

**PARTICIPATION IN DANCE TRAINING IN FINLAND – A STUDY OF MOTIVES
AND BEHAVIOR REGULATION**

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ABSTRACT

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According to the self-determination theory (Deci & Ryan, 1985; 2000), motivation mediates the relationship between physical activity participation and well-being. In environments such as classical ballet that are highly controlling and competitive, intrinsic motives towards training and self-determined forms of behavior regulation are especially important. Therefore, the purpose of the current study was to examine the various participation motives and behavior regulations of dance students. A secondary aim was to investigate group differences across age, competitive level and dance form.

Altogether 103 dance students from three schools across Southern Finland completed the Physical Activity and Leisure Motivation Scale (PALMS; Morris & Rogers, 2004) and the Behavior Regulations in Sport Questionnaire (BRSQ; Lonsdale, Hodge & Rose, 2008). After initial data screening, the Cronbach's alphas were calculated to check the internal consistencies of the subscales of the measurements, and Pearson correlation coefficient was analyzed to examine the inter-subscale correlations. Overall, the results revealed that dance students participate in dance for motives related to enjoyment, mastery and psychological condition, and that they are intrinsically motivated to participate. An independent-samples t-test was used to examine the group differences across age, and revealed significant differences: older dance students scored lower in PALMS mastery and competition/ego and higher in BRSQ amotivation than their younger counterparts. An ANOVA was used to investigate the group differences across competitive level but yielded no significant differences between any groups. An independent samples t-test revealed significant differences in participation motivation between dancers from different dance forms: ballet dancers' participation motives were more related to competition/ego and less to enjoyment and psychological condition, and they scored higher in introjected behavior regulation compared to dancers from other dance forms.

According to the tenets of the self-determination theory (Deci & Ryan, 2000), the findings of the study implicate that overall, the participation motivation of dance students facilitates optimal adaptation to training in the competitive setting of dance. However, in order to avoid drop-out with age, and facilitate dancers' well-being in the long run, a task-involving and autonomy-supportive environment is relevant, especially in such dance settings like ballet where requirements are extreme.

Keywords: intrinsic-, extrinsic motivation, self-determination theory, achievement goal theory, behaviour regulation, dance

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1 INTRODUCTION

The concept of motivation, the cognitive drive and “the why” of human behavior, has inspired a plethora of sport psychology researchers during the past decades. Motivation can be described as “the internal or external forces producing the initiation, intensity, direction and persistence of human behavior” (Vallerand, 2007, p. 59). Despite a considerable number of theories and definitions of motivation, there is a consensus that the more people have fun in the activity, the more likely they are to continue doing that (Roberts, Treasure & Conroy, 2007; Vallerand, 2007).

There is a common belief that participating in physical activity is beneficial (World Health Organization, 2010) but a growing body of evidence is showing that this might not always be true. Especially in the physical activity and sport environments that are highly controlling or competitive, the outcome of continuous and long-term participation might result in ill- instead of well-being (Bartholomew, Ntoumanis & Thøgersen-Ntoumani, 2009). One environment suggested to be like this, striving for “the perfect movement” and a flawless body composition, is ballet dance (Van Staden, Myburgh & Poggenpoel, 2009; Aalten, 2005). Despite the extreme mental and physical requirements (Nicholas, 1975), the field of dance has not been the focus of sport psychology research until the recent years.

There is evidence showing that motivation mediates the relationship between physical activity participation and well-being. Among all existing motivation theories, the self-determination theory (SDT), developed by Deci and Ryan (1985), has gathered the most considerable amount of attention in the sport psychology research during the past decades. The self-determination theory explains motivation through satisfaction of three innate human needs (autonomy, relatedness and competence). An intrinsically motivated individual pursues a task for the pure enjoyment of doing (Vallerand, 2007). According to the achievement goal theory (AGT, Nicholls, 1984), individuals have predisposition tendencies to demonstrate competence in the working environment in a more ego- or task-oriented manner, depending on the use of other- vs. self-referenced evaluation.

