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PRODUCTIVE ORGANIZATIONAL ENERGY IN ESTONIAN FOOTBALL
ORGANIZATIONS

Bachelor's Thesis

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I have written this Bachelor Thesis independently. Any ideas or data taken from other authors or other sources have been fully referenced.

Table of contents

Introduction	4
1. Analysis of concept of POE, theoretical review of previous studies on POE and key features of football organizations	7
1.1. Definitions of productive organizational energy	7
1.2. Findings of previous studies and three dimensions of POE.....	10
1.3. Key features of football organizations relevant to POE.....	13
2. Empirical analysis of different dimensions of POE in Estonian football organizations	15
2.1. Methodology	15
2.2. Quantitative analysis of collected data and discussion of results.....	20
Conclusion	33
References	36
Appendix A	39
Appendix B.....	40
Resümee	42

“The strength of the team is each individual member. The strength of each member is the team”

(C) Phil Jackson

Introduction

It is no secret that organizational success is significantly affected by the energy of its employees. According to Cole et al (2012), different researchers stick to different points of view and approaches to energy: while some scholars still consider energy as an individual phenomenon, others try to take more comprehensive look at this concept and look at energy through the prism of collectiveness. However, as in the contemporary world the vast majority of organizations are operating in teams (meaning that employees are mostly expected to act in the harmony with the other members of the team), author believes that a collective approach to energy is more comprehensive and gives better understanding of the concept. Indeed, according to Mathieu et al (2008), if one considers energy only in the context of individual feeling of an employee, they are more likely to miss an important influence of other group members on an employee's energy, thus making research not holistic enough to describe this phenomenon. Therefore, in this bachelor's thesis author will approach energy as a collective phenomenon.

Exploring the phenomenon of collective energy can also be important since collective energy obviously affects the individual energy of each employee. And, according to Cole et al (2012), there is a clear direct relationship between the employees' energy and their job satisfaction and organizational commitment. This, in turn, can help in decreasing turnover of employees in an organization lower (Siddiqui et al, 2012).

In addition to it, knowledge about the collective energy can also help managers in assessing employees individual performance: according to Cross et al (2003), there are employees who can energize others on the workplace, as well as those who can negatively affect surrounding people by taking the energy away from others. If a manager is able to identify the representers of both groups among his/her subordinates, this knowledge can serve as a useful tool in assessing employees and making personnel-related decisions. In addition to it, “managing” this collective energy might help organizations keep valuable employees in the company and decrease their potential willingness to leave: as shows the recent survey of Yu and To (2021), “difficult employees” (representatives of the second group, those who take the energy away from co-workers) are more likely to negatively affect the desire of other employees to stay in the company.

Furthermore, organizational energy is one of the most important factors helping to overcome organizational crisis if one occurs (Muceldili & Erdil, 2015). This can be connected to

the fact that some organizational crises occur because of mental exhaustion of some members of an organization.

It is important to notice that this collective energy is more frequently called *productive organizational energy* in scientific literature, because of its “contagiousness”; and so it will be henceforth called in this thesis. It is also important to introduce that in this thesis three dimensions of productive organizational energy are going to be discussed. According to Cole et al (2012), these are emotional (feelings and emotions of a person), cognitive (rational thoughts and ideas) and behavioral (actions taken by a person). A more detailed look at these three dimensions will be taken later in this bachelor’s thesis.

When speaking of organizational energy, scholars usually distinguish between **positive and negative organizational energy**. According to Tooman (2017), the keywords that positive organizational energy can be described by are joy, enthusiasm and satisfaction, while in case of negative organizational energy a person might feel frustrated, feared and disappointed.

The phenomenon of collective energy, or, as it will be called in this thesis, productive organizational energy, will be considered using the example from football organizations. Since football (soccer) is one of the most popular team sports in the world, it is no surprise that, just like for any other team sport, the importance of teamwork is crucial in this game. McEwan and Beauchamp (2015) are also arguing that the effectiveness of teamwork is in direct relationship with the results of a sports organization.

Therefore, the football organizations have been chosen as a subject of research, since in team games proper level of teamwork is seen very well, while in organizations from other industries it may not always be so obvious and visible. Arguably, success in football depends on teamwork more than anywhere else. The close connection between, for example, on-field success of football organizations and level of their teamwork is also justified scientifically: according to Eccles (2010), teamwork is one of the primary explanatory factors of football team’s success on the field. However, despite the increased importance of teamwork in football organizations, general principles of management (including managing team work) are staying the same regardless on industry and some principles that bring success in football can be applied to any field: according to Hoye et al (2015), in sports, managers usually use the same patterns of decision-making and fundamentals as in other industries.

To sum it up, since football organizations include coaching staff, administrative staff and players, author sees them as one of **the best showcases of teamwork**. As an example of football organizations, author will take the football organizations located in Estonia: this choice is justified by their geographic proximity to the author and, subsequently, their higher availability. Both football players and coaching and administrative staff of football organizations are going to

be analyzed in this thesis, since all these groups of employees equally contribute to the success of a football organization. Also, as was found in the study of Sahan et al (2011), what most of excelling sportsmen have in common, is that they have close and productive communication with **both** coaching staff and managers of organization (administrative staff). This is another reason why in this bachelor's thesis, players, coaching staff and administrative staff of football organizations, all need to be surveyed.

In addition to that, some words need to be said about football organizations in Estonia, which are going to be the subject of research in this bachelor's thesis. Unlike large-scale football organizations in Europe (in countries such as Spain, UK or Germany), football organizations in Estonia can be characterized by relatively small number of employees, which implies closer interaction between most of them (for example, in bigger football organizations, president rarely communicates with players and coaching staff, while in Estonian football organizations, this communication happens very often). Also, as was mentioned before, no scholar has ever studied productive organizational energy in Estonian football organizations, meaning that there is a gap to be filled particularly in Estonia.

Therefore, the aim that author sets in this Bachelor's thesis is to discover the manifestation of different dimensions of productive organizational energy using the example of football organizations in Estonia.

For researching the concept of productive organizational energy in Estonian football organizations, the following tasks are going to be implemented in this Bachelor's thesis:

- to define and analyze the concept of productive organizational energy as well as related concepts;
- to overview the findings of the previous studies on POE and describe three dimensions of productive organizational energy;
- to introduce the specific features of football organizations that are connected to POE;
- to conduct the empirical study investigating how different dimensions of productive organizational energy are displayed in Estonian football organizations and if the perception of POE any different among different organizations, positions, and regions of Estonia;
- to analyze the results of the empirical part, draw conclusions on how different dimensions of productive organizational energy are manifested in Estonian football organizations, and discuss the findings by comparing them to those of previous studies.

Another thing that needs to be said is that the clear research gap for this topic does exist. To the author's knowledge, no study pertinent to the topic of productive organizational energy in

terms of sports organizations, especially football organizations in Estonia, have been conducted. All the studies gathered by the author and reviewed in this bachelor's thesis, mostly cover collective energy in more traditional business setting. Also, the number of studies on productive organizational energy in any other industries is also limited. This creates a big room for researching productive organizational energy on the example of field where teamwork matters the most.

This research will consist of two parts. In the theoretical part, the empirical studies regarding the topic of productive organizational energy (collective energy) will be analyzed and synthesized: firstly, the definitions of productive organizational energy will be described and analyzed; the results of previous research will be presented, and three dimensions of productive organizational energy will be specified. In addition to it, since the concept of collective energy is considered on the example of football team organizations, the specific features of sports organizations that are relevant to this topic will also be described.

In the empirical part of this bachelor's thesis, author will present the methodology of the research and justify its choice, then conduct the empirical study exploring how different dimensions (aspects) of productive organizational energy are manifested in football organizations. After this, the results of the empirical research will be summarized and discussed, and author will make his conclusions based on them.

Keywords: productive organizational energy, collective energy, football organizations.

1. Analysis of concept of POE, theoretical review of previous studies on POE and key features of football organizations

1.1. Definitions of productive organizational energy

In the overview of empirical literature on the topic of productive organizational energy, the following studies are going to be reviewed by the author of this bachelor's thesis:

- 1) the study written by Kunze and Bruch in 2010;
- 2) the research compiled by Cole et al in 2012;
- 3) the article by Alexiou et al published in 2019.

These studies will be considered based on different comparison criteria, such as definitions of productive organizational energy, methodology of empirical research, and results these papers have reached.

Author justifies the choice of these papers by their availability in the public access: the topic of productive organizational energy is under researched, and the number of articles in this field is limited. It is also important to notice that the pool of researchers who have worked on the topic of consideration is quite limited as well.

In the definitions analysis, in addition to the definitions from the studies mentioned above, author decided to introduce one more definition of productive organizational energy, which was presented in the study of Walter and Bruch (2010).

Table 1 below illustrates the aspects covered by definitions from selected studies on POE. This table demonstrates what features have been mentioned in different definitions of productive organizational energy. The whole texts of definitions can be found in the Appendix A.

Table 1

Aspects covered by definitions of productive organizational energy.

