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Master's Thesis of Global Sport Management

# Primary Classroom Teachers' Motivation in Teaching Physical Education:

A Self-Determination Theory Perspective

초등학교 선생님들의 체육 교육 수업 동기:  
자기 결정 이론 관점을 기반으로

2022년 8월

서울대학교 대학원

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이 논문은 문화체육관광부와 국민체육진흥공단 지원을 받아 수행된 연구임

This work was supported by Ministry of Culture, Sports, and Tourism and Sports Promotion Foundation

# Primary Classroom Teachers' Motivation in Teaching Physical Education:

A Self-Determination Theory Perspective

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**August 2022**

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## **Abstract**

# **Primary Classroom Teachers' Motivation in Teaching Physical Education: A Self-Determination Theory Perspective**

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The main purpose of the study is to explore the motivation of classroom teachers for carrying out Physical Education (PE), using the model Self-determination theory (SDT) in understanding their motivation from the perceived fulfillment of three psychological needs: autonomy, competence, and relatedness. Moreover, the study will look into how various personal, and environmental factors impact on teachers' fulfillment of autonomy, competence and relatedness for a positive motivational outcome. The participants of this study were 160 primary classroom teachers (142 females and 18 males) from the government schools in Male' (capital of Maldives) who teach physical education. A cross-sectional, survey-based study design

was employed. Participants were administered questionnaires using online means (email and online messaging applications) that reliably and accurately assessed the variables of the study. Descriptive analysis were computed. Internal consistency trustworthiness of all the constructs were determined using Cronbach's alpha. To address the first purpose of the study multiple regression analysis were employed to determine how the perceptions of autonomy, competence, and relatedness influence the dependent variables of perceived motivation to teach PE. The second purpose of the study administered multiple regression to explore how personal (i.e., educational background, teaching experience), and physical education environment (i.e., PE facility quality, administrative support) variables predict teachers' perception of autonomy, competence, and relatedness. Results indicated that teachers' perception of autonomy, competence, and relatedness were positively associated with self-determined motivation. Furthermore, personal and environmental factors did not indicated any relations with perceived needs satisfaction. Findings support the tenets of SDT, on the contrary, personal and environmental variables did not contribute to the needs satisfaction.

**Keywords:** Motivation, Self-Determination Theory, Intrinsic motivation, Extrinsic motivation, Physical education,

**Student Number:** 2020-29399

## Table of Contents

Abstract.....	i
List of Figure .....	vii
List of Tables .....	viii
Chapter 1. Introduction.....	1
1.1. Study Background .....	1
1.1.1. Physical Education in Maldives .....	4
1.2. Significance .....	11
1.3. Purpose of the study .....	11
1.4. Research Questions .....	12
Chapter 2. Review of Literature .....	13
2.1. Motivation for teaching PE .....	13
2.1.1. Self-determination theory (SDT) .....	14
2.1.2. Competence .....	17
2.1.3. Autonomy.....	18
2.1.4. Relatedness.....	19
2.1.5. Extrinsic Motivation.....	20
2.1.6. Intrinsic Motivation.....	21
2.1.7. Self-Determination Continuum .....	23
2.1.8. Teachers’ Basic Psychological Need Satisfaction .....	27
2.1.9. Personal and Environmental Factors Impact on Teachers’ Fulfillment of Need Satisfaction .....	28
2.2. Theoretical Model .....	31
2.3. Hypothesis .....	33
Chapter 3. Method .....	34
3.1. Research Approach .....	34
3.2. Population and Participants.....	34



3.3. Research Instrument.....	35
3.3.1. Perceived teacher motivation scale .....	35
3.3.2. Perceived teacher autonomy scale.....	36
3.3.3. Perceived teacher competence scale .....	37
3.3.4. Perceived teacher relatedness scale.....	37
3.3.5. Teacher and school demographic questionnaire .....	38
3.4. Analysis Procedure.....	38
3.5. Credibility, Reliability, and Ethical Considerations.....	39
Chapter 4. Results.....	41
4.1. Descriptive Statistic.....	42
4.2. Reliability Analysis .....	45
4.3. Correlation Analysis.....	46
4.4. Regression Analysis .....	49
Chapter 5. Discussion.....	59
5.1. Overview of the study .....	59
5.2. Need Satisfaction and Relationship to Motivation.....	59
5.2.1. Intrinsic Motivation and Relationship of Need Satisfaction .....	60
5.2.2. Extrinsic Motivation and Relationship of Need Satisfaction .....	61
5.2.3. Amotivation Motivation and Relationship of Need Satisfaction .....	61
5.3. Personal and Environmental Factors Impact on Needs Satisfaction..	62
5.3.1. Personal and Environmental Factors Impact on Autonomy.....	62
5.3.2. Personal and Environmental Factors Impact on Competence.....	63
5.3.3. Personal and Environmental Factors Impact on Relatedness.....	64
5.4. Research Implications .....	65
5.5. Research Limitation .....	66
5.6. Conclusion.....	67
References .....	69
Appendix A .....	75

Appendix B.....	76
Appendix C.....	85
Appendix D .....	86
국 문 초 록 .....	87

## **List of Figure**

Figure 1. Self-Determination Continuum.....	23
Figure 2. The Hypothesis model .....	30

## List of Tables

Table 1. Demographic Characteristics of Participants .....	42
Table 2. Descriptive Statistics of Variables.....	43
Table 3. Reliability Analysis of Cronbach's Alpha.....	45
Table 4. Correlation for Study Variables .....	46
Table 5. Intrinsic Motivation ANOVA for Regression Test .....	50
Table 6. Intrinsic Motivation Regression Coefficient Test .....	50
Table 7. Extrinsic Motivation ANOVA for Regression Test .....	51
Table 8. Extrinsic Motivation Regression Coefficient Test .....	52
Table 9. Amotivation ANOVA for Regression Test .....	52
Table 10. Amotivation Regression Coefficient Test .....	53
Table 11. Autonomy ANOVA for Regression Test for Personal and Environmental Factors.....	54
Table 12. Autonomy Regression Coefficient Test for Personal and Environmental Factors.....	54
Table 13. Competence ANOVA for Regression Test for Personal and Environmental Factors.....	55
Table 14. Competence Regression Coefficient Test for Personal and Environmental Factors.....	55
Table 15. Relatedness ANOVA for Regression Test for Personal and Environmental Factors.....	56
Table 16. Relatedness Regression Coefficient Test for Personal and Environmental Factors.....	57

# **Chapter 1. Introduction**

## **1.1. Study Background**

Sports has always been a beacon of hope and unity throughout history. From the ancient times of Greek Olympics to the most recent years in sporting history, sports have always had an impact in the society. Research indicates that, Sports and Physical education in the context of higher education is a key factor for the formation of future citizens in terms of personality training, by developing and promoting a list of values, behavior and social and personal attitudes manifested in everyday life (Ionescu, 2013). However, there are numerous factors to consider when exploring the influence of gender, socio-economic status and sociodemographic on participation of young children in Physical Education (PE) in schools.

Due to inactivity among youth, obesity prevalence has tripled in recent years. To effectively depress the childhood obesity and gain health benefits, children should engage in 60 or more minutes of moderate to rigorous exercises daily (Chaput et al., 2020). According to the World Health Organization as cited in Bush & Dorm (2016), engaging in physical activity through play, games, and sports provides young children develop self-

confidence, relieve tension, achieve success, opportunities, and interact with others as well as learning about the spirit of solidarity and fair play (Bush & Dorn, 2016).

In the recent years, Physical Education (PE) has been known to play a significant role in the education of children, nationwide. The contribution of Physical Education to the personal, social and physical development of a child is essential. Physical Education (PE) provides children with the knowledge, skills and necessary understanding to perform variety of physical activities, maintain physical fitness and to value and enjoy physical activities as an ongoing fragment of a healthy lifestyle. In addition, PE programs have a significant influence on the future health of children and encourage them to take part in a wide variety of physical activities that can have numerous benefits for the children, such as involving students in group activities, acceptance of success and failure. Concepts of working hard and fair play are few of the many attributes PE have on a child. With exercise and activity habits commencing early in life and the development of healthy lifestyle behaviors among children and adolescents translating into reduced health risks in adulthood (Ingram & Cert, 2011), quality education at an early age is paramount. Hence, schools have been identified as key health setting and are being called upon to give greater attention to their physical education and

physical activity programs (Kirk, 2005). Effective teaching requires the development of professional judgement in order to be able to adapt the teaching skills to meet the demands of the specific situation (Cooper et al., 2016). In order to do so, we need qualified and capable teachers who are motivated to teach PE (P. Morgan & Bourke, 2008). However, there have been numerous researches that indicates that many PE programs in primary schools are of poor quality, which is a result of non-specialist teachers teaching PE (P. Morgan & Bourke, 2008). In addition, research has also depicted the importance of motivation as an underlying foundation of teaching PE affectively (Abós et al., 2019; Pelletier et al., 2002; Roth et al., 2007). The present study will focus on motivation within the theoretical framework of self-determination theory (SDT) (Deci et al., 1991; Deci & Ryan, 2000), and the basic psychological needs of autonomy, competence, and relatedness. The study will anchor on the motivation of teachers teaching PE within SDT and the basic psychological needs and the personal and environmental tenets within the school environment.

Motivation drives an individual to act or behave in particular ways. SDT theory posits the exhibition of disparate types of motivation, which depends on the extent to which an individual's behavior is self-determined and the subsequent manner in which it is regulated (Ryan & Deci, 2000). On

the extent of self-determination, motivation can be separated into three categories: intrinsic motivation (when an activity is undertaken out of interest, enjoyment, or inherent satisfaction), extrinsic motivation (activities undertaken for reasons other than inherent interest in the activity), and amotivation (the lack of any self-determination) (Deci et al., 1991; Deci & Ryan, 2000). There has been very little research carried out investigating teacher motivation and its influence on teacher engagement and behavior, and much less research carried out on primary classroom teacher's engagement in particular their motivation in engagement and behavior taking PE classes. Hence, this study is essential for Maldives educational system and why qualified PE teachers are more important than previously believed. By examining the basic psychological needs satisfaction of teachers within SDT, and the environmental and personal roles that will shed light on what influences teacher's motivation towards teaching physical education.

#### 1.1.1. Physical Education in Maldives

Education system in Maldives have always been prioritized by the government since they strategized of mainstream primary school education in 1979 (National Institute of Education, 2014). The first National Curriculum for primary was crafted and implemented in 1984, and revised in 1997, which



was completed in 2000. The most recent National Curriculum was reformed and developed for the changes occurring with 21<sup>st</sup> century. From the changes that have taken place in the society, practices of the past and current needs, and with a vision for a better tomorrow. (National Institute of Education, 2014).

In the past, tertiary or higher education was available to few students usually from a selected few families (Muna, 2014), but in recent years more students are seeking tertiary education after completing their secondary education. The rising demands for the local provision of in-country tertiary education, the government of Maldives established post-secondary training institutes. As a result, the number of distinct and separate post-secondary institutions continue to grow in number. This reflects the country's growing need for specialist and tertiary training to support the growing economic demand. Within the past three decades separate institution have been set up to provide education and training in areas of teacher education, travel and tourism and many more, to account for the needs of the country (Muna, 2014). In 2001, these institutions were combined and brought under Maldives College of Higher Education (Muna, 2014). In 2011, it was officially declared as the first university of the Maldives (The Maldives National University) (Muna, 2014).