There is a large body of evidence showing a positive correlation between the intrinsic forms of motivation and well-being in academic, exercise and sport settings (Deci & Ryan, 2000; Reinboth & Duda, 2006; Ryan, Frederick, Lepes, Rubio, & Sheldon, 1997). It has also been shown that task (over ego-) orientation is associated with satisfaction of the three basic needs (e.g Reinboth & Duda, 2006), higher levels of self-esteem and self-confidence (Reinboth & Duda, 2004), lowered performance anxiety (Abrahamsen & Pensgaard 2012; Yoo, 2003), and psychological well-being (e.g Maltby & Day, 2006).

Motivation studies in the dance context were initiated by Quested and Duda in the end of the last decade, and have given some preliminary evidence of the suitability of the self-determination theory framework in dance contexts (Quested & Duda, 2009). However, the field of dance remains unexplored, and just very few studies so far have studied motivational issues using the frameworks of the self-determination theory and the achievement goal theory in dancers in Finland.

Thus, the purpose of the current study is to explore the various motives of dancers for participating in practice and their behavior regulation.

2 PARTICIPATION MOTIVATION IN PHYSICAL ACTIVITY – THEORETICAL FRAMEWORKS

In this section, the motivation theories relevant for studying participation motivation will be introduced. Two dominant theories, the self-determination theory (SDT, Deci & Ryan, 1985, 2000) and the achievement goal theory (AGT, Nicholls, 1984) are presented in detail. Additionally, the relevant findings related to these theories in the sport, exercise and dance settings are presented.

2.1 The self-determination theory

“people are inherently motivated to feel connected to others within a social milieu [relatedness], to function effectively in that milieu [competence], and to feel a sense of personal initiative while doing so [autonomy]” (Deci & Ryan, 1994, p. 7).

The self-determination theory is an organismic theory consisting of three mini-theories: the cognitive evaluation theory, the basic needs theory and the organismic integration theory (presented below). In the foundation of the self-determination theory lie three innate, basic human needs: autonomy, relatedness and competence (Hagger & Chatzisarantis, 2007). For optimal functioning and self-motivation, a person has to feel a certain amount of choice, freedom and personal value over his or her actions (autonomy), capability of effective execution of the required action (competence) and connection to, and being understood and accepted by the environment (relatedness) (Deci & Ryan, 2000).

According to the self-determination theory, variations in the level of need satisfaction depend on the social context, which, together with the internal values and preferences of the individual, determine the degree and quality of motivation. Sufficient satisfaction of the needs leads to more self-determined (autonomous) behavior regulation and to feelings of being in control over one's actions, supporting responsibility and commitment. In contrast, insufficient need satisfaction leads to feelings of being controlled by external forces and to less self-determined behavior (Ryan, 2009). These two ends of the motivation continuum

are called intrinsic and extrinsic motivation. In the extreme, the disengaging end of the continuum is amotivation (Vallerand, 2007).

Intrinsic motivation

Intrinsic motivation refers to participation in an activity for the pleasure of the task and satisfaction from the activity or performance itself, without any perceived or experienced external pressure to perform (Deci & Ryan, 2007). Vallerand (2007) suggested that three sources underlie intrinsic motivation, highlighting experiences in sport and exercise settings: motivation to know (satisfaction from learning, understanding or exploring), motivation to accomplish things (satisfaction from the attempt to achieve goals), and motivation to experience stimulation (satisfaction from the bodily sensations) (Vallerand, 2007). For example, a dancer who practices because he or she enjoys the feeling of each movement, the stretching of limbs and the lightness of jumps, is intrinsically motivated by the stimulation of his or her dancing.

Extrinsic motivation

In extrinsic motivation, behavior serves an external purpose and participation results from fulfilling some external requirements, rather than just an intrinsic need or volition (Deci & Ryan, 2000). However, extrinsic motivation can be self-determined and in fact, most of the behavior related to everyday living serves an external purpose (work to earn a living, exercise to have a nice body etc.) but yet are at least to some extent self-determined. Extrinsic motivation can be controlled by factors such as other people's orders or expectations, need to show superiority, or avoidance of negative consequences (Deci & Ryan, 2000).