Authors, year	Transmission of POE between workers	Dimensions mentioned	Positive effect of POE	Focus on organizational goals
Cole, Bruch, Vogel (2012)	X	X	X	X
Kunze, Bruch (2010)			X	
Alexiou, Khanagha, Schippers (2019)	X	X	X	X
Walter, Bruch (2010)		X		X

Source: compiled by the author according to the sources in the table

First and foremost, it needs to be said that only two of these empirical studies have provided their own definitions – these are the study of Cole et al conducted in 2012 and the paper of Kunze and Bruch (2010). The other study, that of Alexiou et al (2019), did not contain authors' own definitions of productive organizational energy: they used the citation of definition compiled for another study.

Another important note pertains to the definition of Kunze and Bruch (2010): even though, as can be seen, authors do not use the collocation “productive organizational energy”, using just “productive energy” instead, from the definition itself it can be seen that they, just like others, consider productive energy only in the working context.

Starting with similarities of these definitions, the biggest one is that all the authors consider productive organizational energy as **collective phenomenon**.

In addition to it, another common similarity between the definitions from the Table 1 is that three out of four studies present productive organizational energy as unequivocally **positive phenomenon**. The only outlier here is the definition cited by Walter and Bruch (2010, p. 766), which does not clearly state the positive nature of this concept: author of this bachelor's thesis allows that “extent” to which an organization unlocks its potential can be not only high, but also low (in this case, productive organizational energy would not positively affect workers).

The aspect that Cole et al (2012), Alexiou et al (2019) and Walter and Bruch (2010) agree on is **multi-dimensional** nature of the concept: all three definitions are emphasizing that productive organizational energy has three main dimensions: cognitive, behavioral and emotional. In the further chapters of this bachelor's thesis author will take a closer look at those aspects.

Cole et al (2012) and Walter and Bruch (2010) in their definitions also concur with the fact that productive organizational energy is also experienced by the members of an organization in their collective desire to achieve **organizational goals**.

Having considered the similar features of these definitions, it is also important to analyse how different the approaches of authors were. Cole et al (2012) (as well as Alexiou et al, 2019) see productive organizational energy as a condition not only demonstrated by individuals but also **transmitted** between the members of a unit. This feature is quite important, since in the other definitions nothing is mentioned about the transmission of this productive energy between co-workers. However, this is a crucial aspect of productive organizational energy: positive (or negative) energy can be "contagious" and influence all the members of a unit. As mentioned above, Walter and Bruch (2010) also agree that behavioral aspect is existent, but in their definition (which was cited from another source) it is not specified that behavior has agentic nature.

In the definition cited by Walter and Bruch (2010, p. 766), productive organizational energy is considered as hidden potential of a company, which needs to be realized and unlocked. None of other authors of definitions has considered this concept under the prism of locked potential.

The least complex definition is given in the study of Kunze and Bruch (2010): they take a step aside from dimensions of productive organizational energy, as well as from transmission of this phenomenon, stating that productive organizational energy is nothing short of collective force with which members of a unit work.

After comparing and analyzing the definitions from other empirical studies, author also finds it important to generalize this information by compiling his own definition of productive organizational energy. I define this concept as collectively shared condition of emotional, cognitive and behavioral arousal which is experienced by the members of a working unit on the way to achieving their organizational goals. This definition is primarily derived from the definition by Cole et al (2012), because the author of this thesis believes that the words "shared condition" is the best way to reflect the concept of POE.

1.2. Findings of previous studies and three dimensions of POE

Prior to discussing and comparing the papers that have been selected by the author, it is very important to go a bit deeper with discussion of what these articles are studying.

The article “**Energy at work: A measurement validation and linkage to unit effectiveness**” written by M. Cole, H. Bruch and B. Vogel in 2012 takes a comprehensive look at different properties of the concept of productive organizational energy. In their study (2012), Cole, Bruch and Vogel conduct the examination of six statements using statistical correlation analysis. These statements are:

- 1) productive organizational energy is multi-dimensional construct, with all the dimensions being crucial contributors to the general concept of POE;
- 2) productive organizational energy is a collective concept and does differ from individual energy;
- 3) productive organizational energy is in direct relationship with such concepts as collective motivation, collective cohesion, collective efficacy and autonomy. It has inverse relationship with collective exhaustion. At the same time, productive organizational energy is not a synonym of collective motivation, cohesion, collective efficacy and autonomy;
- 4) productive organizational energy is positively correlated with goal commitment, job satisfaction and organizational commitment;
- 5) productive organizational energy is in positive relationship with all the other group concepts that are not mentioned in statement 3;
- 6) productive organizational energy is in direct positive relationship with overall organizational performance.

The key result of this study is that statistical analysis that has been conducted by the researchers has revealed that all the hypotheses are supported. While the main findings will be presented later in this subchapter, here it needs to be repeated once again: the study of Cole, Bruch and Vogel (2012) has demonstrated that productive organizational energy is a collective multi-dimensional construct that has direct correlation with such collective constructs as collective motivation, collective cohesion and collective efficacy, and inverse correlation with collective (group) exhaustion.

The second study of consideration is that of F. Kunze and H. Bruch published in 2010 and called “**Age-Based Faultlines and Perceived Productive Energy: The Moderation of Transformational Leadership**”. The aim of this study was to examine the affect of age barriers between the members of an organization on productive energy in this organization and to test how transformational leadership can change this relationship. Authors of the study also used

quantitative research method to achieve research aim, handing out the questionnaire to 710 employees of a big organization located in Germany, Austria, Liechtenstein and UK.

Two hypotheses have been tested:

- 1) age-based faultlines are in negative relationship with productive organizational energy;
- 2) transformational leadership can positively change this relationship between age-based faultlines and POE.

The results of statistical analysis have clearly show that both of those hypotheses stand true, meaning that age barriers do indeed hamper productive organizational energy within working teams. However, results of study say, transformational leadership can be applied to change this relationship.

The third study being considered in this bachelor's thesis is that of Alexiou et al, conducted in 2019 and called "**Productive organizational energy mediates the impact of organizational structure on absorptive capacity**". Here researchers aim to test the correlation between productive organizational energy, organizational structure and the ability of an organization as a whole to learn and absorb new knowledge. Results of Alexiou et al (2019) reveal that organizational structure can be an important factor for developing productive organizational energy: centralization of a firm negatively correlates with POE, while organizational learning is positively affected by POE. The key information about all the considered studies is presented in Table 2.

Table 2

Comparison of results of empirical studies on POE.

Authors, year, sample size and area	Subject of study	Results
Kunze&Bruch, 2010. 710 employees from a big company from Germany, Austria, Liechtenstein, UK	Affect of age-based faultlines and transformational leadership on productive energy in the organization	Age-based faultlines negatively affect perceived productive organizational energy
Cole, Bruch, Vogel, 2012. 50 corporate executives from a US company.	a) collective and b) multi-dimensional nature of POE	POE is a collective multi-dimensional construct and is positively correlated with a firm's performance, organizational commitment, job satisfaction of employees.
Alexiou, Khanagha, Schippers, 2019. 61 companies from 5 industries	The effect of organizational design and POE on organizational learning	POE positively affects firm's ability to learn, centralized firms with have lower POE

Source: compiled by author according to the sources in the table

As can be seen from the Table 2, all the authors unanimously agree on the opinion that productive organizational energy is a positive feature for an organization: Cole et al (2012) state that productive energy positively impacts such emotional and cognitive states of employees as organizational commitment and job satisfaction. Alexiou et al (2019), in turn, come up with another positive trait of productive organizational energy: the results of their study show that it enhances organizational learning process by increasing absorptive capacity.

The results of the study conducted by Cole et al (2012) also backs up their viewpoint – as well as the opinion of Alexiou et al (2019) and Walter & Bruch (2010) – regarding the three-dimensional nature of the concept of productive organizational energy: all the authors agree on the opinion that POE consists of emotional, cognitive and behavioral aspects.

As to the study of Alexiou et al (2019), one can notice that their findings mostly revolve around the connection between POE and organizational structure, POE and ability to learn. Researchers have found that productive organizational energy does increase the ability of organizational members to improve their skills and learn. Similarly to Cole et al (2012), Alexiou et al (2019) also see productive organizational energy as a multi-dimensional construct.

Kunze and Bruch (2010), in turn, pay attention to age variance in an organization and its influence on productive organizational energy. They have found that age-based barriers can negatively impact the POE in an organization. However, they state that transformational leadership can be a changing factor in this relationship.

As can be seen from the results of reviewed studies, multi-dimensional structure is the key feature of productive organizational energy. Therefore, it is extremely important to take a closer look at these dimensions. As mentioned above, include emotional (also called affective in some studies), cognitive and behavioral domains. The overview of these three pillars of productive organizational energy is presented in Table 3.

Table 3

Three dimensions of POE

Dimension	What is affected	Key question
Emotional (affective)	Feelings and emotions an employee is experiencing at the workplace	“How does one feel?”
Cognitive	The intellectual capabilities of an employee, his/her rational thinking	“What does one think?”.
Behavioral	The actual actions an employee is taking	“What does one actually do?”

