*. Regulations of the Cabinet of Ministers of the Republic of Latvia No. 885. Retrieved from: https://likumi.lv/ta/en/en/id/328709-procedures-by-which-the-state-finances-vocational-orientation-sports-education-programmes

Cope, E.J., Bailey, R., & Pearce, G. (2013). Why do children take part in, and remain involved in sport? A literature review and discussion of implications for sports coaches. *International Journal of Coaching Science, 7*(1), 55-74.

Cresswell, J., Rogers, C., Halvorsen, J., & Bonfield, S. (2019). Ideal football culture: A cultural take on self-determination theory. *Journal for the Theory of Social Behaviour, 49*(2), 198-211.

Dvorak, J. (2004). Editorial. *American Journal of Sports Medicine, 32*(1), 3–4. DOI:10.1177/0363546503262283

Dvorak, J., Junge, A., Graf-Baumann, T., & Peterson, L. (2004). Football is the most popular sport worldwide. *The American journal of sports medicine, 32*(1). DOI: 10.1177/0363546503262283

Gulbe, A. (2010). *Olimpiskās izglītības inovatīvs apguves modelis sporta pedagogu profesionālās kompetences pilnveidei.* Promocijas darbs. Latvijas Sporta pedagoģijas akadēmija.

Hardman, A. E., & Stensel, D. J. (2009). *Physical activity and health: the evidence explained.* Routledge.

Izglītības un zinātnes ministrija (IZM) [MoES] (2014). *Latvijas jauniešu sportošanas paradumi. Kvantitatīvas aptaujas rezultāti.* Retrieved from: https://www.izm.gov.lv/lv/media/4069/download

Slimību profilakses un kontroles centrs [Centre for Disease Prevention and Control (CDPC)] (2023). *Fizisko aktivitāšu ieteikumi Latvijas iedzīvotājiem.* Retrieved from: https://www.spkc.gov.lv/lv/media/4747/download?attachment

Krastiņš, O. (1998). *Statistika un ekonomoetrija*. Rīga: LR Centrālās statistikas pārvaldes poligrāfijas nodaļa.

Latvijas Futbola federācija. [Latvian Football Federation]. (2018). *Latvijas Futbola federācijas spēlētāju sagatavošanas programma*. Rīga: LFF

Miller, B.W., Roberts, G.C., & Ommundsen, Y. (2004). Effect of motivational climate on sportspersonship among competitive youth male and female football players. *Scandinavian Journal of Medicine & Science in Sports, 14*(3), 193-202.

Morgan, S.W., Martin, L., Howard, B.J., & Mihalek, P.H. (2005). Active learning: what is it and why should I use it?. *Developments in Business Simulation and Experiential Learning: Proceedings of the Annual ABSEL conference, 32*, 219-223.

Robazza, C., Pellizzari, M., & Hanin, Y. (2004). Emotion self-regulation and athletic performance: An application of the IZOF model. *Psychology of Sport and Exercise, 5*(4), 379-404. https://doi.org/10.1016/S1469-0292(03)00034-7

Rodrigues, F., Monteiro, D., Matos, R., Jacinto, M., Antunes, R., & Amaro, N. (2023). Motivation among Teenage Football Players: A Longitudinal Investigation throughout a Competitive Season. *European journal of investigation in health, psychology and education, 13*(9), 1717–1727. https://doi.org/10.3390/ejihpe13090124

Ryan, R.M., & Deci, E.L. (2017). *Self-determination theory: Basic psychological needs in motivation, development, and wellness*. New York: Guilford publications.

Stults-Kolehmainen, M. A., Ciccolo, J. T., Bartholomew, J. B., Seifert, J., & Portman, R. S. (2013). Age and gender-related changes in exercise motivation among highly active individuals. *Athletic Insight, 5*(1), 45-63.

Vossoughi, S., & Bevan, B. (2014). Making and tinkering: A review of the literature. *National Research Council Committee on Out of School Time STEM, 67*, 1-55.

Willms, J.D. (2003). *Student engagement at school: A sense of belonging and participation; Results from PISA 2000*. Organisation for Economic Co-operation and Development.