Amotivation

Amotivation represents a state when a person is lacking motivation and has no will to participate in an activity despite the external reinforcement (Deci & Ryan, 2000). For example, totally inactive people are facing with this kind of motivation, resulting in a sedentary lifestyle.

The cognitive evaluation theory (CET, Deci & Ryan, 1985), a sub-theory of the self-determination theory, tries to understand the factors that either facilitate or debilitate intrinsic motivation (Chatzisarantis, Hagger, Biddle, Smith & Wang, 2003). The theory focuses on the fulfilment of the needs for autonomy and competence and underlines the importance of one's perceived sense of control over the behavior (perceived locus of causality, PLOC, deCharms 1968). Positive feedback and free choice over the behavior are regarded as informational, facilitating senses of competence in the task at hand and of self as the initiator (internal locus of causality) thus enhancing intrinsic motivation. External rewards, deadlines and surveillance are regarded as controlling and facilitate incompetence and a sense of complying external demands (external locus of causality), ultimately leading to a decline in intrinsic motivation (Deci & Ryan, 1985).

The basic needs theory (BNT, Deci & Ryan, 2000) underlines the essential role of the basic needs satisfaction to psychological growth and well-being across all people. The tendency of the environment (teachers, coaches, parents etc.) to support self-direction, e.g giving the learners opportunities of choice, recognizing their feelings and experiences and minimizing the use of pressures and demands, is referred to as autonomy support. According to the basic needs theory, satisfaction of the basic needs for autonomy, competence and relatedness is fundamental for personal development, integrity, and behavior regulation, and an indicator of psychological and physical well-being (Vallerand, 2007). Thus, the satisfaction of the basic needs is situated as a mediator between the social environment (perceived autonomy support) and psychological outcomes (Deci & Ryan, 2000).

2.1.1 Motivation regulation (the organismic integration theory)

The organismic integration theory, a sub-theory of the self-determination theory, explains the internalization process of motivation through social-contextual factors and behavior regulation (Deci & Ryan, 2000). The level of internalized / externalized motivation results from the interplay between the perceived locus of control (autonomy support / external control), satisfaction of the basic needs and consequent behavior regulation. Violations of the satisfaction of any of the three basic needs, caused by any reason, result in more externalized behavior regulation and ultimately diminish the level of intrinsic motivation (Deci & Ryan, 2000). For example, a dance student who is enjoying her practice but faces

continuous problems with being bullied by classmates might face a violation of his / her need for relatedness, resulting in coming to practice only to avoid teacher being angry and, without intervention, in ultimately losing his / her motivation. The process of internalization / externalization is dynamic and can change over time, situation, context and task (Levigne et al., 2009; Maltby & Day 2011).

When engaging in a behavior only for external rewards or obligation, and when the environment is perceived as highly controlling, the self-regulation is *external*. For example, a dancer who engages in training only to fulfill the expectations of his or her parents is externally regulated: low in both autonomy and self-motivation. *Introjected regulation*, still representing extrinsic motivation, describes a situation where actions are taken to avoid guilt or shame that might result from not obeying. Social pressure to participate in team sports or exercise groups might act as this kind of controlling force, where freedom to choose is thwarted, and motivation is fairly extrinsic. Representing the least autonomous form of intrinsic motivation is *identified regulation*. In this stage, the behavior is to some extent self-determined (autonomous) and the motivation results from a will to learn new in order to achieve a personally interesting goal and thus be satisfied with the self. For example, when an athlete has to do hundred push-ups, he or she does not necessarily enjoy it at the moment, but does so in order to gain adequate strength for his or her future athletic performance. When identified behavior is integrated as a part of the self and in itself satisfies personal needs, but still serves some purpose other than the task itself, the regulation is *integrated*. *Intrinsic motivation* represents a completely autonomous form of self-regulation, resulting from the pure enjoyment of, pleasure from and personal interest towards a task (Deci & Ryan, 2000). A competitive, hard-training athlete usually adopts an identified or an integrated form of self-regulation, and the motivation can change over time, and with personal and career development. Based on the organismic integration theory, it could be hypothesized that ideally, the athletic environment would support both the basic need satisfaction (high autonomy) and more egoistic goals of an individual. The influence of the motivational climate to basic need satisfaction and behavior regulation is outside of the scope of this study but will be briefly discussed below (the achievement goal theory).