Source: compiled by the author based on the study of Cole et al (2012)

Affective, cognitive and behavioral dimensions are not unique to just productive organizational energy and can be met in many scientific papers that study different human

attitudes. According to Kwon and Vogt (2009), **affective** dimension is formed based on experiences underwent on the emotional level, while **cognitive** dimension is “responsible” for digesting information about something from more rational point of view, and, as a result of this process, creating certain beliefs of a person. **Behavioral** dimension (component), according to Garcia-Santillan et al (2012), pertains to actual outer expression of a person’s attitudes: it can be expressed in actions, as well as absence of actions.

It also needs to be noticed that productive organizational energy benefits an organization only when arousal in **all three dimensions** of it is triggered (Alexiou et al, 2019). This means that if an employee does not feel activation of at least one of the aforementioned aspects, the collective energy is not likely to be productive and directed on achieving certain organizational goals. For example, when a person feels cognitive and behavioral arousal, but no emotional, he/she will not be able to maintain the proper level of energy long-term due to lack of emotional link with what is happening in an organization. The same stands true if either cognitive or behavioral aspect are not activated.

Based on the analysed studies, the author of this thesis can generalize knowledge about the concept of productive organizational energy. This is a three-dimensional construct, which spans emotional, cognitive and behavioral aspects of employees. The proper level of productive organizational energy can bring additional value for an organization, as it increases organizational commitment of employees (meaning that their ties with an organization will be stronger) and their job satisfaction (Cole et al, 2012); also productive organizational energy positively affects absorptive capacity and the ability of an organization to learn (Alexiou et al, 2019). All these positive repercussions can lead to better organizational performance. Another important feature of productive organizational energy, which, in author’s opinion, can be derived from the studies under analysis is that it can be transmitted from one unit member to another (in both positive and negative ways). This knowledge can be helpful for a manager when making personnel decisions: for example, those who transmit positive productive energy should be praised and those who, in turn, emit negative energy, are not the best fit for the organization.

1.3. Key features of football organizations relevant to POE

However, describing the specifics of productive organizational energy is not enough for proceeding with the empirical part of this bachelor’s thesis. Since author is studying this concept on the example of football organizations, it is important to underline the key features and specific inherent traits that describe football organizations.

It also needs to be noticed that author will only review the features of sports organizations that are relevant to this bachelor’s thesis and the topic of collective energy (i.e.,

specifics of organizational structure or their financial operation will not be considered very thoroughly).

Firstly, the **criteria for successful performance** in sports are way vaguer and more unclear than in other fields of business. While some teams (organizations) strive for purely sporting success (winning games and titles), others can aim for performing social function or providing certain types of services to their shareholders. All these functions sometimes may dominate over financial performance of a sports organization (“Sport Management”, n.d.). However, some football organizations strive for on-field success just in order to reach certain financial goals, because, according to Pinnuck and Potter (2006), sporting success highly correlates with financial success of a football organization. In this regard, the performance of sports organizations will not be covered in this bachelor’s thesis.

Another important feature that is also, in author’s opinion, connected to the topic of productive organizational energy in sports (particularly, football), is the **public nature of it**. This makes a significant difference between sports and other fields, where performance of employees is not viewed by a big number of people. Since sports events are usually covered on mass media, it puts additional pressure on sportsmen (Puertas-Molero et al, 2019). This, in author’s opinion, might affect the behavioral dimension of POE, meaning that additional nerves and pressure can influence performance of athletes (not necessarily negatively – according to Onag & Tepeci (2014), some athletes perform better under pressure). In addition, as mentioned in subchapter 1.2., productive organizational energy only benefits organization when all three dimensions of it are activated. However, the reverse is true as well: amid all the pressure that sportsmen feel because of their publicity, positive productive organizational energy can help sportsmen, managers and coaches overcome psychological problems and keep their psychological condition stable (Borowik, 2014).

The last feature of sports organizations (in team sports) that author deems relevant to the topic of POE is the **mandatory nature of working in team in person**. In the past two years, the number of opportunities to work remotely in the world has seen a significant increase (Epstein, 2021). This implies that in some jobs face-to-face interaction is no longer mandatory. This can never be the case in sports, where, in order to perform properly, sportsmen need to spend a lot of time on trainings and games seeing each other on a daily basis. This makes team sports an even more interesting basis for exploring the phenomenon of productive organizational energy. As mentioned before, one of the key features of POE is its ability to transmit from one team member to another: for example, according to Wilson et al (2009), if a coach provides no meaningful communication to a sportsman, it increases the likelihood of sportsman’s mental condition being damaged – this can express in burnout. Obviously, this transmission (of both positive and

negative energy) would go quicker when people work with each other in person rather than remotely, because social interaction is the transmitter of human energy (Baker et al, 2015). However, it also needs to be said that, as mentioned in the introduction, no empirical results on POE in sports organizations have yet been obtained.

Having analyzed existing empirical studies on the relevant topic and described the important features of sports organizations which are relevant to the field of research, author now can proceed to implementing the empirical part of this study. The methodology choice, as well as the whole process of the empirical research will be provided and described in Chapter 2.

2. Empirical analysis of different dimensions of POE in Estonian football organizations

2.1. Methodology

In this part of the bachelor's thesis, author is planning to implement the following tasks:

- Select the measurement tool of productive organizational energy from the previous study of Cole et al (2012), explain the choice of measurement tool;
- Describe the process of translation of the measurement tool from English to Estonian and Russian languages, and ensuring that translated versions have exactly the same meaning as the original one;
- Explain the process of compiling, translating and testing the Likert scale-based questionnaire;
- Guide reader through the process of distribution of the questionnaire to the members of football organizations from first two tiers of Estonian football; justify the choice of target number of responses; discuss challenges in questionnaire distribution and final sample size.

In order to define the proper measurement tool that can be used for measuring productive organizational energy in a certain organization, author needs to refer to the studies on the same topic that were considered in the previous chapter.

Having taken a look at these studies, it can be noticed that the researchers generally admit that the measurement tool used by Cole et al (2012) is the most commonly used tool when it comes to measuring productive organizational energy. Apart from this study, the analogical measurement tool is used in the study conducted by Kunze and Bruch (2010). It is once again worth reminding that the number of studies on productive organizational energy is limited, as this topic is very under-researched.

While Alexiou et al (2019) do not use absolutely identical measurement tool for their study, they also admit that this method of measurement of productive organizational energy is

the most effective one. They base their measurement on that of Cole et al (2012), adjusting it based on their specific research aim.

Author orients on studies of Cole et al (2012), Kunze and Bruch (2010) and Alexiou et al (2019) since these are the only studies on productive organizational energy available in public access. As this tool was used by all three groups of researchers whose studies were considered, author of this bachelor's thesis also measures productive organizational energy using the same measurement tool initially offered by Cole et al (2012).

This measurement tool examines all three dimensions of productive organizational energy: emotional (affective) dimension, cognitive dimension and behavioral dimension. In total, there are 14 statements: 5 of them reflect affective dimension, 5 pertain to cognitive dimension and 4 – to behavioral dimension. The full version of all the statements reflecting affective, cognitive and behavioral dimensions can be found in Appendix B, where they are given as they were presented in the questionnaire (which author is going to discuss later). In addition to it, measurement tool has been translated into Estonian and Russian languages, the process of which will be described later. Estonian and Russian versions of the questionnaire are not presented in this bachelor's thesis due to copyright issues.

In the measurement tool by Cole et al (2012), participants are asked to assess how relatable for them each statement is, using the Likert scale. For the statements reflecting emotional (affective) dimension, the 1-5 frequency scale is applied, meaning that participants are asked the question: "How often do you experience certain feelings in your job?". On this 1-5 frequency scale, answer options include 1 (never), 2 (very rarely), 3 (sometimes), 4 (rather often) and 5 (almost always).

For the statements pertaining to cognitive and behavioral dimensions, the 1-5 agreement scale is used. This means that participants of the survey are asked the question "To what extent do you agree with following statements?". For this type of Likert scale, the following answer options are implied: 1 (strongly disagree), 2 (rather disagree), 3 (neutral), 4 (rather agree) and 5 (strongly agree).

However, since in Estonian football organizations there are not only Estonian-speakers, but also people speaking Russian and English (as to English-speakers, these are usually players from the overseas), the translation from English to Estonian and Russian languages was necessary. The translation to Estonian was conducted in professional translation agency in three steps: English-Estonian, then Estonian-English, then comparison of two translations. All these steps were needed to make sure that the **exact meaning of statements is not lost in the translation**. The translation from English to Russian was conducted in the same way: translation

agency translated it from English to Russian, then Russian to English, then two translations were compared, similarly to English-Estonian translation.