Teacher education has been a primary focus of the government. Consequently, to further tackle the scarcity of the needs of teachers for the schools, Maldives college of Higher Education, later changed to The Maldives National University, started training teachers' for up to Master's Degree (Muna, 2014). Hence, the importance of PE and the emerging concern and need to establish pedagogically sound and comprehensive approaches to further distinguish the scarcity of well-trained teachers (Yildizer & Munusturlar, 2021). Physical literacy (PL) is part of the discourse in transferring health related fitness and physically active lifestyle in school settings, especially in PE classes. Moreover, the importance of PL has been identified as a vital construct of PE for improving health and well-being (Roberts et al., 2019), as such many governments across the world have pioneered considerable initiatives in developing countries, to promote physical activity through PL in PE (Roetert & MacDonald, 2015). However, in Maldives the primary teacher training course only includes one module named Physical Education for the PL of teacher training (Maldives National University [MNU], 2019). Unfortunately, only one module of PE is not adequate enough to teachers' for delivering PE needed to understand the concept of PL for delivering quality PE for the students (Mandigo et al., 2009). Teachers requires some qualities that have been identified as 'non-negotiable'

features with pedagogical model and distinctive identity, in addition to the theoretical comprehension of the philosophy of PL, to transfer the knowledge and variety of outcomes that encompasses PL to students (Kirk, 2013). In this sense, courses in teacher education should embed the PL concept into their teacher education programs (Yıldizer & Munusturlar, 2021). In a study conducted by (Choi et al., 2021) reported that PL perception of preservice teachers' is directly associated with higher teaching efficiency to enact effective teaching behaviors in PE. Furthermore, the outcomes of quality PE as well as PL is directly related with the vital components, which are motivation, confidence, knowledge, competence and understanding, and teachers have acknowledged that, to effectively deliver quality PE these elements are vital and necessary (Veall 2015).

Yıldizer & Munusturlar, (2021) in their research, highlighted in their examination of the differences between PE teachers and classroom teachers and the importance of understanding teachers' PL perception is crucial for delivering and promoting the quality of PE practice and policies. The study also suggests the importance of integration of PL and its attributes of knowledge and understanding of PL, self-expression, self-confidence must be embedded in initial teacher education and training, as PL perception is directly associated with higher teaching efficiency. Nevertheless, Maldives

teacher training programs do not include sufficient PL programs in training primary teachers.

The Global School-based Student Health Survey (GSHS) 2009 conducted in the Maldives by the Ministry of Education in collaboration with Ministry of Health and Family with the support and coordination of World Health Organization and Centre for Disease Control and Prevention highlighted a forlornly result which revealed that only 25% of students were physically active for the recommended 60 minutes per day, from which Male students are significantly more (29.3%) than female students (21.9%) (Shifa, 2009). These figures highlight the hindrance in physical activity in schools, where most of the children spends more than half of the day (Shifa, 2009). Hence, schools have been identified as the key setting for physical activity and PE (Kirk, 2005).

The lack of specialized PE teachers in the schools has exponentially hindered the delivery of quality physical education. According to DeCorby, Kara, et al, (2005), Physical Education specialists with degree training will have a better impact on students learning. Additionally, the learning will be developmentally appropriate, safe, with effective instruction in the physical, affective, and cognitive domains (DeCorby, Kara. et al., 2005). Primary

schools in Maldives, use classroom teachers to teach physical education, despite the lack of knowledge and proper training. Additionally, there are number of interrelated factors that inhibits teachers from delivering quality learning experiences in physical education for the children (Jess et al., 2017; P. Morgan & Bourke, 2008). Morgan and Bourke (2008) states that the two main factors that inhibits quality learning experience are both institutional and teacher related factors.

At the teacher-level, lack of confidence and negative perception of physical education are often seen concatenated with their past personal experience with physical education as learners (Faulkner et al., 2004; Jess et al., 2017; P. J. Morgan & Hansen, 2008b). Consequently, many classroom teachers approach to teaching physical education reflects this perception of their past experience. As such, not surprisingly primary teachers express a negative perception of teaching physical education (Harris, Cale, & Musson 2011, as cited in Jess et al, 2017).

At the institutional level, the factors that contributes to the negative perception of primary physical education are inadequate professional development programs and initial teacher education (Jess et al., 2017). Additionally, two of the main problems that is identified are the lack of

opportunities to teach physical education in practicum and the limited amount of time dedicated to teaching physical education as a subject (Faulkner et al., 2004; Jess et al., 2017; P. J. Morgan & Hansen, 2008b). Morgan and Hansen (2008) identified other institutional factors as barriers include lack of support, insufficient time, and inadequate resources.

Given the importance of ensuring top priority to literacy and numeracy within primary schools at the expense of non-core subjects, the time devoted to the delivery of PE will be reduced and further incorporating Health in to the PE syllabus, the time allocated for PE has minimized from 2 periods of 35minutes to 1 period (DeCorby, Kara. et al., 2005; Faulkner et al., 2004; Jess et al., 2017; P. Morgan & Hansen, 2007; P. J. Morgan & Hansen, 2008a). In this scenario, the teacher's lacking the knowledge and confidence to teach PE are likely to use such changes to further reduce their commitment and limit the time students experience physical activity (Jess et al., 2017). Accordingly, using the model Self-determination theory (SDT) in understanding their motivation from the perceived fulfillment of three psychological needs: autonomy, competence, and relatedness will give an understanding to how their perception can foster the outcome of teaching quality physical education.

## **1.2. Significance**

Motivated teachers have been well documented for their valuable outcomes (Carson & Chase, 2009). Hence, motivated teachers have been a crucial component for the efficacious functioning of schools, and the longevity of their careers. There has been a great deal of empirical research undertaken to test this study in education generally (Reeve, 2002), and PE, and sport specifically (Frederick-Recascino 2002; Vallerand and Rousseau 2001). However, understanding student's motivation has been the main attention so far. Teachers who teach physical education has received little attention. Additionally, this study will be essential for the education system of Maldives, where no such research has ever been conducted. Thus, understanding classroom teachers' motivation to teach physical education certainly merits study (Carson & Chase, 2009).

## **1.3. Purpose of the study**

This study will explore the motivation of class room teachers for carrying out Physical Education (PE), using the model Self-determination theory (SDT) in understanding their motivation from the perceived fulfillment of three psychological needs: autonomy, competence, and relatedness. It is important to understand why teachers teach the way they do,

and how using the Self-determination theory will shed light on what influences teacher's motivation towards teaching physical education. The study will focus on the primary school teachers in the capital city of Maldives, Male'.

#### **1.4. Research Questions**

**RQ1.** How does need satisfaction (autonomy, competence, and relatedness) relates to the positive outcome of motivation of classroom teachers on conducting PE lessons.

**RQ2.** How does various personal, and environmental factors impact on teachers' fulfillment of autonomy, competence, and relatedness for a positive motivational outcome.



## **Chapter 2. Review of Literature**

### **2.1. Motivation for teaching PE**

“To be motivated means to be *moved* to do something” (Ryan & Deci, 2000). Over the last decades, teacher based educational research has been acquired pertaining vast knowledge to both generic and field-based behavior associated with teacher effectiveness (Deci et al., 1991; Lindholm, 1997). However, there is little knowledge on how perceptions of self, job, and work interaction with personal, training, and experience variables to determine teacher work motivation and effectiveness (Lindholm, 1997).

Motivation is not unreservedly a unitary phenomenon. Motivation in people can be not only of different amounts but also in different kinds. They vary in level of motivation and also in orientation. Furthermore, orientation of motivation underlines the attitudes and goals that are responsible, which concerns why of the actions (Pelletier et al., 2002; Ryan & Deci, 2000).

Motivation in teachers need to be addressed because of the vital role a teachers’ character play in children’s lives and society. In the past, motivation has been perceived to be a phenomenon that is individual in nature, and which explains the direction (or initiation), intensity (or vigor), and

duration (or perseverance) of voluntary behavior (Mitchell, 1982). Teacher motivation is the psychological undertaking that strengthens the choice, effort, and how long he/she will persist on what she does (Carson & Chase, 2009). In layman's terms, teacher motivation is multifaceted contrive with potential impacting teachers' behavior (Carson & Chase, 2009). Hence, self-determination theory (SDT) (Deci et al., 1991; Deci & Ryan, 2000) is a theory that can be formulated to explain the process of motivation among teachers carrying out physical education.

#### 2.1.1. Self-determination theory (SDT)

Self-determination theory (Deci et al., 1991; Deci & Ryan, 2000) explains the process in which motivation develops and the influence it displays on human behavior and wellbeing. Embedded within SDT, are the three fundamental needs for autonomy, competence, and relatedness (Deci & Ryan, 2000) and for individuals to achieve optimal functioning, these fundamental needs must be fulfilled. Because demonstrating and improving one's abilities is fundamentally satisfying, satisfaction of competence needs predicts performance outcomes (Deci & Ryan, 2000).

SDT distinguishes the different types of motivation, which is based on divergent goals or reasons that give rise to an action as mentioned

previously. Basically, the distinction between intrinsic motivation, which explains an individual carrying out an action for his/her inherent interest or enjoyment, whereas, extrinsic motivation, explains the action as leading to separable outcome (Ryan & Deci, 2000). Hence, the quality of experience varies from behaving for intrinsic and extrinsic reasons (Ryan & Deci, 2000).

Self-determination theory makes an additional distinction on intentional or motivated (Deci et al., 1991; Deci & Ryan, 2000). The distinction is between self-determined and controlled types of intentional regulation. Actions that are motivated is self-determined with volition and endorsed by one's self, whereas controlled actions are subjugated by interpersonal or intrapsychic force (Deci et al., 1991; Deci & Ryan, 2000). With self-determined behavior comes choice, on the other hand with controlled behavior comes the regulatory process of compliance or in some cases defiance.

The concept of perceived locus of causality (Deci et al., 1991; Ryan, Richard M. Connell, 1989), has been used to identify the dimensions that ranges from being self-determined or being controlled. Self-determined behavior is perceived as internal with the locus of causality, whereas when

controlled the perceived locus of causality is believed to be external to the self (Ryan, Richard M. Connell, 1989).

Comprehensive research by SDT has examined environmental factors that may hinder self-motivation, social functioning and personal well-being (Deci & Ryan, 2000). There have been numerous researches carried out exploring the detrimental effects that describes the thwarting of the three basic psychological needs (competence, autonomy, and relatedness). For example, Carson and Chase's (2009) study explored the motivation of physical education (PE) teachers using the model Self-determination theory (SDT) in understanding PE teacher's motivation from the perceived fulfillment of three psychological needs: autonomy, competence, and relatedness. While the authors cited many scholars, who explored the SDT theory, this is the first time this theory has focused on Physical educators' motivation. They predicted the positive relation of motivation of PE teachers to autonomy, competence and relatedness (Carson & Chase, 2009).