2.1.2 The self-determination theory in physical activity and sport setting

The self-determination theory has proven to be a plausible and ideal tool to apply in the sport and exercise settings, as it “focuses on promoting autonomous reasons for engaging in exercise, which are personally-salient and viewed as emanating from the self” (Hagger & Chatzisarantis, 2008, p. 10.). Thus, according to the self-determination theory, the individual seeks to adopt and fulfill intentions for exercise that are personally meaningful, presumably leading to continued action. It has been found in physical activity contexts that need satisfaction predicts intrinsic motivation and is in turn negatively correlated with extrinsic motivation and amotivation (Hagger & Chatzisarantis, 2008; Motl, 2007). Also, intrinsic motivation has been found to predict adaptive physical activity behaviors, such as positive affect, concentration and happiness, and thus the importance of self-determined motivation in physical activity contexts has been highlighted (Motl, 2007; Zhang, 2009). Carroll (2001) found that students who scored high in perceived competence were more active in their leisure time than their less competent counterparts. When comparing the motivations for sport and for exercise participation, Kilpatrick, Hebert and Bartholomew (2005) found in their study with college students that more intrinsic motives such as enjoyment and challenge were connected to sport participation whereas exercise participation was connected with motives related to appearance and weight management. Thus, the researchers concluded that the motives for sport participation are more desirable than those for exercise. However, in a Finnish sample of 285 high school participants, Aypar (2012) found that non-athlete students reported more intrinsic motives for participating in physical activity than their athlete student counterparts. These discrepancies might be due to participant’s age, and support the research findings showing that intrinsic motivation to participate in exercise diminishes with age, and issues related to health and looking good become more important (Cooper, Schuett & Phillips, 2012; Digelidis, Kotsaki, & Papaioannou, 2005). Also gender differences have been found in several motivation studies, suggesting that women in general participate in physical activity because of appearance (Aypar, 2012; Cooper et al., 2012; Chowdhury, 2012; Kilpatrick et

al., 2005; Louw, Van Biljon & Mugandani, 2012), whereas men have motives related to competition and success (Aypar, 2012; Kilpatrick et al., 2005, Niskanen & Savijoki, 2011) or affiliation (Chowdhury, 2012).

Overall, there is a large body of evidence showing a positive relationship between intrinsic, compared to extrinsic forms of motivation and well-being in sport and exercise settings (Deci & Ryan, 2000; Maltby & Day, 2011; Markland & Ingledew, 1997; Reinboth & Duda, 2006; Ryan, Frederick, Lepes, Rubio & Sheldon, 1997). Additionally, research supports the statement of Deci & Ryan (1985), that external control, such as rewards, threats, deadlines or pressured evaluations diminish intrinsic motivation, creativity and self-determination (Cremades, 2012; Kingston, Horrocks & Hanton, 2006; Medic, Mack, Wilson & Starks, 2007). These findings further highlight the importance of studying the motivation of people from different contexts and identifying their needs and interests in order to develop suitable interventions in the future.