Once the translations of the measurement tool to Estonian and Russian were received from the translation agency, author and supervisor of this Bachelor's thesis, as well as third invited person who speaks on the native level both Estonian and Russian, organized a meeting to verify the translation provided by the agency. During this meeting, author, supervisor made minor amendments in agency's translation, to make sure that the exact meaning of every single statement in the measurement tool is not lost. Also, since the author of this thesis is native speaker in Russian language, he also made his own changes to the Russian version of the measurement tool. For the Estonian version of the measurement tool, the supervisor of this thesis was involved, as well as invited volunteers who speak Estonian language on the native level.

After the translation of measurement tool was completed and verified, author has compiled the questionnaire using LimeSurvey platform. As stated above, respondents were asked to assess to what extent they agree with certain statements (or how often they experience certain feelings, in case of questions about emotional dimension of POE). As stated above, the statements as they were presented in the questionnaire, are provided in Appendix B.

Together with the questions from measurement tool, in the questionnaire participants were asked to provide their organization's name (so that author would be able to conduct further analysis for specific organizations) and position that a participant takes in his/her organization (to analyze results of the survey based on the position taken by participant). This analysis by club is important, since author was also aiming to send customized feedback to any football organization where number of responses exceeds 7.

When asked to provide an organization, participants were to select from the drop-down menu one of 20 organizations that author selected to be the target group – these organizations included 10 teams from Meistriliiga (premier-league, elite tier of Estonian football) and 10 teams from Esiliiga (second tier of Estonian football). As to the positions taken in organizations, respondents could choose from three types of positions: Administrative position, Coaching staff member (also includes physios etc.) and Player.

Author decided not to ask respondents about their gender and age: as number of members of Estonian football organizations is quite limited, such personal details could possibly identify particular respondents (for example, there are not a lot of 17-year old players, or women working in each organization). This contradicts with the principle of anonymity, which was very important in this survey. For that reason, age and gender were not asked in the questionnaire.

Prior to start answering the questions from the questionnaire, respondents were given a "welcome message" – a short text describing what this survey is about (what is POE), what are

the key concepts from the questionnaire (such as “work group”) and what benefits can organization potentially get from filling out the questionnaire.

In addition to English, questionnaire has also been made available in Russian and Estonian. Apart from measurement tool itself, which was already translated, there were welcome message, questions and answer options which also needed translation to Estonian and Russian. As to the Russian version of the questionnaire, author has translated it by himself. For the Estonian version, author gained help from the supervisor (native Estonian speaker).

Once all three versions of the questionnaire were completed, author proceeded with the test of the pilot version of the questionnaire. Pilot test included sending questionnaire to three people: English native speaker, Estonian native speaker and Russian native speaker. All three respondents have confirmed that questionnaire is understandable and easy-to-answer on all three languages. After author made sure that all three versions are understandable to native speakers, author could proceed with one of the key parts of survey – distribution of the questionnaire.

As stated above, author has selected 20 teams from the top two tiers of Estonian football to participate in the survey. At first, the initial plan of the author was to contact clubs by email (most of the clubs have contact details on their websites). In addition to that, author was also planning on using his own contacts in the football clubs in order to speed up the process data collection. Author personally knows some people from Tallinna FCI Levadia (players), Tallinna FC Flora (members of administrative staff) and Tartu JK Tammeka (players, coaches and members of administrative staff).

Since author contacted 20 clubs, the maximum amount of responses (the whole size of population in case of Estonian football organizations) could be around 70-, given that on average there are around 35 people per club (players plus key members of coaching and administrative staff). In this regard, author made the decision to set the targeted number of responses to 100, which constitutes around 15% of the population.

On April 13th, 2022, author started distributing the survey to the clubs. The general algorithm of contacting a club where author does not have any connections, was the following: “check emails of key contact people on the website – send out letters with an ask to fill out and share the survey with other members of organization”. In addition to it, as mentioned above, author contacted people he personally knows from Tallinna FCI Levadia, Tallinna FC Flora and Tartu JK Tammeka.

Unfortunately, the initial strategy of survey distribution did not bring the desired results: in the first week of the survey distribution, from April 13th to April 19th, only 12 responses were received. Those were mainly from the clubs where author personally knew, which meant that email distribution of the questionnaire was not the most efficient way to collect responses.

For that reason, starting from April 20th, 2022, author decided to employ new strategy of data collection, that implied contacting players, coaches and members of administrative staff of the clubs personally on Facebook. This strategy implied the following algorithm of actions: “check the team roster on the club’s website or website of Estonian Football Union – look up every single player/coach/manager on Facebook – send them a direct message asking to participate in the survey”. On the first day of implementation of new survey distribution strategy, author has contacted 67 people from three organizations (Pärnu JK Vaprus, FC Kuressaare, Tartu JK Tammeka) and received 35 replies. Due to this, such strategy was deemed more successful and effective, and from April 21st to April 26th, author was busy with contacting people from the other organizations from the initial list of 20 clubs.

The deadline for the data collection that author set for himself was April 28th, 2022, and on this day the survey was closed by the author. During more than two weeks of questionnaire distribution process (April 13th – April 28th), in total author has contacted 253 people from 20 organizations, having the final result of 111 responses, which by 11% exceeded the expected sample size, and made up around 16% of the whole population. Also, one can calculate that the response rate (the relationship of number of those who have fully completed the survey to the number of people reached) was around 43.8%. Another 56 people have opened the survey, but have not completely filled it out.

Nevertheless, the method of contacting players/coaches/administrative staff members by Facebook had its certain drawbacks. The main one was that not all people actively use Facebook on a daily basis, and some of them do not have Facebook page at all. Also, not all organizations keep their websites updated, which means that sometimes on the website author could find some players that are not with an organization anymore, or, in some cases, no roster at all was presented on the website. Due to this, author managed to get at least one response from only 15 out of 20 organizations from the initial list.

In addition to it, it is important to mention that during the process of interaction with the members of football clubs, members of three football clubs expressed their interest in customized results of the survey, which span only the answers from their organization. Author is planning to send out the results of the survey to the clubs upon defending this Bachelor’s thesis.

For the analysis of the survey, author will use quantitative approach: he will describe the sample using the frequency tests, then proceeding to analyses of average responses by each statement and each dimension of productive organizational energy. In addition to it, author plans to examine whether the perception of POE is different depending on position of a person in organization, organizations itself and region of Estonia.

Having completed all the tasks mentioned in the beginning of this chapter, author can now proceed with processing the data received from the survey, and interpreting the received results. Author is going to be using SPSS software in order to conduct quantitative analysis of collected data. Author has decided to use quantitative approach to empirical research because POE is a collective phenomenon, meaning that it can't be studied on a small sample of, say, 10-15 people. In addition, all the previous studies on POE have also been conducted using quantitative approach. In SPSS, author is planning to analyze the sample itself, and investigate how well different dimensions of productive organizational energy are manifested in Estonian football organizations, and trace possible differences in perception of POE among various groups of respondents using Kruskal-Wallis and Mann-Whitney comparison of means tests. Also, the correlation between different dimensions of POE will be measured, using Spearman correlation test.

2.2. Quantitative analysis of collected data and discussion of results

Prior to going to the quantitative analysis of collected data in SPSS, author of this bachelor's thesis exported data from LimeSurvey and coded it using MS Excel. Author has coded answers of respondents (1-5, based on Likert scale), football organizations (from 1 to 15, since members of 15 organizations have filled out the survey), positions of respondents (1-3, standing for players/coaches/administrators) and regions where organizations are located (1-2, organizations from Tallinn and from other regions).

After coding the collected data from the questionnaire, author proceeded with quantitative analysis of data. Firstly, to get the overview of the sample, it is important to take a look at frequency tables. As expected before the survey distribution, the organizations where author has personal contacts can be seen more frequently in the sample: two most frequent organizations in the sample are Tartu JK Tammeka and Tallinna FC Flora (17 responses received from each club) – these are among three clubs that author of this bachelor's thesis contacted through his personal channels. Their cumulative share in total number of responses constitutes almost one-third of the whole sample (30.6% of the sample). Significant number of responses were also received from FC Nõmme United and Pärnu JK Vaprus, with both reaching the mark of ten responses. Another clubs that worth mentioning are Tallinna FCI Levadia, members of which provided 9 responses, JK Tallinna Kalev, Paide Linnameeskond and FC Kuressaare with 8 responses each, and FC Elva with 7 responses. Out of another six clubs (JK Narva Trans, Nõmme Kalju FC, Tallinna FC Flora U21, Tallinna FCI Levadia U21, Tallinna JK Legion and Viimsi JK) none exceeded the milestone of 5 responses. Based on those frequencies, author of this Bachelor's thesis decided to provide customized feedback to all organizations where number

of responses was at least seven. Information about frequency by organizations is presented in Table 4.