Thus, SDT explores not only the positive developmental tendencies, but also social environments that are antagonists toward these tendencies (Deci & Ryan, 2000). Therefore, these basic needs to be fulfilled by the individual to achieve self-motivation. SDT is organismic in nature and takes

consideration that human beings is always on the verge of assimilating new ideas or interests for themselves. Individuals needs the sense of self volition, or choices among several possible courses of action to be engaged in behaviors like teaching or taking part in physical activity (Deci & Ryan, 2000).

Deci & Ryan (2000) suggests that, there are basic psychological needs of all human beings that need to be fulfilled in their SDT theory, which are competence, autonomy, and relatedness and they are identified as the “nutriments of self-determination theory (Deci & Ryan, 2000). Furthermore, these nutriments assist the motivated states and accomplishments by encountering various social situations.

#### 2.1.2. Competence

Competence can be defined by the need of influence for our surrounding, and the need to experience effectiveness in the interactions with the world (Deci & Ryan, 2000). Being competent of the tasks at hand, can bring about the motivation needed for an individual. Higher level of perceived competence is the key for higher level of self-determination and intrinsic motivation (Goudas & Biddle, 1994). It is the need and desire to demonstrate and enhance one’s abilities. The concept of competence needs can be found as earl as White (1959) as cited in Cerasoli et al., 2016. In White’s concept of

effectance motivation (White 1959 as cited in Cerasoli et al., 2016) describes the innate needs individuals have to affect and manipulate the environment, and to acquire the desired outcomes. Multiple theories have posited competence as a fundamental need of motivation as a foundation (Cerasoli et al., 2016).

### 2.1.3. Autonomy

Autonomy can be defined as, an individual's need to experience willingness of his/her actions, and is more intrinsically motivated than the perceived competence (Deci & Ryan, 2000). Moreover, it is the psychological need one possesses to experience self-determination and assure the cause of the behavior as one's own (Deci & Ryan, 2000; Ryan & Deci, 2000). The intrinsic desire of an individual can be hindered or lost if they are forced or manipulated to engage in a task (thwarting autonomy). The perceived autonomy of a behavior is posited when the individual has the freedom to initiate and maintain the behavior. Furthermore, freedom and lack of imposed constraints will be perceived as autonomous. In contrast, a behavior will not be perceived as autonomous when their initiation and directive is pressured or constrained (Cerasoli et al., 2016; Deci & Ryan, 2000). Self-determination theory maintains that if the environment supports the autonomy of the

individual, more autonomous motivation will occur (Deci & Ryan, 2000; Ryan & Deci, 2000).

#### 2.1.4. Relatedness

Relatedness is defined as, the need for loving, caring, and connectedness with others, and a feeling of being accepted (Deci & Ryan, 2000). If these needs are fulfilled and met, individuals are autonomously motivated. In contrast, if these needs are not fulfilled or partially met, controlled reasons take precedence. Numerous theories of human motivation have talked about the importance of interpersonal relationships, such as Maslow's (1943) hierarchy of needs theory and Alderfer's existence-relatedness-growth (ERG; 1969) theory. Relatedness needs are essential to self-determination theory, for behavior regulation to internalize and the natural growth tendencies to emerge they provide the foundation (Cerasoli et al., 2016; Deci & Ryan, 2000). These needs include the desire to connect, affection and receive love and care in return. The need to establish relationships, emotional bonds and attachments with others is one of the needs of human beings. As a result, individuals will gravitate toward those who assist in meeting these needs and away from those who thwart them (Reeve 2009 as cited in, Cerasoli et al., 2016).

### 2.1.5. Extrinsic Motivation

Extrinsic motivation (EM) refers to a wide range of behaviors that are performed as a means to an end rather than for their own sake (Ryan & Deci, 2000). Extrinsic motivation is a concept that applies whenever an activity is performed in order to achieve a distinct outcome. In contrast to intrinsic motivation, extrinsic motivation perpetrates an action or activity for the instrumental value, rather than the simple enjoyment portrayed by the former. However, unlike some perspectives that view extrinsically motivated behavior as invariantly nonautonomous, SDT proposes that extrinsic motivation can vary greatly in the degree to which it is autonomous (Ryan & Deci, 2000). Ryan and Deci, (2000) point out an example:

A student who does his homework only because he fears parental sanctions for not doing it is extrinsically motivated because he is doing the work in order to attain the separable outcome of avoiding sanctions. Similarly, a student who does the work because she personally believes it is valuable for her chosen career is also extrinsically motivated because she too is doing it for its instrumental value rather than because she finds it interesting. Both examples involve instrumentalities, yet the latter case entails personal endorsement and a feeling of choice, whereas the former involves mere compliance with an external control. Both represent intentional behavior, but the two types of extrinsic motivation vary in their relative autonomy (Ryan & Deci, 2000). (p. 60)



Extrinsic behavior was originally sought out as non-self-determined behavior, which can only be precipitated by external contingencies (e.g., rewards). However, recent studies from Deci & Ryan have proposed the existence of different types of extrinsic motivation. These motivations can be ordered along a self-determination continuum, which includes external regulation, introjection, identification, and integration.

#### 2.1.6. Intrinsic Motivation

Intrinsic motivation is defined simply as engaging in an activity for its inherent satisfaction and pure pleasure, rather than for some distinct consequence (Deci & Ryan, 2000; Ryan & Deci, 2000). Intrinsic motivational behavior is performed voluntarily, in the absence of external constraints or material rewards (Ryan & Deci, 2000). Deci & Ryan posit that intrinsic motivation stems from the innate psychological need of self-determination and competence, engaging the feelings that arrives from these needs.

The intrinsic motivation in humans is not the only form of motivation, but it's an extensive and vital one (Ryan & Deci, 2000). Humans from their earliest stages of growth, are inquisitive, active, curious, and displays a ubiquitous willingness to learn and explore without any extraneous incentives to do so (Ryan & Deci, 2000). This natural motivational tendency and

inherent interests guides the individual in acquiring knowledge and skills in developing the cognitive, social, and physical development. The propensity to take interest in novelty, assimilate creativity and skills is not limited to childhood, but it spans across the lifetime affecting performance and persistence and well-being. Numerous studies have suggested that intrinsic motivation exists within individuals, nevertheless it also exists in the relation between activities and individuals (Ryan & Deci, 2000). People are intrinsically motivated for particular tasks and not others. Different authors have defined intrinsic motivation in terms of the task being interesting, while others define it as in terms of the satisfaction the individual gains from intrinsically motivated task engagement (Deci & Ryan, 2000; Ryan & Deci, 2000).

Scholars of SDT have suggested general dimensions of motivation, which can be further differentiated into specific motivation types. To specify, Vallerand (1997) claimed the existence of three intrinsic motivation types; to know, to accomplish, and to experience stimulation. In contrast, Deci & Ryan (2000) hypothesized the existence of four degrees of behavioral regulation consisting in extrinsic motivation, namely, integrated, identified, introjected, and external. These seven types of motivation with amotivation is perpetuated along a continuum of self-determination theory (Carson & Chase, 2009).

Normally, lower levels of self-determination (i.e., amotivation and non-internalized extrinsic motivation) originates from lesser perceived needs satisfaction of the three needs, while higher levels of self-determination (i.e., intrinsic motivation and internalized extrinsic motivation) are believed to emerge from greater perceived satisfaction of the three needs (Deci & Ryan, 2000; Ryan & Deci, 2000). Within self-determination theory emerges a sub-theory known as Organismic Integration Theory (OIT) which describes these different types of motivation known as behavioral regulations (Vasconcellos et al., 2020). OIT describes the different forms of extrinsic motivation, and which promote or hinder integration of the regulation and internalization of these behaviors from the contextual factors (Deci & Ryan, 2000; Ryan & Deci, 2000).

#### 2.1.7. Self-Determination Continuum

Behavior	Non-Self-Determined					Self-Determined
Type of Motivation	Amotivation	Extrinsic Motivation				Intrinsic Motivation
Type of Regulation	Non-regulation	External Regulation	Introjected Regulation	Identified Regulation	Intergrated Regulation	Intrinsic Regulation
Locus of Causality	Impersonal	External	Somewhat External	Somewhat Internal	Internal	Internal

Figure 1. Self-Determination Continuum (Reproduced from Deci & Ryan, 2000)

The illustration above emanates the self-determination continuum, arranged from left to right in terms of the extent to which the motivation for one's behavior emanates from one's self. Figure 1 depicts six types of regulation on the self-determination continuum. They range from amotivation (i.e., lack of motivation) to autonomous motivation (i.e., intrinsic motivation, identification). The four types of extrinsic motivation differ from the amount of autonomy they represent to the individual characteristics eg., (Litalien et al., 2017). The least autonomous form of extrinsic motivation is external regulation (doing an activity for contingent rewards or punishments controlled by others), followed by introjected regulation (acting to avoid sense of guilt or anxiety or to protect contingent self-worth). The most autonomous side are identified regulation (when the personal values and task

are aligned), and integrated regulation (when the task is fully assimilated with sense of self). (Litalien et al., 2017; Ryan et al., 2014).

From the far left, amotivation states the lack of intention to act. When a person is amotivated, his/her behavior lacks intentionality and causation to perform any action (Ryan & Deci, 2000). The results that emanate from amotivation come from not valuing an activity, not feeling competent to perform the activity, or not believing it will impart a desired outcome (Ryan & Deci, 2000).

The next category represents the least autonomous forms of extrinsic motivation, called external regulation. These behaviors are performed to satisfy the external demand or obtain a reward contingency imposed externally. These behaviors are externally regulated as controlled or alienated, and their actions have an external perceived locus of causality (EPLOC; deCharms, 1968., as cited in (Ryan & Deci, 2000)).

Regulation through identification is more autonomous and self-determined form of extrinsic motivation. This form of regulation has a person identified with the personal importance of the behavior, and accepted its regulation as his/her own (Ryan & Deci, 2000).

Integrated regulation is the most autonomous form of extrinsic motivation. When identified regulation has assimilated to one's self, only then can integration transpire. This occurs through self-examination and when one's values and needs become compatible with new regulations. Extrinsically motivated actions can only become self-determined, when one's action are internalized and assimilated to the self. Integrated motivation shares similar qualities with intrinsic motivation, both being unconflicted and autonomous. Even though, integrated regulation is volitional and valued by the self, they are still extrinsic in nature and the behavior is presumed to be instrumental value with the outcome separated from the behavior (Ryan & Deci, 2000).

Finally, we have intrinsic motivation. This is the prototype of self-determined activity (Ryan & Deci, 2000). There is no single phenomenon that reflects the positive potential of human nature as intrinsic motivation. Intrinsic motivation has the inherent tendency to explore novelty and challenges, to learn, and to extend and exercise one's capacities (d'Ailly & Blokhuis, 2018). The concept of intrinsic motivation explains this innate proclivity for assimilation, mastery, spontaneous interest, and experimentation, which is critical to cognitive and social growth and serves as a primary source of pleasure and vitality in life (Csikszentmihalyi &

Rathunde, 1993; Ryan, 1995., as cited in Ryan & Deci, 2000). Despite the fact that human tendency for intrinsic motivation, the enhancement and maintenance of this inherent propensity requires supportive conditions.