2.1.3 The self-determination theory in dance setting

The motivation research conducted in a dance context is still fairly sparse but there is preliminary support for the hypothesis that motivation mediates the environmental influences on well-being, thus supporting the applicability of the self-determination theory framework also in dance environments (Geme, 2010; Kamarova, 2010; Qusted & Duda, 2009, 2010; 2011; 2013). Studies with dancers from England and Russian-speaking countries have shown that perceived autonomy support is positively correlated with need satisfaction, and predicts increased well-being (Kamarova, 2010; Qusted & Duda, 2009). To further explain the mediating effects of the need satisfaction, Qusted, Bosch, Burns and Cumming (2011) found in their study with vocational dancers that basic need satisfaction predicted the way a dance student appraised the upcoming performance situation which again was associated with cortisol secretion. The researchers concluded that basic need satisfaction enabled the dancer to feel both competent (having adequate technical skills), self-directive and supported by the environment, helping him or her to appraise the situation in a more positive way, as a challenge. In contrast, poor basic need satisfaction predicted threat appraisals in the performance situation. The researchers further found out that these appraisals were associated with dancers' cortisol levels: basic need satisfaction

and challenge appraisals predicted low cortisol secretion. Also, Quested and Duda (2011) found a negative correlation between dancer basic need satisfaction and incidence of burnout. These findings are in line with the tenets of the self-determination theory and indicate that basic need satisfaction is the central psychological mechanism behind the biological responses for pre-performance stress in dancers. However, not all studies with dancers have found a significant and consistent relationship between autonomy support and need satisfaction of all the basic needs, thus challenging the self-determination theory (Deci & Ryan, 2000). For example, Quested and Duda (2010; 2011) found that autonomy support was related only to the need satisfaction for relatedness and when investigating the fluctuations of basic need satisfaction in various settings within dance (dance classes, rehearsals and performances), they found that in dance classes and rehearsals the autonomy support was related to need satisfaction for autonomy and relatedness while in performances it was significantly related only to need satisfaction for competence (Quested & Duda, 2013). Thus, there might be other factors in the teacher-created environment that facilitate the need satisfaction for competence, and further the fluctuation of the need satisfaction is to some extent dependent on the situation the dancer is in. Also in line with these findings, Geme (2010) found in a study with Finnish dancers, that perceived autonomy support significantly correlated with autonomy and relatedness but not with competence, and was not associated to indices of well-being. Additionally, in Finland, only relatedness was related to more autonomous forms of motivation regulation, which in turn was associated with increased well-being (Geme, 2010). More research is needed in order to decide about the role of the environment in satisfying the basic needs and further, what kind of need satisfaction actually is relevant for dancer's overall well-being.

However, based on the findings presented above it can be concluded that having intrinsic motives for participation and a sense of self-determination over action is important also in dance context. So far, the motivation studies with dancers have not investigated why dancers participate in their daily practices. To address this, the present study focused on the motives and behavior regulation of dance students.

2.2 The achievement goal theory

The achievement goal theory was developed in educational settings when investigating the effects of success and failure on children's motivation (Hagger & Chatzisarantis, 2008; Nicholls, 1984). The fundamental assumption of the achievement goal theory is that individuals are intentional and goal-oriented organisms that innately have a desire to demonstrate competence and to avoid incompetence (Roberts, Treasure & Conroy, 2007). Nicholls (1989) argued that at least two conceptions of ability exist and personal achievement goals and behavior depend on these individual conceptions. He further discovered that children develop a differentiated concept of ability at the age of 12 when task difficulty, effort and ability are seen as separate constructs and high ability is perceived when outperforming others while expending equal or less effort (Nicholls, 1989). According to the achievement goal theory, people have predisposed tendencies to demonstrate their competence either in a more self- or other-referenced manner. These tendencies are called the achievement orientations and two types exist, namely task (mastery) - and ego (performance) -involvement. Task-involved people focus on being better than oneself and improving mastery on a given task, while ego-involved people concentrate on outperforming others (Roberts et al., 2007). Ego-involvement has been argued to reduce one's own interest towards the task thus resulting in decrease in intrinsic motivation and lack of persistence, especially when being the best seem unlikely (Duda, 1987). A factor mediating the individual, predisposed goal orientations is the social context, known as the motivational climate. As within the individuals, also the environment has a tendency to reinforce either task- or ego-involvement. Task-oriented climate tends to encourage hard work, effort and personal improvement while ego-oriented climate focuses on competition with others, rewarding based on ability and punishment for errors (Hagger & Chatzisarantis, 2008). The motivational climate influences the individual effort, persistence, cognitions, emotions and behavior, and thus can modify the predisposed goal orientation tendencies (Ntoumanis, 1999).