Table 4

Frequency table, by organizations

Organization	Frequency	Percent
FC Elva	7	6.3
FC Kuressaare	8	7.2
FC Nõmme United	12	10.8
JK Narva Trans	2	1.8
JK Tallinna Kalev	8	7.2
Nõmme Kalju FC	3	2.7
Paide Linnameeskond	8	7.2
Pärnu JK Vaprus	10	9.0
Tallinna FC Flora	17	15.3
Tallinna FC Flora U21	5	4.5
Tallinna FCI Levadia	9	8.1
Tallinna FCI Levadia U21	2	1.8
Tallinna JK Legion	2	1.8
Tartu JK Tammeka	17	15.3
Viimsi JK	1	0.91

Source: compiled by the author

The other angle under which one could look at this sample is positions that the respondents take in their organizations. Since many Estonian football clubs don't have numerous people in administrative or coaching staff (it is quite rare for an Estonian football club, for example, to have a big scouting or medical team), it is no surprise that the most represented position in football organizations of Estonia is players. Indeed, it is perfectly justified by the sample: out of 111 respondents, 87 were players, which made up 78.4% of the scale. As to coaches and members of administrative staff, they are represented by 13 and 11 respondents respectively. Given the overall small size of Estonian football organizations, it is also worth mentioning that in smaller clubs (for example, FC Nõmme United) certain people might have both administrative and coaching responsibilities. In this regard, author allows that among those 24 people representing coaches and members of administrative staff, there might be some respondents who take more than one position. The overwhelming number of players can also be explained by the fact that some football clubs do not provide information about coaching staff on their websites, and even if they do, coaches tend to be more busy and less likely to respond to a Facebook message. Also, coaches and managers, who obviously tend to be more adult people than football players, tend to spend less time on social media and, subsequently, some of the coaches contacted by Facebook also did not respond. The frequencies of respondents of different positions are presented in the Table 5.

Table 5

Frequency table, by position taken in organization

	Frequency	Percent
Administrative position	11	9.9
Member of coaching staff (coaches, physios, etc.)	13	11.7
Player	87	78.4

Source: compiled by the author

Also, as mentioned above, the sample analysis is not limited to frequencies by organization and position of respondents. As have been already said, during the coding process author has introduced new variable regarding the regions where clubs are located. This was done to examine differences in perception of productive organizational energy among members of clubs from Tallinn and from the rest of Estonia. Author decided to conduct such analysis because the logical assumption is that in Tallinn, as in a big capital city, there are more football clubs (half of Meistriliiga clubs are from there), which means that there are more opportunities for players/coaches/managers to find more suitable club for them, where they could feel better connection with other members. In other regions of Estonia, there are usually one club per city, and almost no other cities have two or three clubs (with the exception of Tartu, Pärnu, Narva). Frequency analysis of the sample by region shows that number of respondents from Tallinn is slightly more (but almost equal) than the number of respondents from other cities of Estonia. 52.3% of those who responded to the questionnaire were from Tallinn, which fairly reflects the overall relationships of teams in top tier of Estonian football where the most of survey responses are from (Meistriliiga) – out of ten teams competing, five represent Tallinn. Table 6 demonstrates the frequency of responses, by region.

Table 6

Frequency table, by region (Tallinn – not Tallinn)

	Frequency	Percent
Tallinn	58	52.3
Not Tallinn	53	47.7

Note: JK Viimsi counted as a team not from Tallinn – despite obvious geographic proximity to the capital

Source: compiled by the author

Also, since author has put a lot of effort into translating the measurement tool and questionnaire into Estonian and Russian, it was important to see the proportion of responses in English, Estonian and Russian language. As can be retrieved from the statistics, no respondent has given their answers in English language. This is connected to the fact that author has only contacted eight players and coaches who do not speak Estonian and Russian, and none of them

was using Facebook on a permanent basis. Surprisingly, responses given in Russian language have only amounted to 12.6% of the sample – even though author expected this share to be around 20-25% per cent. Such a low share of Russian-language responses can be explained by the fact that Russian speaking population is in general less likely to use Facebook as their main channel of communication than Estonian people. Also, it cannot be excluded that some respondents who author contacted in Russian language, decided to use Estonian language when filling out the questionnaire, because it was more convenient to them, or it just did not matter which language to use. Therefore, it is no surprise that share of responses from Estonian speakers made up 87.4%, accounting for 97 responses out of 111. The frequencies of responses by language used in the questionnaire are presented in the Table 7.

Table 7

Frequency table, by language

	Frequency	Percent
Estonian	97	87.4%
Russian	14	12.6%

Source: compiled by the author

Having analyzed the sample, author needs to conduct an important reliability test which is aimed to verify that all the statements (which were already divided into factors by Cole et al, 2012) have proper level of consistency and statements within one factor (affective, cognitive or behavioral dimension) are closely related to each other. Since the measurement tool has been taken from the previous study of Cole et al (2012), author does not need to group statements into factors. However, the measurement tool had been translated into Estonian and Russian, which implies that its reliability needs to be measured again. This is to make sure that the meaning is not lost in translation, all the respondents, regardless of their language, understood the statements equally well, and the statements (even after translation to two languages) were consistent with each other.

According to Taber (2018), Cronbach's alpha that is 0.7 or higher demonstrates that all the variables (statements, in case of this thesis) within factors (in this case, dimensions of POE) are internally consistent, i.e. Cronbach's alpha of 0.7 or higher shows that our measurement tool has remained reliable after translation into Estonian and Russian. The results of the reliability analysis are presented in the Table 8.

As can be inferred from the Table 8, Cronbach's alpha in case of all three factors (dimensions of POE) is higher than 0.7. This means that all the statements from the measurement tool have acceptable level of internal consistency within their factors: for example, statements measuring affective dimension are consistent with each other, and the same stands true for

cognitive and behavioral dimension. Based on this, author makes a conclusion that the measurement tool is still reliable when translated into Estonian and Russian.

Table 8

Reliability analysis of measurement tool

Factor (dimension of POE)	Cronbach's alpha
Affective	0.84
Cognitive	0.78
Behavioral	0.75

Source: compiled by the author

After the author described the sample and analyzed the reliability of data, he can proceed with the analysis of descriptive statistics for received results. Average responses for each of statements from measurement tool are presented in the Table 9.

Table 9

Descriptive statistics of survey results, by statement from the measurement tool

Statement	Mean	Minimum	Maximum	Standard deviation
1. People in my work group feel excited in their job.	4.12	3	5	0.72
2. People in my work group feel enthusiastic in their job.	4.14	2	5	0.65
3. People in my work group feel energetic in their job	4.01	2	5	0.64
4. People in my work group feel inspired in their job.	3.93	2	5	0.80
5. People in my work group feel ecstatic in their job	3.55	2	5	0.80
6. My work group is ready to act at any given time	4.10	3	5	0.62
7. People in my work group are mentally alert	3.75	2	5	0.72
8. In my work group, there is a collective desire to make something happen	4.59	3	5	0.60
9. People in my work group really care about the fate of this company	4.17	2	5	0.73
10. People in my work group are always on the lookout for new opportunities.	3.67	2	5	0.80
11. People in my work group go out of their way to ensure the company succeeds	4.21	2	5	0.79
12. People in my work group often work extremely long hours without complaining	3.41	1	5	0.98
13. There has been a great deal of activity in my work group.	4.10	2	5	0.74
14. People in my work group are working at a very fast pace	3.90	2	5	0.85

Source: compiled by the author

It is important to remind that the Likert scale for first five statements that represent affective (emotional) dimension of productive organizational energy is frequency-based (with 1 being “Never” and 5 standing for “Always”). For the statements 6-14 the Likert scale was based on the extend of agreement, with 1 meaning “Strongly disagree” and 5 being “strongly agree”.

Prior to proceeding with analysis of average responses, a crucial note needs to be made regarding the standard deviations for each statement. As can be seen in Table 9, for all the statements standard deviation is below 1 – this is considered as a low value of standard deviation. Analysis of standard deviations is essential in order to assess the usefulness of means analysis. In case of too high standard deviation, there is a high risk that analysis of means would be unreliable, since small group of too high or too low values can seriously affect the average number. In this case, however, standard deviations are relatively small, which can confirm the reliability of analysis of means.

From the Table 9, it can be seen that in overall, most of the statements have the average response revolving around 4, which means that in general members of Estonian football organizations perceive productive organizational energy in their clubs on a good enough level. However, there are certain statements that are perceived a bit differently than other. For example, as can be inferred from the table, members of Estonian football organizations were rather neutral when asked about the ecstatic feeling in their jobs – the average response for this statement was just 3.55. This pattern is explainable – “ecstatic” feeling is a very strong and rare emotion which is not too often experienced on the workplace (and is not even needed this much). Despite this, people generally agree that the feelings of enthusiasm, excitement and inspiration, as well as the feeling of being energetic in job can be more commonly felt on the workplace. All these four statements have average response close to 4, which in frequency Likert scale corresponds to “Rather often”.