#### 2.1.8. Teachers' Basic Psychological Need Satisfaction

According to SDT, the fulfillment of the needs satisfaction for autonomy, competence, and relatedness is vital, because these basic needs serve as the psychological nutriment for the personal growth and integrity (Ryan et al., 2014; Ryan & Deci, 2000; Vallerand, 2000). As noted above, perceived autonomy support is central for teachers' need satisfaction e.g., (Klassen et al., 2012). Numerous researches have suggested that need satisfaction has a positive experience on teachers' engagement in, happiness, and enjoyment at work (Fernet et al., 2013; Klassen et al., 2012; Lee & Nie, 2014; Tadić, Bakker, & Oerlemans, 2013). Further studies have also highlighted that need satisfaction reduces feelings of anger, burnout, and anxiety (Fernet et al., 2013; Klassen et al., 2012), and it sets down a foundation for effective teaching and learning (Holzberger et al., 2014; Taylor, Ntoumanis, & Standage, 2008). Furthermore, researchers have also proposed that need satisfaction is salient for job satisfaction and commitment (Lee & Nie, 2014). Field study have further exhibited that teachers who are autonomy

supportive (in contrast to controlling) propels their students, greater intrinsic motivation, curiosity, and desire for challenge (Deci, Nezlek, & Sheinman, 1981; Flink, Boggiano, & Barrett, 1990; Ryan & Grolnick, 1986, as cited in Ryan & Deci 2000). Thus, prior studies provide evidence that need satisfaction is vital for adaptive work-related perceptions among teachers. To understand the impact of need satisfaction in teachers for functioning at work, we need to do more research to find the unique roles played by the basic psychological needs (Collie et al., 2015). Hence, this study will focus on the three needs satisfactions; autonomy, competence, and relatedness, in relations with their psychological functioning and the quality of their interactions and engagement in carrying out primary grade's physical education lessons.

#### 2.1.9. Personal and Environmental Factors Impact on Teachers' Fulfillment of Need Satisfaction

To understand the relationship between perceived need satisfaction and self-determined motivation is determining what variables, influence and predict teachers' perception of autonomy, competence, and relatedness (Carson & Chase, 2009), this study will focus on personal and environmental variables which can improve teachers' perceived need satisfaction. Previous studies have exhibited the higher perception of quality equipment were likely



connected with higher perceived competence and autonomy (Carson & Chase, 2009). Nix's (1998) study suggested, having better facilities is not enough to feel competent and in control, teachers' also need the resource support within the facilities too. This may be associated with pedagogical importance teachers' place on the tools of their job (Fejgin, Ephraty, & Ben-Sira 1995). Hence, the importance on the quality of equipment which is a means to attain desired learning outcomes optimally for children by delivering varied, sequential, stimulating, and developmentally acceptable learning activities (Carson & Chase, 2009). Furthermore, this quantifiable quality resources will give the teachers' a sense of perceived choice and control in their teaching environment.

Carson & Chase's (2009) study recorded, attending PE conferences and perusal of PE journals were also variables that influenced the perception of autonomy, competence, and relatedness. Attending these professional conferences will contribute new ideas for teaching which can lead to better control and choice over the content of the lesson. Further, reading professional journals which can lead to affiliation with current trends and colleagues in PE, which in turn can serve as a source of competence and relatedness. Previous studies have found, the connection between professional preparations as a key additive for confidence in one's ability to

teach successfully. Additionally, studies also highlight the value on professional development in the improvement of greater self-determined teacher motivation (Nix 1998; Sheldon & Biddle 1998; Carson & Chase, 2009).

Teachers' perceptions of relatedness are positively predicted with administration support (Carson & Chase, 2009). Administrators' have the potential to foster teachers' feelings of workplace affiliation. For years, academic scholars have argued that physical education is not given the physical, curricular, and social status that most other academic disciplines get (Fejgin, Ephraty, & Ben-Sira, 1995; Hardman & Marshall, 2000; Stroot & Whipple, 2003). These constraints to uphold motivated behavior and belongingness, mostly talks about PE teachers challenges which may differ from the experience classroom teachers have within a school system. Nevertheless, classroom teachers also need the presence of supervisors or lead teachers, to encourage, be interested, and be respectful with them to improve their connectedness feelings. Furthermore, administrators can improve teachers' motivation by being supportive with them (Davis & Wilson 2000; Pelletier, Se ´guin-Le ´vesque, & Legault, 2002).

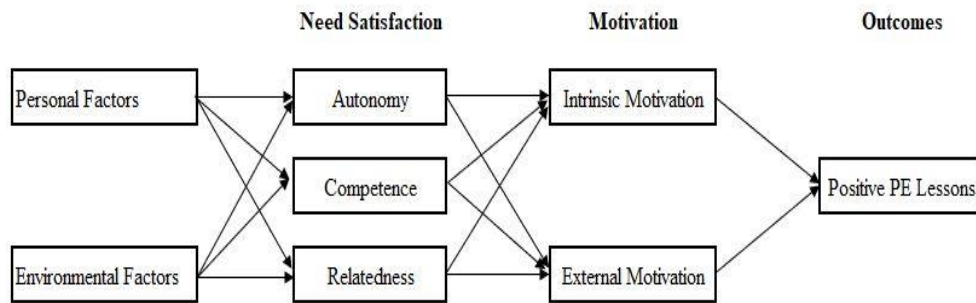


Figure 2. The Hypothesized Model

## 2.2. Theoretical Model

The theoretical model is created by amalgamating multiple theoretical models review from past researchers (Carson & Chase, 2009; Vasconcellos et al., 2020). Modifications to the model was created for the adaptation of the proposed hypothesis. As mentioned previously, the purpose of this study is to understand and explore the motivation of class room teachers' intentions and outcomes of Physical Education, using the model Self-determination theory (Deci et al., 1991; Deci & Ryan, 2000; Ryan et al., 2014; Vallerand, 2000) in understanding their motivation from the perceived fulfillment of three psychological needs: autonomy, competence, and relatedness. The theoretical model represents the structure of a continuum, which is based on past research and recent development in the measurement of motivation derived from self-determination theory.

The construct of the model indicates teachers' perception of personal (e.g., teachers' feelings of workplace affiliation) and environmental factors (e.g., teachers' need for quality resources) which directly relates to the perceived need satisfaction; autonomy, competence, and relatedness. These latent needs satisfaction are the determinants that helps teachers' intrinsic and extrinsic motivation. The model shows here that individual characteristics, personal, and environmental factors may have an impact on teachers' feelings of autonomy, competence, and relatedness, will consequently have dominant effects on one's motivation internal or external.

Very few researches have examined the empirical relations of SDT theory and their perceived fulfillment of the three psychological needs among classroom teachers' teaching intentions as an outcome (Pelletier et al., 2002). Additionally, no research has been undertaken in Maldives for the aforementioned study. Hence, this study will be an addition for the field in question and will be beneficial for the betterment of the Maldivian Educational system in general.

### **2.3. Hypothesis**

**H<sub>1</sub>:** There will be a positive relation of motivation of classroom teachers on conducting PE lessons, to the basic needs (autonomy, competence and relatedness) of SDT.

**H<sub>2</sub>:** There will be an impact, when various personal, and environmental factors act on teachers' fulfillment of the basic needs (autonomy, competence and relatedness) of SDT.

## **Chapter 3. Method**

### **3.1. Research Approach**

This study will employ a quantitative method, involving primary classroom teachers who are teaching physical education classes in Maldives. Permission to conduct this study is granted by the Ministry of Education of Maldives. The objectives of the study were to investigate the positive relation of motivation of classroom teachers on conducting PE lessons, to autonomy, competence and relatedness. Additionally, the study will also explore the potential impact of various personal, and environmental factors on teachers' fulfillment of autonomy, competence and relatedness will predict positive results.

### **3.2. Population and Participants**

The participants of this study were comprising of primary classroom teachers who teach physical education. The participants were determined from government schools in Male' (capital of Maldives). In Maldives, primary teachers teach students from 6 to 11 years old. According to Ministry of Education of Maldives, there are 130 male teachers and 1080 female teachers working in primary grades as of 2019 (School Statistics, 2019). 160

primary teachers from the capital city of Maldives (Male') participated in the study. From a population of 344023 people (*Statistical Yearbook of Maldives 2021*, 2021), there are 1210 primary school teachers (School Statistics, 2019) from which we surveyed 160 teachers, almost 13% of the total teachers in Male'. From the population of teachers in primary grades in Male', 13% is a notable number that makes this study compelling and significant.

### **3.3. Research Instrument**

The study administered questionnaires to the teachers using online means (email and online messaging applications). The purpose of the questionnaires was explained in a separate paper attached with the questionnaire. In addition, teachers were assured of the anonymity of the questionnaires.

#### **3.3.1. Perceived teacher motivation scale**

The Sport Motivational Scale-6 (SMS-6) (Mallett et al., 2007) is a revised version of the Sport Motivation Scale (SMS) (Pelletier et al. 1995). The scale will be slightly modified to assess the teacher's perceived reasons for teaching. The stem will be modified to say, 'Why do you teach physical education?' from 'Why do you participate in sport'. Based on the tenets of SDT and the identified multidimensional intrinsic and extrinsic motivations

(Deci & Ryan, 2000; Ryan & Deci, 2000; Vallerand, 2000), will measure 24 items. This 24-item measure is a bi-factor model of motivation with one general factor (motivation) and three specific factors (amotivation, extrinsic motivation, and intrinsic motivation). Words in some items will be substituted to be more suitable to PE teachers. For instance, ‘for the pleasure of discovering new training techniques’ (intrinsic motivation) was changed to ‘for the pleasure of discovering new teaching techniques, ‘for the prestige of being a teacher’ (external regulation), and ‘it is not clear to me anymore; I don’t really think my place is in teaching’ (amotivation). Words in some items will be substituted to be more suitable for teachers teaching PE. Participants will rate each item on a seven-point scale, anchored by the end points 1 (not at all) and 7 (exactly), and with a midpoint of 4 (moderately).

### 3.3.2. Perceived teacher autonomy scale

Teachers’ perception of autonomy will be measured using the consistent procedures used by previous researchers to assess the autonomy need satisfaction in the PE setting (Ntoumanis 2001; Standage, Duda, & Ntoumanis 2003, 2005, 2006). Perception of autonomy on the job will be measured using teachers perceived internal locus of causality (e.g., ‘My students’ success reflects my careful planning’). This 18-item scale will ask



teachers to reflect on circumstances of satisfaction in teaching PE. Responses will be indicated on a seven-point scale spanning from 1 (strongly disagree) to 7 (strongly agree). Teachers' perceived autonomy was scored as an average of all seven responses.

### 3.3.3. Perceived teacher competence scale

The physical Education Teacher Efficacy Scale (PETES) will be used to assess teachers' perceived competence in teaching PE (Humphries et al., 2012). The scale will be slightly modified by omitting certain questions that do not fit our study. (e.g., Efficacy about teaching students with special needs) This scale will ask the teachers of how sure they are in their teaching ability. (e.g., I can plan skill sequences so that tasks go from easier to harder in small steps). The 27-item PETES is scored on a seven-point scale that included the markers of 1 (no confidence at all) to 7 (extremely confident).