Speaking of the statements 6-10 that represent cognitive dimension of productive organizational energy, one can observe a bigger dispersion of average responses. For example, one can see that for the statement 8, there is the highest average response out of all statements – 4.59. This can mean that respondents from Estonian football clubs generally feel pretty confident about the collective desire for making something happen – the average response for this statement lies between “Rather agree” and “Strongly agree”. Also, interestingly, none of the respondents disagreed with this statement – this can be seen from the “minimum” column, which shows the lowest response for each statement. In this case, this minimum value was 3, which stands for “Neutral”. Conversely, for the statements 7 (“People in my work group are mentally alert”) and 11 (“People in my work group are always on the lookout for new opportunities”) author observes relatively low average responses, with both of them being below 4. This can be

interpreted in a way that in general, members of Estonian football organizations do not strongly perceive a high level of mental alertness and willingness to try out new opportunities. Not too high willingness to look for new opportunities and challenges can be explained by the fact that, for example, moving from one football organization to another is usually associated with drastic changes of lifestyle (e.g. moving from Tallinn to Kuressaare). In some cases, people just do not need to change their life dramatically and prefer to stay where they are. Another factor that can explain relatively low average estimation for this statement is quite high overall perception of POE among members of Estonian football organizations: according to Preskar and Žižek (2020), the more energy a person feels on the workplace, the higher their organizational commitment is (meaning that willingness to leave organization and look for new opportunities is decreased). Findings of Cole et al (2012) also confirm that POE is positively correlated with organizational commitment.

For the statements 6 and 9, one can see that average responses revolve around 4.1, which means that in general, participants of the survey were rather agreeing that their co-workers are ready to act at any given time and do care about the faith of the organization. Also, for statement 6, the minimum response is 3 (“Neutral”), meaning that no respondent disagreed with the fact that their co-workers are ready to be in action at any time.

As to the statements 11-14, that reflect behavioral aspect of productive organizational energy, here it can be seen that statement number 12 stands out. This statement has the lowest average response out of all statements – 3.41 (“People in my work group often work extremely long hours without complaining”). This is the only statement, for which the minimum response reached 1 – meaning that at least one person strongly disagreed with the fact that their colleagues work very long hours and do not complain about it. Such low estimation can also be explained – in case of football players, their work is mostly associated with high physical workload, and overworking (overtraining) can be detrimental to them, leading to worse physical and mental condition. Querido et al (2021) confirm that athletes in professional football need to properly recover, otherwise, there is a risk of overtraining syndrome.

For the other three statements, average response is in the region of 4-4.2, meaning that respondents in general agree that there is a lot of activity in their work group, and members of work group give their best to the company’ success. Also, statement 14 has 3.9 average response, meaning that survey participants rather agree that their work group operates at a fast pace (however, since this one is slightly below 4, there are ground to believe that some respondents were more skeptical about the working pace of their co-workers). Author also believes that 4 is relatively high response in comparison to other studies (this will be considered below). One (yet not the only) of the possible reasons of it is the fact that most of the respondents were players:

according to Kalén et al (2019), in the major five European football leagues, most players are at the age of 21 to 29. This means that average age range for a football player is quite narrow and that most of the players are of pretty much the same age. Subsequently, since most players are in the similar age group, they feel more collective energy than people in some other industries, where the age range of members may be significantly wider. This assumption can also be supported by the findings of Kunze and Bruch (2010) mentioned in the theoretical part of this thesis: they discovered that **the age-based faultlines negatively correlate with POE** (in other words, they hamper the transmission of POE among team members).

In addition to it, author can assume that such high numbers in POE among members of football organizations have been achieved due to increased importance of leadership in team sports. According to Coker et al (2021), effective leadership in team sports has always been considered as a vital factor that affects on-field performance significantly. At the same time, Vogel et al (2022) connect leadership activities to POE – they observe clear positive impact of leaders on productive organizational energy.

In addition, author has conducted the analysis of descriptive statistics by each dimension of productive organizational energy. This analysis is aimed to demonstrate, whether participants of the survey perceive different dimensions of POE in the same way. Prior to conducting this analysis, author has introduced three new variables on SPSS, that were called “Affective” (representing the average of responses for statements 1-5), Cognitive (average of responses for statements 6-10) and “Behavioral” (average of responses for statements 11-14). Once these variables were generated, author could proceed with the analysis of descriptive statistics of responses by each dimension. The results of this analysis are illustrated in the Table 10.

Table 10

Descriptive statistics of Likert scale responses, by dimension of POE.

Dimension of POE	Mean	Minimum	Maximum	Standard deviation
Affective	3.95	2.80	5.00	0.57
Cognitive	4.05	2.60	5.00	0.51
Behavioral	3.91	2.00	5.00	0.64

Source: compiled by the author

The first major observation from this table is that, just like in the case with previous table with average responses by statement, standard deviations for all three dimensions are quite low, and do not exceed 1. This gives author grounds to believe that in this case analysis of means is also reliable enough, and is not affected by certain too high or too low observations.

Similarly to the analysis of means by statements that was conducted above, here it can be seen that in case of all three dimensions mean value is close to 4. This shows that in general the

participants of the survey perceive that all three dimensions of productive organizational energy are manifested quite well in their organizations. The fact that mean of behavioral dimension is slightly lower than that of two other dimensions, can be explained by the analysis of average responses by statements, which is conducted below. Statement 12, which belongs to behavioral dimension, ended up having the lowest average score, which, in turn, affected the mean of the whole dimension. Results of the analysis of means by dimension confirm the findings of previous analyses that state that in general, members of Estonian football organizations see that productive organizational energy at their organizations is rather positive, with average score of 4 on the 5-point-scale.

Comparing this result with the previous studies (conducted on the sample from different industries), author observes that the average perception of productive organizational energy is higher in Estonian football organizations than, for example, in a US-based company from the study of Cole et al (2012), where the average estimate for productive organizational energy was slightly below 3.5. Also, in the study of Kunze and Bruch (2010), the average response for POE made up 3.77, which is also lower than the result of this study (roughly 4 for all dimensions). The same is with the study of Walter and Bruch (2010), where average estimation of POE was 3.7. Based on this, author can assume that compared to other organizations that have been researched previously, POE is quite well developed in Estonian football organizations – which is not surprising, considering the peculiarities of sports organizations considered in the chapter 1.3. Mandatory nature of working in team and impossibility of avoiding face-to-face communication are the important factors that enhance people's perception of POE.

Findings of the study of Alexiou et al (2019) can also be helpful when making an assumption about the reasons behind relatively high scores of POE in Estonian football organizations. They argue that centralization of organization's structure has negative affect on POE. Author can conclude that, since Estonian football organizations are usually of small size, centralization level there is quite low, meaning that there is an opportunity for higher POE

Having analyzed the descriptive statistics, author can proceed with the comparison of means. This analysis is aimed to reveal whether means of responses about affective, cognitive and behavioral dimensions of POE are different among representatives of different organizations, positions and regions. In case of this specific set of data, author decided to conduct non-parametric Kruskal-Wallis (for comparing means within 3 or more groups) and Mann-Whitney (for two groups) tests: this decision was made based on the sample size, which is quite small (111 responses) and on the number of groups to compare.

Firstly, author wants to examine if the perception of productive organizational energy and its different dimensions is equal among respondents taking different roles in organizations: players, members of coaching staff and members of administrative staff.

The decision rule in this case is the following: **if the significance value is bigger than 0.05, there is no difference in perception of POE among groups, if this value is smaller than 0.05, then there is statistically significant difference of means.** The results of comparison of means among respondents representing different positions are presented in the Table 11.

Table 11

Kruskal-Wallis test for responses from the representatives of different positions

Dimension of POE	Significance value
Affective	0.40
Cognitive	0.47
Behavioral	0.34

Source: compiled by the author

As can be clearly seen from the Table 11 above, all the significance values are above 0.05. This means that regardless of position of a respondent, the estimations were very similar, and perception of productive organizational energy in Estonian football organizations **does not depend on the position** that a person takes in their organization.

Another interesting analysis that author wants to perform is the comparison of means of responses among different organizations. In other words, author needs to examine if people from different football organizations of Estonia see productive organizational energy similarly.

The same acceptance/rejection rule is applied for this analysis, as was used for the previous one. If the significance value is higher than 0.05, then there is no difference between means among different groups, if the significance value is smaller than 0.05, then the statistically significant difference exists. The results of the Kruskal-Wallis test by organizations is presented in the Table 12 below.

As can be seen from the Table 12, the results of this analysis are different from the previous one. In case of affective (emotional) dimension, significance value was above 0.05, meaning that regardless of organization, respondents perceived affective dimension on the same level. However, results are not the same for cognitive and behavioral dimensions, for both of which significance value was below 0.05. This implies that cognitive and behavioral dimensions are not perceived equally among representatives of different football organizations in Estonia, and members of at least one organization see it differently than others. To sum it up, author has come to a following conclusion: while affective dimension is perceived equally in all football

organizations in Estonia, the perception of cognitive and behavioral dimensions is different among organizations.

Table 12

Comparison of means of responses from the representatives of different organizations

Dimension of POE	Significance value
Affective	0.052
Cognitive	0.018*
Behavioral	0.031*

Note: * - the difference between means is statistically significant on the level of 0.05

Source: compiled by the author

Once author has found out that the perception of cognitive and behavioral dimensions of POE is different among different organizations, the next task is to identify, how different this perception is. To tell this, author found means of responses for each team. However, author will only analyze those teams where he has more than 7 responses. It is important to notice that due to anonymity issues, author will use codes instead of organizations' names. The means of responses by the members of those organizations are presented in the Table 13.

Table 13

Means and standard deviations of responses about cognitive and behavioral dimensions of POE among different organizations

Organization	Cognitive dimension, mean	Cognitive dimension, standard deviation	Behavioral dimension, mean	Behavioral dimension, standard deviation
1	4.43	0.55	4.25	0.87
3	3.70	0.68	3.50	0.81
5	4.00	0.40	3.78	0.63
6	3.82	0.43	3.60	0.68
7	4.24	0.31	4.08	0.33
9	4.20	0.50	4.22	0.46
10	3.95	0.47	3.79	0.53
11	4.20	0.50	4.22	0.46
13	4.17	0.31	3.93	0.51

Notes: only organizations with 7 or more responses are included in the table. Organizations are coded due to anonymity issues.

Source: compiled by the author

As can be seen from the Table 13, standard deviations for both dimensions of all clubs were below 1 – this gives author grounds to believe that means in this case would be reliable and

would reflect the real average opinions/perceptions of respondents. The results of means analysis show that in general, members of most organizations perceive cognitive and behavioral dimensions of productive organizational energy quite positively: mean responses tend to revolve around 4 out of 5. Also, interestingly, three out of four organizations with the highest estimates are from Tallinn – however, the highest result of all the organizations belongs to a club from outside of Tallinn. Additionally, there was not observed any significant differences between the results of small and relatively big clubs – this finding is also backed up by the study of Kunze and Bruch (2010), that stated that team size does not affect perception of productive organizational energy.

Author has also noticed that the average responses for cognitive dimension are consistently higher than estimations for behavioral dimension. This can be connected to the fact that even though a person who is convinced in something, is more likely to convert this confidence into real action, in some cases it does not happen.

Another interesting finding from this analysis is that the organizations with highest average responses for cognitive dimension also have highest average estimations for behavioral dimension, and vice versa. This leads author to a conclusion that the scores for cognitive and behavioral dimensions are in direct relationship. Indeed, if a person is rationally convinced in something, they are more likely to turn this confidence into real action.

In order to confirm (or refute) this visual impression that responses for cognitive dimension correlate with responses for behavioral dimension, author decided to conduct non-parametric Spearman correlation test. Author also included affective dimension of POE to the analysis, to see how it correlates with two other dimensions. Correlation coefficient that is less than 0.3 means weak correlation, coefficient between 0.3 and 0.7 indicates moderate correlation, and if two variables have correlation coefficient higher than 0.7, this correlation is considered strong (Turk, 2018). Results of this correlation analysis are presented in the Table 14.

Table 14

Correlation between different dimensions of POE

Dimension	Affective	Cognitive	Behavioral
Affective	1.00	0.52*	0.48*
Cognitive	0.52*	1.00	0.71*
Behavioral	0.48*	0.71*	1.00

Source: compiled by the author

Notes: “*” sign indicates statistically significant correlations on level 0.01

First of all, it needs to be said that the significance values of all three pairs (affective-cognitive, affective-behavioral, cognitive-behavioral) are 0.00, which means that **there is**

statistically significant correlation between the responses about different dimensions of productive organizational energy. As can be inferred from the correlation coefficients from the table, in Estonian football organizations, there is moderate correlation between affective and cognitive dimensions, and between affective and behavioral. **The correlation between cognitive and behavioral dimensions of POE, however, is strong**, as its correlation coefficient exceeds 0.7. This confirms author's initial visual impression after seeing the results of analysis of means – responses for cognitive and behavioral dimension do correlate, and the higher was the response estimation for cognitive dimension, the more likely it is that the average response for behavioral dimension will also be high. This finding is also consistent with that of Cole et al (2012): they observed, that all three dimensions of productive organizational energy are significantly correlated with each other. However, in their study correlation coefficient between all three dimensions indicated moderate correlation, while author of this thesis found out that in Estonian football organizations cognitive and behavioral dimensions are positively correlated with each other. Author assumes that this is connected to the industry specifics – football players, as ambitious sportsmen, are more likely to convert their rational confidence in something into real action.

In addition to the analyses above, author wants to examine whether three dimensions of productive organizational energy are perceived differently depending on the region. As was mentioned below, author divided all the organizations into two groups: those from Tallinn, and not from Tallinn. Unlike previous means comparison tests, in this case author performs Mann-Whitney test, since the number of groups in this case is two (Tallinn-not Tallinn). The results of comparison of means of responses for different dimensions of POE depending on the region are presented in the Table 15.

Table 15

Mann-Whitney test for responses from organizations from Tallinn and not from Tallinn

Dimension of POE	Significance value
Affective	0.01*
Cognitive	0.41
Behavioral	0.18

Note: * - the difference between means is statistically significant on the level of 0.05

Source: compiled by the author

From the Table 15, it can be inferred that significance values for the cognitive and behavioral dimension exceeded 0.05, meaning cognitive and behavioral dimensions of productive organizational energy are perceived equally among representatives of football organizations from Tallinn and not from Tallinn. However, for the affective dimension, the

results are different: its significance value is below 0.05, meaning that this dimension is perceived in different ways by respondents who are located in the capital of Estonia and by those who live outside of Tallinn.

Once author identified the statistical difference in perception of affective (emotional) dimension among representatives of different region, he wants to test, where the affective dimension is perceived on a higher level – in or outside of Tallinn. The results of this analysis are presented in the Table 16.

Table 16

Means and standard deviations of responses about affective dimension of POE among respondents from different regions

Location	Affective dimension, mean	Standard deviation
Tallinn	4.07	0.55
Not Tallinn	3.82	0.57

Source: compiled by the author

Table 16 clearly illustrates that respondents from Tallinn have higher level of perception of affective dimension of POE. For understanding the context, it is important to mention that, to author's knowledge, players from the clubs from outside of Tallinn often prefer to spend their free time in their hometown, which might limit the time of their interaction with other members of organization – this can be one of explanatory factors why the mean is lower among the people from organizations from outside of Tallinn. However, even though the difference is statistically significant, it is still quite small. Therefore, author can make a conclusion that in the clubs from outside of Tallinn there are no major issues with the perception of productive organizational energy.

Having received and discussed the results of the empirical analysis, author finds it important to mention that this survey has its own limitations. Such limitations can be related to the fact that the vast majority of sample represent one nationality (almost all of the respondents are Estonian) and one (very specific) field of occupation – football. In this regard, author realizes that there might be certain issues with generalizability of the results of this survey. However, key theoretical concepts and ideas considered in this study, can also be applied in other sectors.

Conclusion

In the theoretical and empirical parts of this bachelor's thesis, author has implemented several important research tasks which give comprehensive understanding of the concept of productive organizational energy and its manifestation in Estonian football organization. In this section, author wants to sum up all the theoretical and practical findings of this bachelor's thesis.

Firstly, author has conducted thorough analysis on how authors of previous studies defined the concept of productive organizational energy. Four definitions from previous studies have been selected and compared based on different criteria (mentioning of transmission of POE between workers, dimensions, positive effect of POE and link with organizational goals). As a result of this analysis, author came up with his own definition of POE, which he defined as “collectively shared condition of emotional, cognitive and behavioral arousal which is experienced by the members of a working unit on the way to achieving their organizational goals”. Thus, reader has been introduced to the concept of POE, which is crucial for future analysis of this phenomenon.

Having analyzed the concept itself, author proceeded to the analysis of previous literature on the topic. Since productive organizational energy has a big research gap and there are not enough studies on this topic in the open access, author has selected three papers that provide important insights about POE. Author has synthesized information from the studies of Cole et al (2012), Kunze and Bruch (2010) and Alexiou et al (2019), having found that productive organizational energy consists of three dimensions: affective (how does one feel?), cognitive (what does one think?) and behavioral (what does one do?). Only once all three dimensions are triggered, POE becomes positive and benefits the organization. Another finding from previous literature is that POE is positively correlated with organizational commitment and job satisfaction. On the top of it, one of the key features of POE is its transmission from one team member to another.

Author has also described the key peculiarities of sports organizations, which are important for understanding the context in which POE is considered in this bachelor’s thesis. The most important features of team sports organizations included mandatory nature of working in team and in person (football team cannot work remotely), quite vague performance criteria, and public nature of sports (everyone sees the result of team’s performance). Understanding those concepts is crucial for proceeding to exploring phenomenon of POE on the example of football organizations.

In the chapter 2.1, author has thoroughly described the methodology of this bachelor’s thesis, having justified the choice of measurement tool and gone over the process of its translation, survey creation and data collection. After the data was collected, author has conducted empirical study investigating how different dimensions of productive organizational energy are displayed in Estonian football organizations. This study has revealed that in general, members of Estonian football organizations rather feel energized, enthusiastic and excited at their job, but not ecstatic. Also, people working in Estonian football clubs rather agree that they experienced the collective desire to make something happen, really caring about organization’s

future. Respondents, however, were a bit more skeptical about willingness of their colleagues to look for new opportunities and challenges. In addition to it, members of Estonian football organizations believe that there has been a lot of activity in their team, and that everyone is doing their best to ensure success of the club; however, they are not so sure that members of their organizations can work for very long hours and not complain.