### 3.3.4. Perceived teacher relatedness scale

Work Motivation Inventory (R-WMI) will be revised to use to measure teachers' feelings of relatedness within the social setting of teaching (Braskamp & Maehr 1996). Some affiliations will be slightly modified to the specification of the teaching environment. (e.g., 'I enjoy helping colleagues even if I have to make some sacrifices'). Responses for the entire 9-item scale

will be measured on a seven-point scale ranging from 1 (strongly disagree) to 7 (strongly agree). Perceived teacher relatedness scores were calculated by averaging all 9 responses.

#### 3.3.5. Teacher and school demographic questionnaire

To assess teachers' personal information a demographic questionnaire will be administered similar to the one used by Nix (1998) will be used. For example (gender, school level, educational background, age, and years of experience). Environmental variables (e.g., perceptions of administration support, annual PE budget, and facility and equipment quality). The perceived teaching environment variables will be rated on seven-point scale anchored by the endpoints 1 (poor) to 7 (excellent).

### **3.4. Analysis Procedure**

For descriptive analysis, the collected data were analyzed using the Statistical Package for Social Science (SPSS) version 26. Descriptive statistics were used to evaluate the survey's demographic component.

Cronbach's alpha was utilized to determine the internal consistency trustworthiness of all the constructs. The assessment tool's reliability guaranteed that the aspects of all scales were statistically reliable constructs.

To address the first purpose of the study, a multiple regression analysis was employed to determine how the perceptions of autonomy, competence, and relatedness influence the dependent variables of perceived motivation to teach PE.

To address the second purpose of the study, multiple regression analysis was conducted to explore how personal (i.e., educational background, teaching experience), and physical education environment (i.e., PE facility quality, administrative support) variables predict teachers' perception of autonomy, competence, and relatedness. Here, the personal, and environmental variables served as the predictor variables and a different perceived need served as the criterion variable for each regression analysis.

### **3.5. Credibility, Reliability, and Ethical Considerations**

Procedures have been established to ensure the study's credibility, reliability, and trustworthiness. The research data collection was supported by the Ministry of Education (MOE) of Maldives. The surveys were sent in English for the primary school teachers in Male', Maldives.

Additionally, the methods employed in the study for data collection and analysis are relevant with the study previously done by Carson & Chase, (2009). As previously stated, the instruments used in the research was

previously tested and performed by authors in their respective studies (Humphries et al., 2012; Braskamp & Maehr 1996; Nix, 1998; Ntoumanis 2001; Standage, Duda, & Ntoumanis 2003, 2005, 2006; Mallett et al., 2007).

To confirm to ethical standards during research study, all participants were provided with the information regarding participation. This information outlined the study, their voluntary participation and handling of data. Furthermore, participants have the right to withdraw from the study at any time. Participants will be anonymous in all publications. All data will be organized and handled with confidence. Seoul National University provided the author with a letter of support and appreciation, which was sent to each school via email in the study as part of the research ethics procedure.

## **Chapter 4. Results**

This chapter discusses the results of the research questions, data analysis of responses was captured and cleaned using SPSS software (Version 26.0). The original sample size of the study was 161 respondents, yet after cleaning the data, it was reduced to 160 respondents. The initial analysis for the research results will be described in this chapter according to descriptive statistics and Multiple Regression analysis output for each factor of the research. Then, the results will be analysed from the method used in this study to explore the main two questions:

**RQ1.** How does need satisfaction (autonomy, competence, and relatedness) relates to the positive outcome of motivation of classroom teachers on conducting PE lessons.

**RQ2.** How does various personal, and environmental factors impact on teachers' fulfillment of autonomy, competence, and relatedness for a positive motivational outcome.

#### 4.1. Descriptive Statistic

Table 1. Demographic Characteristics of Participants

Baseline Characteristics	Frequency	Percent
	<i>n</i>	%
Gender		
Male	18	11.3
Female	142	88.8
Age		
20-25	18	11.3
25-30	39	24.4
30-35	58	36.3
35 and above	45	28.1
Qualification		
Bachelors	101	63.1
Masters	48	30.0
Specialist	11	6.9
Teaching Experience		
>5	51	31.9
>10	58	36.3
>15	26	16.3
>20	15	9.4
>25	6	3.8
>35	4	2.5

*Note.* *N*=160

Table-1 shows the demographic data of the participants: The sample contains 18 representing (11.3%) of the respondents were Male and 142 representing (88.8%) were female. Most of the respondents are of age between 30-35 years with 58 which represents (36.3%); 18 which represents (11.3%) of the respondents were between 20-25 years, 39 which represents (24.4%) were between 25-30 years, and 45 which represents (28.1%) were above 35 years. Among the respondents 101 which represents (63.1%) hold

bachelor's degree, 48 which represents (30.0%) hold Master's degree, and 11 which represents (6.9%) were specialists in their field; From the respondents, 51 which represents (31.9%) had teaching experience of less than 5 years, 58 which represents (36.3%) had teaching experience of less than 10 years, 26 which represents (16.3%) had teaching experience of less than 15 years, 15 which represents (19.4%) had teaching experience of less than 20 years, 6 which represents (3.8%) had teaching experience of less than 25 years, and 4 which represents (2.5%) had teaching experience of less than 35 years. This shows that most of the teachers' were well experienced in the teaching field.

Table 2. Descriptive Statistics of Variables

	<i>n</i>	Minimum	Maximum	Mean	Std. Deviation
Gender	160	1	2	1.89	.317
Qualification	160	2	3	1.44	.621
Age	160	3	4	2.81	.972
Texp_time	160	5	6	2.24	1.243
S_facilities	160	6	7	3.61	1.501
Equipment	160	6	7	3.60	1.547
Budget	160	6	7	3.29	1.503
Enrollment	160	2	3	1.93	.825
Competence	160	5.15	7.00	5.31	1.081
Autonomy	160	4.22	6.44	4.75	.640
Relatedness	160	3.56	7.00	5.31	.826
M_Int	160	5.00	7.00	5.69	1.147
M_Ext	160	4.75	6.50	5.29	.892

	<i>n</i>	Minimum	Maximum	Mean	Std. Deviation
M_A	160	6.00	7.00	4.53	1.804
Valid N (listwise)	160				

Texp\_time: Teaching Experience; S\_facilities: Sports Facility; M\_Int: Intrinsic Motivation; M\_Ext: Extrinsic Motivation; M\_A: Amotivation

The descriptive statistics (table-2) of the study, including mean (M), standard deviation (SD). The minimum value of the variables recorded is 1.00 and the maximum value recorded is 7.00, the range of all variables recorded is greater than 0. The mean value shows the average value of each variable between the minimum and maximum level. The mean values recorded was from the lowest; qualification (M = 1.44), enrolment (M = 1.93), teaching experience (M = 2.24), age (M = 2.81), budget (M = 3.29), equipment (M = 3.60), sports facilities (M = 3.61), amotivation (M = 4.53), autonomy (M = 4.75), extrinsic motivation (M = 5.29), competence (M = 5.31), relatedness (M = 5.31), and intrinsic motivation (M = 5.69) the highest. Amotivation was the lowest, which had a mean score of (M = 4.53) on a 7-point scale. The teachers in general exhibited a self-determination profile with higher scores on intrinsic and extrinsic motivation and lower scores on amotivation. Which is the most reliable variable for motivation among teachers and sports facilities being the lowest is the least reliable in terms of being motivated from



SDT framework. The standard deviation shows the dispersion or spread of the value around the central tendency of each variable. The table projects the respondents showing very low deviation from the mean. For example; competence (SD = 1.08), intrinsic motivation (SD = 1.15), amotivation (SD = 1.80) and autonomy (SD = 0.83). The higher standard deviation score shows the value has spread more and the lower standard deviation means the value dispersed less and be more consistent within the value.

## 4.2. Reliability Analysis

Table 3. Reliability Analysis of Cronbach's Alpha

Variable	Scale Mean if item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if items Deleted
Competence	36.066	33.829	.383	.691
Autonomy	36.625	35.748	.478	.691
Relatedness	36.065	36.485	.266	.709
M_Int	35.691	33.049	.414	.686
M_Ext	36.089	34.228	.459	.684
M_A	36.849	36.239	.015	.787
S_facilities	37.770	27.334	.652	.630
Equipment	37.777	27.509	.611	.639
Budget	38.083	28.838	.540	.657

Reliability analysis was performed using Cronbach's alpha, which yielded the score of (.714) making it in between the range of .70 and .90, which meets the criteria suggested by Nunally (1978). As previously stated, the instruments used in the research was previously tested and performed by authors in their respective studies (Humphries et al., 2012; Braskamp & Maehr 1996; Nix, 1998; Ntoumanis 2001; Standage, Duda, & Ntoumanis 2003, 2005, 2006; Mallett et al., 2007).

### 4.3. Correlation Analysis

Table 4. Correlation for Study Variables

Variable	1	2	3	4	5	6	7	8	9
1. Sports Facilities	1								
2. Equipment	.902**	1							
3. Budget	.788**	.795**	1						
4. Competence	.252**	.272**	.188*	1					
5. Autonomy	.257**	.268**	.204**	.493**	1				
6. Relatedness	.057	-.007	-.001	.126	.282**	1			
7. Intrinsic Motivation	.172*	.162*	.164*	.342**	.399**	.261**	1		
8. Extrinsic Motivation	.245**	.235**	.210**	.313**	.346**	.208**	.787**	1	
9. Amotivation	-.039	-.109	-.121	.032	.122	.405**	.044	.003	1

\*\* . Correlation is significant at the 0.01 level.

\* . Correlation is significant at the 0.05 level.

The Pearson's correlation analysis was performed to measure the direction and strength of variables. Sports facilities has a strong and positive correlation with equipment ( $r = .902, p < .01$ ). Sports facilities has a strong and positive correlation with budget ( $r = .788, p < .01$ ). Sports facilities has a strong and positive correlation with competence ( $r = .252, p < .01$ ), autonomy ( $r = .257, p < .01$ ), but a very small relationship with relatedness ( $r = .057, p < .01$ ), which means with increase of sports facilities, competence and autonomy increases more and there is less increment seen with relatedness. Sports facilities has a strong and positive correlation with intrinsic motivation ( $r = .172, p < .05$ ), extrinsic motivation ( $r = .245, p < .01$ ), and a negative and moderate relationship with amotivation ( $r = -.039, p < .01$ ), the latter indicates that when sports facilities increased amotivation is decreased.

Equipment has a strong and positive correlation with budget ( $r = .795, p < .01$ ), competence ( $r = .272, p < .01$ ), and autonomy ( $r = .268, p < .01$ ), but a negative relationship with relatedness ( $r = -.007, p < .01$ ). Equipment has a strong and positive correlation with intrinsic motivation ( $r = .162, p < .05$ ), extrinsic motivation ( $r = .235, p < .01$ ), and a negative relationship with amotivation ( $r = -.109, p < .01$ ), the latter indicates that when equipment increased amotivation is decreased.

Budget has a strong and positive correlation with competence ( $r = .188$ ,  $p < .05$ ), and autonomy ( $r = .204$ ,  $p < .01$ ), but a negative correlation with relatedness ( $r = -.001$ ,  $p < .01$ ). Budget also has a strong and positive correlation with intrinsic motivation ( $r = .164$ ,  $p < .05$ ), extrinsic motivation ( $r = .210$ ,  $p < .01$ ), and a negative relationship with amotivation ( $r = -.121$ ,  $p < .01$ ).

Competence has a strong and positive correlation with autonomy ( $r = .493$ ,  $p < .01$ ), but a moderate correlation with relatedness ( $r = .126$ ,  $p < .01$ ). Competence also has a strong and positive correlation with intrinsic motivation ( $r = .342$ ,  $p < .01$ ), extrinsic motivation ( $r = .313$ ,  $p < .01$ ), and a moderate relationship with amotivation ( $r = .032$ ,  $p < .01$ ).

Autonomy has a strong and positive correlation with relatedness ( $r = .282$ ,  $p < .01$ ), intrinsic motivation ( $r = .399$ ,  $p < .01$ ), and extrinsic motivation ( $r = .346$ ,  $p < .01$ ), and a moderate relationship with amotivation ( $r = .122$ ,  $p < .01$ ). Relatedness has a strong and positive correlation with intrinsic motivation ( $r = .261$ ,  $p < .01$ ), and extrinsic motivation ( $r = .208$ ,  $p < .01$ ), and a strong relationship with amotivation ( $r = .405$ ,  $p < .01$ ). This indicates all three types of motivation have strong relationship with relatedness. Intrinsic motivation has a strong and positive correlation with extrinsic motivation ( $r = .787$ ,  $p < .01$ ), but a moderate correlation with

amotivation ( $r = .044$ ,  $p < .01$ ). Finally, extrinsic motivation has a moderate correlation with amotivation ( $r = .003$ ,  $p < .01$ ).

The results of correlation can be broadly divided into two categories. First, the correlation between the environmental factors (sports facilities, equipment and budget) and the three basic needs satisfaction (competence, autonomy and relatedness) which exhibited strong and positive relationship except for relatedness which indicated negative and moderate correlation. Additionally, environmental factors (sports facilities, equipment, and budget) showed positive and strong relationship with motivation (intrinsic and extrinsic) except amotivation which showed negative and moderate correlation. Second, the correlation between the three basic needs satisfaction (competence, autonomy and relatedness) and motivation (intrinsic and extrinsic) which exhibited strong and positive relationship, except amotivation which showed moderate relationship with competence and autonomy but surprisingly positive and strong correlation with relatedness.

#### **4.4. Regression Analysis**

The correlation for RQ1 between each facet of the dependent variable (motivation); Intrinsic motivation, extrinsic motivation, amotivation, and each independent variable (needs satisfaction); Autonomy, competence and relatedness and the correlation for RQ2 between each facet of the dependent

variable (needs satisfaction); Autonomy, competence and relatedness and each independent variable; Personal factors and environmental factors were evaluated by using multiple linear regression analysis. Each term's significance p-value tests the null hypothesis that the coefficient is equal to zero (no effect). Because changes in the predictor's value are linked to changes in the response variable, a predictor with a low significance is likely to be a relevant addition or variable to the model.

Table 5. Intrinsic Motivation ANOVA for Regression Test

Model	Sum of Squares	<i>df</i>	Mean Square	F	Sig.
Regression	44.37	3	14.79	14.001	.000 <sup>b</sup>
Residual	164.79	156	1.06		
Total	209.16	159			

a. Dependent Variable: Intrinsic Motivation

b. Predictors: (Constant), Relatedness, Competence, Autonomy

Table 6. Intrinsic Motivation Regression Coefficient Test

Model	Unstandardized Coefficients		Standardized Coefficients		Sig.
	B	Std. Error	Beta	t	
(Constant)	1.19	.724		1.644	.102
Competence	.21	.087	.195	2.387	.018
Autonomy	.46	.151	.257	3.044	.003
Relatedness	.22	.103	.164	2.211	.029

a. Dependent Variable: Intrinsic Motivation

Multiple regression analysis was used to test relationship with the needs satisfaction (competence, autonomy and relatedness) significantly predicted participants' intrinsic motivation. The results as shown in Table 5 and Table 6 indicated that the model was a significant predictor of intrinsic motivation,  $F(3,156) = 14.00$ ,  $p < .001$ ,  $R^2 = .21$ . The findings revealed that competence predicted positive intrinsic motivation ( $\beta = .21$ ,  $p < .05$ ), autonomy positively predicted significance in intrinsic motivation ( $\beta = .46$ ,  $p < .01$ ), and relatedness showed a significant relationship with intrinsic motivation ( $\beta = .23$ ,  $p < .05$ ).

Table 7. Extrinsic Motivation ANOVA for Regression Test

Model	Sum of Squares	<i>df</i>	Mean Square	F	Sig.
Regression	20.33	3	6.78	9.946	.000 <sup>b</sup>
Residual	106.28	156	.68		
Total	126.61	159			

a. Dependent Variable: Extrinsic Motivation

b. Predictors: (Constant), Relatedness, Competence, Autonomy

Table 8. Extrinsic Motivation Regression Coefficient Test

Model	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
(Constant)	2.307	.581		3.999	.000
Competence	.157	.070	.191	2.261	.025
Autonomy	.303	.122	.218	2.496	.014
Relatedness	.132	.083	.123	1.604	.111

a. Dependent Variable: Extrinsic Motivation

Multiple regression analysis was used to test relationship with the needs satisfaction (competence, autonomy, and relatedness) significantly predicted participants' extrinsic motivation. The results as shown in Table 7 and Table 8 indicated that the model was a significant predictor of extrinsic motivation,  $F(3,156) = 9.95$ ,  $p < .001$ ,  $R^2 = .16$ . The findings revealed that competence predicted positive extrinsic motivation ( $\beta = .16$ ,  $p < .05$ ), autonomy positively predicted significance in extrinsic motivation ( $\beta = .30$ ,  $p < .05$ ), whereas relatedness showed a non-significant effect with extrinsic motivation ( $\beta = .13$ ,  $p > .05$ ).

Table 9. Amotivation ANOVA for Regression Test

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	85.22	3	28.41	10.255	.000 <sup>b</sup>
Residual	432.15	156	2.77		



Model	Sum of Squares	<i>df</i>	Mean Square	F	Sig.
Total	517.37	159			

a. Dependent Variable: Amotivation

b. Predictors: (Constant), Relatedness, Competence, Autonomy

Table 10. Amotivation Regression Coefficient Test

Model	Unstandardized Coefficients		Standardized Coefficients		Sig.
	B	Std. Error	Beta	t	
(Constant)	-.182	1.172		-.155	.877
Competence	-.051	.140	-.031	-.363	.717
Autonomy	.067	.245	.024	.274	.784
Relatedness	.878	.167	.402	5.271	.000

a. Dependent Variable: Amotivation

Multiple regression analysis was used to test relationship with the needs satisfaction (competence, autonomy and relatedness) significantly predicted participants' amotivation. The results as shown in Table 9 and Table 10 indicated that the model was a significant predictor of amotivation,  $F(3,156) = 10.26, p < .001, R^2 = .17$ . The findings revealed that relatedness predicted positive amotivation ( $\beta = .88, p < .001$ ), whereas competence ( $\beta = -.05, p > .05$ ), and autonomy ( $\beta = .07, p > .05$ ) showed a non-significant effect with amotivation.

Table 11. Autonomy ANOVA for Regression Test for Personal and Environmental Factors

Model	Sum of Squares	<i>df</i>	Mean Square	F	Sig.
Regression	8.23	6	1.371	3.687	.002 <sup>b</sup>
Residual	56.90	153	.372		
Total	65.12	159			

a. Dependent Variable: Autonomy

b. Predictors: (Constant), Enrollment, Qualification, Equipment, Teaching experience, Budget, Sports facilities,

Table 12. Autonomy Regression Coefficient Test for Personal and Environmental Factors

Model	Unstandardized Coefficients		Standardized Coefficients		Sig.
	B	Std. Error	Beta	t	
(Constant)	4.47	.219		20.466	.000
Sports facilities	.04	.078	.109	.596	.552
Equipment	.09	.076	.213	1.150	.252
Budget	-.02	.055	-.057	-.434	.665
Qualification	.15	.081	.147	1.878	.062
Teach Experience	-.08	.041	-.150	-1.873	.063
Enrollment	-.09	.060	-.114	-1.471	.143

a. Dependent Variable: Autonomy

Multiple regression analysis was used to test relationship with the personal factors (teaching experience and qualification) and environmental factors (sports facilities, equipment, budget, and enrolment) significantly predicted participants' autonomy. The results as shown in Table 11 and Table

12 indicated that the model was a significant predictor of autonomy,  $F(6,153) = 3.69, p < .05, R^2 = .13$ . However, the findings revealed that sports facilities ( $\beta = .05, p > .05$ ), equipment ( $\beta = .09, p > .05$ ), budget ( $\beta = -.03, p > .05$ ), qualification ( $\beta = .15, p > .05$ ), teaching experience ( $\beta = -.077, p > .05$ ), enrolment ( $\beta = .09, p > .05$ ) showed that they are not statistically significant predictors for autonomy.

Table 13. Competence ANOVA for Regression Test for Personal and Environmental Factors

Model	Sum of Squares	<i>df</i>	Mean Square	F	Sig.
Regression	23.68	6	3.897	3.671	.002 <sup>b</sup>
Residual	162.41	153	1.061		
Total	185.79	159			

c. Dependent Variable: Competence

d. Predictors: (Constant), Enrollment, Qualification, Equipment, Teaching experience, Budget, Sports facilities,

Table 14. Competence Regression Coefficient Test for Personal and Environmental Factors

Model	Unstandardized Coefficients		Standardized Coefficients		Sig.
	B	Std. Error	Beta	t	
(Constant)	4.51	.369		12.210	.000
Sports facilities	.05	.132	.075	.412	.681
Equipment	.19	.129	.264	1.428	.155
Budget	-.05	.094	-.073	-.562	.575

Model	Unstandardized Coefficients		Standardized Coefficients		Sig.
	B	Std. Error	Beta	t	
Qualification	.31	.136	.177	2.259	.025
Teach Experience	.01	.070	.008	.102	.919
Enrollment	-.18	.102	-.136	-1.754	.081

b. Dependent Variable: Competence

Multiple regression analysis was used to test relationship with the personal factors (teaching experience and qualification) and environmental factors (sports facilities, equipment, budget, and enrolment) significantly predicted participants' competence. The results as shown in Table 13 and Table 14 indicated that the model was a significant predictor of competence,  $F(6,153) = 3.90$ ,  $p < .05$ ,  $R^2 = .13$ . The findings revealed that education qualifications ( $\beta = .31$ ,  $p < .05$ ) showed significant prediction for competence. However, equipment ( $\beta = .19$ ,  $p > .05$ ), budget ( $\beta = -.05$ ,  $p > .05$ ), sports facilities ( $\beta = .05$ ,  $p > .05$ ), teaching experience ( $\beta = .007$ ,  $p > .05$ ), enrolment ( $\beta = -.179$ ,  $p > .05$ ) showed that they are not statistically significant predictors for competence.