Additionally, author has revealed that the perception of POE is not different among representatives of various positions, however, there are statistical differences in perception of different dimensions based on organizations and regions of Estonia. Also, according to the findings of this survey, all three dimensions of POE are correlated with each other: affective dimension is moderately correlated with cognitive and behavioral dimensions, while cognitive dimension has strong correlation with behavioral.

Author has also discussed the empirical results of this study and compared them to results from previous literature on POE. Findings of the author of this bachelor's thesis were generally in accordance with conclusions of scholars who previously worked with POE – in addition to it, based on results of previous studies, author also made some assumptions regarding the reasons behind quite high overall results of the survey.

This bachelor's thesis is the first attempt to discover productive organizational energy on the example of team sports (namely – football). However, author believes that there remains a big room for future research – for example, connecting POE with performance of sports teams.

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Appendix A

Definitions of POE

Authors	Year	Definition
Cole, Bruch, Vogel	2012	“the shared experience and demonstration of positive affect, cognitive arousal, and agentic behavior among unit members in their joint pursuit of organizationally salient objectives” (p. 447).
Kunze, Bruch	2010	“Productive energy, defined as the positive and intense force with which a collective works” (p. 596).
Alexiou, Khanagha, Schippers	2019	“shared experience and demonstration of positive affect, cognitive arousal, and agentic behavior among unit members” (as cited in Alexiou et al, 2019, p. 156)
Walter, Bruch	2010	“the extent to which a company has mobilized its emotional, cognitive, and behavioral potential in pursuit of its goals” (as cited in Walter&Bruch, 2010, p. 766)

Source: compiled by author according to the sources in the table

Appendix B

Welcome message and the questionnaire

Dear participant, Thank you very much for agreeing to participate in my survey! Firstly, let me briefly describe the topic of research and the potential gains that your organization will have as a result of completing the survey. The main topic of this research is productive organizational energy (POE). To put it simply, POE is a collective feeling of energy among team members (high productivity, positive emotions, and so on). As we all know, it is extremely important to develop this kind of energy in a sports team. The results of this survey will also be of use for clubs: it will help them to assess their current collective energy, and take steps to improve it, hence improving the results on the pitch. Later on, I will send their own results of the survey to every club that participated. Please, note that the survey is completely anonymous and no personal details of participants will be disclosed. Important: one of the key terms used in the survey is “work group”. The simplest way of explaining it is just people you most closely work with on a daily basis. “Working” in the context of players includes both training and playing games. Answering the survey questions will take no more than 5 minutes. Thanks a lot in advance and have a great day!

	Never	Rather rarely	Sometimes	Rather often	Frequently, if not always
1. People in my work group feel excited in their job.					
2. People in my work group feel enthusiastic in their job.					
3. People in my work group feel energetic in their job.					
4. People in my work group feel inspired in their job.					
5. People in my work group feel ecstatic in their job.					
	Strongly disagree	Rather disagree	Neutral	Rather agree	Strongly agree
6. My work group is ready to act at any given time.					
7. People in my work group are mentally alert.					
8. In my work group, there is a collective					

desire to make something happen.
 9. People in my work group really care about the fate of this company.
 10. People in my work group are always on the lookout for new opportunities.

	Strongly disagree	Rather disagree	Neutral	Rather agree	Strongly agree
11. People in my work group go out of their way to ensure the company succeeds.					
12. People in my work group often work extremely long hours without complaining.					
13. There has been a great deal of activity in my work group.					
14. People in my work group are working at a very fast pace.					
Please, indicate your organization	<ul style="list-style-type: none"> ▪ FC Kuressaare ▪ JK Narva Trans ▪ JK Tallinna Kalev ▪ Nõmme Kalju FC ▪ Paide Linnameeskond ▪ Pärnu JK Vaprus ▪ Tallinna FC Flora ▪ Tallinna JK Legion ▪ Tallinna FC Levadia ▪ Tartu JK Tammeka ▪ FC Nõmme United ▪ Harju JK Laagri ▪ Tallinna FC Flora U21 ▪ Paide Linnameeskond U21 ▪ FC Elva ▪ Viimsi JK ▪ Tallinna FC Levadia U21 ▪ Ida-Virumaa FC Alliance ▪ Viljandi Tulevik ▪ Pärnu Jalgpalliklubi 				
Please, indicate, what position you take in the organization	<ul style="list-style-type: none"> ▪ Player ▪ Member of coaching staff (coaches, physios, etc.) ▪ Administrative position 				

Note: statements 1-5 represent affective dimension, statements 6-10 reflect cognitive dimension, and statements 11-14 measure behavioral dimension

Source: compiled by the author based on measurement tool by Cole et al (2012)

Resümee**PRODUKTIIVNE ORGANISATSIOONILINE ENERGIA EESTI
JALGPALLIORGANISATSIOONIDES**

Georgii Iiushchenkov

Käesolev bakalaureusetöö uurib produktiivse organisatsioonilise energia (inglise keeles *productive organizational energy*, POE) teemat Eesti jalgpalli organisatsioonides. Töö eesmärgiks oli leida POE erinevate dimensioonide ilminguid Eesti jalgpalli organisatsioonide näitel. Uurimisülesanded hõlmasid POE defineerimist, varasema teemakohase kirjanduse analüüsimist, empiirilise uuringu läbiviimist ja selle tulemuste tõlgendamist ning seostamist teoreetilise materjaliga.

Varasematele uuringutele tuginedes on autor kokku pannud omapoolse POE definitsiooni, kirjeldades seda kui kollektiivselt jagatud emotsionaalset, kognitiivset ja käitumuslikku seisundit, mida tunnetavad organisatsiooni eesmärgi nimel ühiselt tööd tegevad grupi liikmed. POE põhitunnusteks on selle mitmedimensiooniline olemus (POE koosneb emotsionaalsest, käitumuslikust ja kognitiivsest dimensioonist), meeskonnaliikmetevaheline POE edasi kandumine ja POE korrelatsioon töörahulolu ning organisatsioonilise pühendumuse jms. Teisisõnu POE-d kogetakse kollektiivselt ja see kandub meeskonna ühelt liikmelt teisele üle.

POE fenomeni vaadeldakse Eesti jalgpalli organisatsioonide näitel, kuna meeskondliku iseloomuga spordiorganisatsioonid võimaldavad väga hästi vaadelda tiimitööd ja tiimiliikmete vahelist suhtlust. Autor on valinud kvantitatiivse lähenemise, mis tugineb varasemates uuringutes kasutatud kolme faktorit sisaldaval POE mõõdikul. Mõõdik koosnes 14 väitest: 5 emotsionaalse, 5 kognitiivse ja 4 käitumusliku dimensiooni kohta. Vastajatel paluti Likerti 5-palli skaalal hinnata, kui sageli nad väites toodud tundeid kogevad või mil määral nad üldiselt väitega nõustuvad. Mõõdik tõlgiti tõlkebüroos edasi-tagasi tõlke meetodil inglise keelest eesti ja vene keelde. Ankeet sisaldas lisaks POE mõõdikule ka küsimusi vastaja ametikoha ja organisatsiooni nime kohta. Uuringule vastas 111 inimest 15 Eesti jalgpalli organisatsioonist, nende seas mängijad, treenerid ja administratsiooni esindajad.

Bakalaureusetöö tulemused näitavad, et üldiselt on Eesti jalgpalliklubide liikmete hinnangud POE-le üsna kõrged (keskmine hinnang ligikaudu 4 palli 5-palli süsteemis). Dispersioonanalüüs näitas, et mängijate, treenerite ja administratsiooni hinnangutes POE dimensioonide tajumises erinevusi ei ole ehk et nad tajuvad POE-d sarnaselt. Küll aga oli statistiliselt olulisi erinevusi organisatsioonide ja piirkondade lõikes. Täpsemalt on teatud jalgpalli organisatsioonides kõrgem kognitiivse ja käitumusliku POE tase ning teatud piirkondades on kõrgem emotsionaalse POE tase. Lisaks selgus ka, et POE dimensioonid on

omavahel positiivses korrelatsioonis, mis tähendab, et mida kõrgem hinnang emotsionaalsele POE-le, seda kõrgem hinnang ka kognitiivsele POE-le jne. See tulemus on kooskõlas varasemate uuringutega, kus samuti leiti, et erinevad POE faktorid on omavahel seotud.

Küll aga on Eesti jalgpalliorganisatsioonide põhjal saadud POE keskmised hinnangud veidi kõrgemad kui varasemates uuringutes saadud hinnangud teiste sektorite kohta. Siin võib põhjuseks olla tihe suhtlus ja koostöö vajadus meeskonnaliikmete vahel.

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