Table 15. Relatedness ANOVA for Regression Test for Personal and Environmental Factors

Model	Sum of Squares	<i>df</i>	Mean Square	F	Sig.
Regression	4.14	6	.689	1.010	.421 <sup>b</sup>
Residual	104.42	153	.682		
Total	108.56	159			

e. Dependent Variable: Relatedness

f. Predictors: (Constant), Enrollment, Qualification, Equipment, Teaching experience, Budget, Sports facilities,

Table 16. Relatedness Regression Coefficient Test for Personal and Environmental Factors

Model	Unstandardized Coefficients		Standardized Coefficients		Sig.
	B	Std. Error	Beta	t	
(Constant)	4.96	.296		16.752	.000
Sports facilities	.22	.106	.392	2.046	.043
Equipment	-.17	.104	-.308	-1.589	.114
Budget	-.03	.075	-.057	-.418	.676
Qualification	.03	.109	.025	.304	.762
Teach Experience	-.01	.056	-.011	-.136	.892
Enrollment	.12	.082	.123	1.508	.134

c. Dependent Variable: Relatedness

Multiple regression analysis was used to test relationship with the personal factors (teaching experience and qualification) and environmental factors (sports facilities, equipment, budget, and enrolment). The results obtained were not statistically significant and failed to reject null hypothesis. The results as shown in Table 13 and Table 14 indicated that the model was

statistically insignificant predictor of relatedness,  $F(6,153) = .69, p > .05, R^2 = .03$ . The findings revealed that sports facilities ( $\beta = .21, p < .05$ ) showed significant prediction for relatedness. However, equipment ( $\beta = -.17, p > .05$ ), budget ( $\beta = -.03, p > .05$ ), qualification ( $\beta = .03, p > .05$ ), teaching experience ( $\beta = -.01, p > .05$ ), enrolment ( $\beta = -.12, p > .05$ ) showed that they are not statistically significant predictors for relatedness.

## **Chapter 5. Discussion**

### **5.1. Overview of the study**

Over the last decades, teacher based educational research has been acquired pertaining vast knowledge to both generic and field-based behaviour associated with teacher effectiveness (Deci et al., 1991; Lindholm, 1997). In the present study, we investigated the positive relation of motivation (intrinsic, extrinsic and amotivation) of classroom teachers on conducting PE lessons, to their perceived needs satisfaction (autonomy, competence and relatedness). Additionally, the study will also explore the potential impact of various personal, and environmental factors on teachers' fulfilment of autonomy, competence and relatedness which will predict positive results. Furthermore, this study is built upon the SDT theory that postulates the needs satisfaction may determine classroom teachers' motivation for teaching PE lessons.

### **5.2. Need Satisfaction and Relationship to Motivation**

In line with self-determination theory (Deci et al., 1991; Deci & Ryan, 2000), the present results revealed the degree in which teachers perceived their needs satisfaction align with the observed motivation (extrinsic, intrinsic and amotivation). Motivation is not unreservedly a unitary phenomenon.

Motivation in people can be not only of different amounts but also in different kinds. They vary in level of motivation and also in orientation. Furthermore, orientation of motivation underlines the attitudes and goals that are responsible, which concerns why of the actions (Pelletier et al., 2002; Ryan & Deci, 2000).

#### 5.2.1. Intrinsic Motivation and Relationship of Need Satisfaction

The present study revealed that intrinsic motivation was facilitated with the three need satisfaction (competence, autonomy and relatedness). Which reveals that teachers' need of simply engaging in an activity for its inherent satisfaction and pure pleasure, rather than for some distinct consequence (Deci & Ryan, 2000; Ryan & Deci, 2000). As hypothesized, teachers' who felt competent, connected with others at work, and autonomous, taught PE for inherent reasons (i.e., to discover something new in teaching, satisfaction in mastering difficult skills, and for the satisfaction of teaching). These findings coincides with theoretical postulation of SDT, which claims the perceived satisfaction (autonomy, competence, and relatedness) are vital for greater self-determination such as intrinsic motivation (Deci & Ryan, 2000; Ryan & Deci, 2000; Carson & Chase, 2009).



### 5.2.2. Extrinsic Motivation and Relationship of Need Satisfaction

The present study revealed, that extrinsic motivation showed significance with the two of the three need satisfaction, mainly competence and autonomy. Nevertheless, relatedness didn't show any significance. Relatedness is defined as, the need for loving, caring, and connectedness with others, and a feeling of being accepted (Deci & Ryan, 2000). From the present study which postulates that teachers' need of relatedness has no importance in their extrinsic motivation. In contrast, competence and autonomy played a vital role in fulfilling the extrinsic motivation (for the prestige of teaching, materialistic and social benefits of being a teacher and to showoff how good you are in teaching). These results suggests that, teachers' with autonomy and competence satisfaction may also teach PE for external rewards (e.g., colleague praise, student recognition, coaching prestige).

### 5.2.3. Amotivation Motivation and Relationship of Need Satisfaction

The present study revealed, that amotivtion showed significant relationship with relatedness. However, competence and autonomy had an inverse effect on amotivation. When a person is amotivated, his/her behavior lacks intentionality and causation to perform any action (Ryan & Deci, 2000). The results that emanates amotivation comes from not valuing an activity, not

feeling competent to perform the activity, or not believing it will impart a desired outcome (Ryan & Deci, 2000). Therefore, amotivation is a very lesser form of motivation through the self-determination continuum (Ryan & Deci, 2000). The results suggests that, amotivation (not putting any effort, not enjoying teaching, or feeling incapable of succeeding) with competence and autonomy had no effect on amotivation and only with relatedness (feeling of belongingness with coworkers) there is a connection on amotivation.

### **5.3. Personal and Environmental Factors Impact on Needs Satisfaction**

Equally important in identifying the relationship between perceived needs satisfaction and self-determined motivation is finding out in a practical sense what variables predict and influence teachers' perception of autonomy, competence and relatedness. In contradiction to previous studies, the present study's second hypothesis, various personal and environmental variables did not show much significance in improving teachers' perceived need satisfaction.

#### **5.3.1. Personal and Environmental Factors Impact on Autonomy**

Although the present findings have demonstrated significant relationships with self-determined motivation and higher perceived needs,

personal and environmental variables failed to show any significance with the perceived needs satisfaction. Autonomy can be defined as, an individual's need to experience willingness of his/her actions, and is more intrinsically motivated (Deci & Ryan, 2000; Ryan & Deci, 2000). Specifically, results indicated that teachers' autonomy did not have any relationship with personal factors (teaching experience, educational qualification) and environmental factors (budget, equipment). These findings depart from the study done by Carson & Chase (2009), where the results indicated higher perceptions of equipment quality were associated with higher perceived autonomy.

#### 5.3.2. Personal and Environmental Factors Impact on Competence

Specific results on competence revealed that, teachers' qualification level (personal variable) showed significant relationship with competence. It is evident that with better qualified education and higher degree will consequently give teachers' much more competence and confidence in taking PE lessons. Moreover, teachers with higher qualifications might be more apt to perceive more choice, confidence and innovative in their teaching environment. These findings expand on Carson & Chase's (2009) findings where they highlighted that, certain personal, professional, and environmental variables significantly improved PE teachers' perceived need satisfaction.

However, all the other factors of personal (teaching experience) and environmental (equipment, budget, sports facilities) showed insignificant results, once again deviating from previous study's findings which resulted in significant relationship with both personal and environmental factors (Nix 1998; Carson & Chase 2009).

### 5.3.3. Personal and Environmental Factors Impact on Relatedness

It is interesting that, the findings showed teachers' perceived relatedness identified no significant relationship with personal variables (education qualification, teaching experience) and environmental variables (equipment, budget, enrolment). Nevertheless, sports facilities revealed significant relationship with relatedness. Deci & Ryan (2000), highlighted that relatedness is defined as, the need for loving, caring, and connectedness with others, and a feeling of being accepted, if these needs of teachers' are fulfilled and met, they are autonomously motivated. The findings in this study are inconsistent from the aforementioned statement from Deci & Ryan (2000). This maybe because that PE has rarely been afforded the physical, curricular, and societal status, setting down constraints to make it more challenging for teachers to uphold motivated behavior in PE (Davis & Wilson 2000; Pelletier et al., 2002).

## **5.4. Research Implications**

The result of the present study exhibited, aligns with the theoretical tenets of the SDT (Deci et al., 1991; Deci & Ryan, 2000). For the first hypothesis, results suggests that overall motivation for teaching PE comes inherently within the teachers. More specifically, perceptions of autonomy, competence, and relatedness were aligned closely with intrinsic motivation.

Teachers' fulfillment of competence can be achieved by organizing more professional development seminars, PE conferences, providing PE journals that may broaden teachers' perspective and give more confidence for PE lessons. Furthermore, school leaders and administrators can set optimal level of challenge, setting the productivity bar appropriately.

Teachers' can be more autonomous if they are given more independence in the school setting. Asking teachers for their perspective can support their sense of autonomy. Moreover, the degree to which they can make autonomous decisions about what they teach and how they teach can strengthen their perceived autonomy.

The feeling of relatedness for teachers comes from providing administrative support. Hence, the presence of respectful, interested and

encouraging supervisors and administrators can help improve teachers' connectedness feelings encouraging motivation for better PE (Davis & Wilson 2000).

In addition, for the second hypothesis, the results of the present study did not reveal significant relationship between personal and environmental factors influencing the perceived needs satisfaction of competence, autonomy, and relatedness. Apart from, educational qualification showed mild relationship with competence and having better sports facilities showed better relationship with relatedness. This result may be because the teachers who take PE in the primary are primarily teachers with no qualification of physical education background. Thus, environmental (better sports facilities, better equipment, and better budget for PE) and personal (qualification and experience) does not have any effect on their perceived needs satisfaction when engaging in PE lessons.

### **5.5. Research Limitation**

The present study's results should be read with some caution due to the limitations in number of participants. While Maldives population is very small in number and the number of participants that filled the survey was 13% of the total population of teachers in Maldives, the fewer number in

participants is often a limitation in survey research. Despite this limitation, this study does make worthy contribution to the field by elucidating the theoretical tenability of SDT. Nevertheless, the insignificance of personal and environmental features in the study can also be looked upon with keen eyes for further investigation. Future studies might utilize different sampling method or population, also observation of teachers can give more meaning to the results, including more variables may also show and benefit different results, even a different methodology for comparing results will be beneficial for future studies.

## **5.6. Conclusion**

In conclusion, the present study contributed empirical evidence for the importance of achieving the perceived psychological needs of competence, autonomy, and relatedness in understanding teachers' motivation carrying out PE. However, the present study did not reveal significant relationship between personal and environmental factors influencing the perceived needs satisfaction of competence, autonomy, and relatedness, it was beneficial to see different results come out through this study. Although, the study captured inconsistent results in the second hypothesis, this study supports the self-

determination theory (Deci et al., 1991; Deci & Ryan, 2000), while providing few practical insights of teachers.



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## **Appendix A**

### **Informed Consent**

Dear Participant:

I am a graduate student of Seoul National University (SNU) under the direction of Professor. Ok Seon Lee in the Department of Physical Education in the SNU, Republic of Korea. I am conducting a research study to evaluate classroom teacher's motivation in teaching physical education.

I am humbly requesting your participation, which will involve completing an online survey for an expected duration of 15-20 minutes. You have the right not to answer any question, and to stop the interview at any time. Your participation in this study is voluntary.

The process of reflecting on your teaching goals and motivation for teaching can spark new teaching goals and motivation. It is anticipated that as a result of participating in this study, you will be helping to understand the motivation needed for teacher's participation in teaching PE. There are no foreseeable risks or discomforts to your participation.

No personal identifying information will be collected during this study. Your responses will remain anonymous. The results of this study may be used in reports, presentations, or publications but your name will not be known, as no personally identifying information will be collected from you.

If you have any questions concerning the research study, please contact me at: [modex79@gmail.com](mailto:modex79@gmail.com)

Sincerely,

Mohamed Waheed

## **Appendix B**

### **Survey Questionnaire**

#### **Teacher Demographic Profile**

*Please fill the most appropriate options*

Degrees held

- ☐ *Bachelor's Degree*
- ☐ *Master's Degree*
- ☐ *Specialist*

Gender

- ☐ *Male*
- ☐ *Female*

Age

- ☐ *20 to 25*
- ☐ *25 to 30*
- ☐ *30 to 35*
- ☐ *35 and above*

Years of teaching experience

-----

I teach physical education classes - per week

- ☐ *1 time*
- ☐ *2 times*
- ☐ *3 times*
- ☐ *4 times*



- *5 times*

I participated in sports in

- *Primary Education*
- *Secondary Education*
- *College/University*

This School's sports facilities are  
*Excellent*

*Poor 1 2 3 4 5 6 7*

This School's sports equipment are  
*Excellent*

*Poor 1 2 3 4 5 6 7*

This annual physical education budget is  
*Excellent*

*Poor 1 2 3 4 5 6 7*

The primary school's enrolment in PE class are

- *20 to 25*
- *25 to 30*
- *30 and above*

## Question set 1

*This set of questions asks about the competence of teaching physical education*

	No Confidence					Extremely Confident	
	1	2	3	4	5	6	7
I know a lot about lifetime/recreational games (such as dodgeball, cooperative and challenge activities), and can teach them effectively.							
I know a lot about racquet/net games such as badminton and table tennis, and can teach them effectively.							
I know a lot about swimming and water safety, and can teach them effectively.							
I know a lot about fitness and can teach it effectively.							
I have a good grasp of exercise science concepts (from exercise physiology, biomechanics, motor learning and sport psychology), and can apply them to teaching physical education.							
I know how first graders are different from fourth graders physically, cognitively, socially, and emotionally.							
I know a lot about fundamental motor skills (manipulative and locomotor) and can teach them effectively.							
When I watch someone perform a skill, I can see if they are doing it right or what they need to correct.							
If someone is having trouble performing a skill, I can tell and show them what to do to get better.							

I can plan skill sequences so that tasks go from easier to harder in small steps.

If a drill is too easy for a highly skilled student, I can easily change it to make it more challenging.

If one of my students was having trouble with a drill, I know ways to change it to make it easier for them.

I can organize and run active classes safely so that students are not likely to get hurt.

I can get my students to respect and cooperate with each other.

I can demonstrate and explain a skill/drill so that the class understands what to do.

I can use clear teaching cues that help students remember and understand how to do a skill correctly.

I can use questions or activities to get kids to think critically or solve problems.

I am able to help children from poverty backgrounds have a successful PE experience.

I understand assessment concepts (such as validity, reliability and authentic assessment) and can apply them in teaching PE.

I can make up rubrics to assess student learning of skills or game play.

My grades reflect how well students have learned what I wanted them to learn.

I can use assessments both for grading my classes and to help me plan.

I can change a lesson as the day goes on based on how the lesson is working.

I can integrate technology if I have access to it (such as video and sound systems) into my teaching.

I am aware of technology-based equipment and computer programs for PE, even if I don't have it.

I often use email and the internet to find or share ideas about PE.

I can use the internet to help plan lessons.

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## Question set 2

*This set of questions is about autonomy and how teachers have freedom to initiate in their teaching.*

	Strongly Disagree							Strongly Agree	
	1	2	3	4	5	6	7		
I am free to be creative in my teaching approach.									
The selection of student-learning activities in my class is under my control.									
Standards of behavior in my classroom are set primarily by myself.									
My job does not allow for much discretion on my part.									

In my teaching, I use my own guidelines and procedures.

I have little say over the content and skills that are selected for teaching.

The scheduling of use of time in my classroom is under my control.

My teaching focuses on those goals and objectives I select myself.

I rarely use alternative procedures in my teaching.

I follow my own guidelines on instruction.

I have only limited latitude in how major problems are resolved.

What I teach in my class is determined for the most part by myself.

I have little control over how classroom space is used.

The materials I use in my class are chosen for the most part by myself.

The evaluation and assessment activities are selected by others.

I select the teaching methods and strategies I use with my students.

I have little say over the scheduling of use of time in my classroom.

The content and skills taught in my class are those I select.

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### Question set 3

*This set of questions is about relatedness, and how teachers relationship and feelings with peers, students and superiors.*

	Strongly Disagree						Strongly Agree		
	1	2	3	4	5	6	7		
I really like the people I interact with in school.									
I get along with people I come into contact with.									
I pretty much keep to myself and don't have a lot of social contacts.									
I consider the people I regularly interact with to be my friends.									
People in my life care about me.									
There are not many people that I am close to.									
The people I interact with regularly do not seem to like me much.									
People are generally pretty friendly towards me.									
I enjoy helping colleagues even if I have to make some sacrifices.									

## Question set 4

*This set of questions is about the motivation of teaching physical education*

Why do you teach physical education?	Strongly Disagree					Strongly Agree	
	1	2	3	4	5	6	7
For the excitement I feel when I am really involved in teaching.							
Because teaching is part of the way in which I've chosen to live my life.							
Because teaching is a good way to learn lots of things which could be useful to me in other areas of my life.							
Because teaching allows me to be well regarded by people that I know.							
I don't know anymore; I have the impression of being incapable of succeeding at teaching.							
Because I feel a lot of personal satisfaction from mastering certain difficult teaching techniques.							
Because it is absolutely necessary to teach if one wants to be better.							
Because teaching is one of the best ways I have chosen to develop other aspects of my life.							
Because teaching is an extension of me.							
Because I must teach to feel good about myself.							
For the prestige of being a teacher.							
I don't know if I want to continue to invest my time and effort as much in teaching anymore.							

Because teaching is consistent with my deepest principles.

For the satisfaction I experience when I am perfecting my abilities to teach.

Because teaching is one of the best ways to maintain good relationships with my friends.

Because I would feel bad if I was not taking time to teach.

It is not clear to me anymore; I don't really think my place is in teaching.

For the pleasure of discovering new teaching performance strategies.

For the material and/or social benefits of being a teacher.

Because teaching well will improve my performance.

Because teaching is an integral part of my life.

I don't seem to be enjoying teaching as much as I previously did.

Because I must teach regularly.

To show others how good I am at teaching.

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## Appendix C

### Approval Letter from Ministry of Education, Maldives

Ministry of Education  
Policy Planning and Research Division  
Malé, Maldives



#### To Whom It May Concern

##### Approval for collecting information from Schools

This is to inform that Mohamed Waheed (A085039) who is doing Masters in Sports Management at Seoul National University, South Korea, has the permission to collect information required for his research project from the schools of Maldives.

##### Research Topic:

"Primary Classroom Teachers Motivation in Teaching Physical Education: Self-Determination Theory Perspective"

##### Main Objectives:

- Teacher's motivation in carrying out physical education in primary level.

##### Data Needed:

Questionnaire / Interviews

##### Participant/s:

300 Primary teachers from schools in Male'.

Please provide your assistance and support in collecting the information for the research.

19 October 2021



##### Note:

- The researchers should strictly follow the rules and regulations set by the HPA, the Ministry of Education and the schools. The researchers should have completed two doses of Covid vaccine 14 days prior to entering the school premises.
- The researcher must obtain prior approval from the school before conducting the research.
- The findings of the research should be shared with the Ministry of Education. [statistics@moe.gov.mv](mailto:statistics@moe.gov.mv)

## Appendix D

### Seoul National University Support Letter



October 19, 2021

To whom may it concern,

This letter serves to confirm that Mr. Mohamed Waheed is a student in Global Sport Management Graduate Program at Seoul National University.

As a requirement of the program, the student is expected to accomplish individual thesis research project. Mr. Mohamed Waheed is currently in the process of carrying out his project titled *Primary Classroom Teachers' Motivation in Teaching Physical Education: Self-Determination Theory Perspective* by conducting surveys. I write to request your assistance to enable him to undertake the research for the master's thesis.

Kindly note that findings will be shared and all information collected will be treated in confidence and solely for academic purposes. I hope you find this in order and assist accordingly.

Best Regards,

Joon-ho KANG

Director & Professor, Dream Together Master  
Global Sport Management Graduate Program  
Seoul National University

## 국 문 초 록

### 초등학교 선생님들의 체육 교육 수업 동기: 자기 결정 이론 관점을 기반으로

**Mohamed Waheed**

글로벌스포츠매니지먼트 전공

체육교육과

서울대학교 대학원

본 연구의 목적은 자기 결정 이론(SDT)을 활용하여 체육 교사들의 세 가지 심리적 욕구 충족(자율성, 유능성, 관련성)에 따른 동기를 탐구하는 데 있다. 더불어 어떠한 개인적, 환경적 요인이 체육 교사의 긍정적인 동기를 위한 자율성, 유능성, 관련성 충족에 영향을 미치는지 알아보고자 하였다. 말레(몰디브의 수도)의 국공립 초등학교에서 근무하는 초등학교 체육 교사 160 명(여 142 명, 남 18 명)이 본 연구에 참여하였으며, 온라인(E-mail 및 메시지 어플리케이션)을 통한 설문을 진행하였다. 설문지 기반의 단면

연구가 설계되었고, 참여자들의 모든 응답은 신뢰할 수 있고 정확하게 측정할 수 있는 온라인 수단(E-mail 및 메시지 어플리케이션)을 통해 기록 및 관리되었다. 수집된 응답을 바탕으로 기술 통계 분석을 실시하였으며, 모든 측정 도구의 신뢰도는 크로바하 알파 값을 사용하여 확인하였다. 본 연구의 첫 번째 목적인 자율성, 유능성, 관련성에 대한 인식이 종속 변수인 체육 수업 동기에 미치는 영향을 알아보기 위해 다중회귀분석을 실시하였으며, 두 번째 목적인 개인적 변인(예: 교육 배경, 수업 경험) 및 물리적 교육 환경 변인(예: 체육수업 도구의 질, 행정적 지원)이 교사의 자율성, 유능성, 관련성 인식에 미치는 영향을 알아보기 위해 마찬가지로 다중회귀분석을 실시하였다. 연구 결과로서 자율성, 유능성, 관련성에 대한 교사들의 인식은 자기 결정 동기와 긍정적인 연관을 보였다. 그러나 개인적 및 환경적 변인은 자율성, 유능성, 관련성과 어떠한 관계를 보이지 않았다. 본 연구의 결과는 자기결정이론을 지지한다는 점을 시사하지만, 개인적 및 환경적 변인에 따른 영향을 밝히지 못함으로써 완벽하게 이론을 지지하지 못하였다.

**주요어:** 동기, 자기 결정 이론, 내재적 동기, 외재적 동기, 체육 교육

**학 번:** 2020-29399