2.2.1 The achievement goal theory in physical activity and sport setting

Both longitudinal and cross-sectional studies from sport and exercise settings show that individual task goals are positively correlated with adaptive behavioral patterns, positive psychological outcomes, task enjoyment and intrinsic motivation (Goudas, Biddle & Fox,

1994; Hagger & Chatzisarantis, 2008; Newton & Duda, 1999; Ntoumanis & Biddle, 1999; Standage, Duda & Ntoumanis, 2003). In contrast, high ego-orientation predicts motivational deficits especially when perceived performance is low, and additionally, task enjoyment and effort is sustained after perceived poor performance only when demonstrating high task and low ego orientation (Goudas et al., 1994). However, when striving for success, competitive athletes might benefit from having an appropriate mixture of both task- and ego-involvement in order to constantly develop as an athlete and persist in the face of struggles when aiming at the top. Indeed, it has been shown that task and ego orientations work independently (Duda, 1992), and thus an individual can be low in both task and ego orientation, high in task and low in ego orientation or any other combination. Fox, Goudas, Biddle and Duda, (1994) investigated adolescent goal orientations and found that individuals high in both task and ego orientations were the most motivated in sport.

2.2.2 The achievement goal theory in dance setting

Only few studies have examined motivation using the achievement goal theory as the framework in the dance context. Carr, Phil and Wyon (2003) studied the motivation of 181 dance students from the United Kingdom, and found that perceived ego-involving motivational climate positively predicted dancer ego-orientation as well as some negative psychological attributes, including trait anxiety and neurotic perfectionism. Furthermore, perceived task-oriented climate positively predicted dancer task-orientation (Carr et al., 2003). Similarly, when examining the effect of perceived motivational climate on basic need satisfaction with hip-hop and vocational dancers from England, Quested and Duda (2009) found that perceived task-involving climate was positively related to the satisfaction of autonomy, relatedness and competence.

2.3 Age perspective in motivation

Cooper, Schuett and Phillips (2012) found that younger (under 20 years) students participate in physical activity for more intrinsic motives than older students and suggested that students may be more prone to develop intrinsic motivation in their early college years. Also, Digelidis, Kotsaki and Papaioannou (2005) found that senior high school students showed lower intrinsic motivation, task orientation and identified regulation than junior high school students in Greek athletic classes. Similarly, Yli-Piipari, Jaakkola and

Liukkonen (2009) investigated a Finnish sample of 12-15 years old students, and found that free time physical activity diminishes significantly when students move from preliminary school to junior high school. Thus, it seems that there is a decline in intrinsic motivation when students get older, which supposedly leads to the well-known drop-out effect from sport clubs and school PE classes in the late teenage years, ultimately leading to inactivity in young adulthood. Indeed, Louw, Van Biljon and Mugandani (2012) found that under 34 year old fitness center visitors had more extrinsic, body-related motives for exercise than their senior counterparts. In Kamarova's study (2010) with dancers from Russian-speaking countries, professional dancers reported less intrinsic forms of behavior regulation and more amotivation than dance students. Identifying students' interests and developing activities that meet the individual interests is important and may further motivate participation in physical activity (Cooper et al., 2012).

3 MEASUREMENT OF PARTICIPATION MOTIVATION

There are several instruments available to measure participation motivation. In the next section, the measurements most widely used in research will be briefly introduced and evaluated.

The Situational Motivation Scale (SIMS; Guay, Vallerand & Blanchard, 2000) consists of 16 items and 4 subscales. The subscales are intrinsic motivation, identified regulation, external regulation and amotivation. The instrument was developed to assess the situational motivation for a specific physical activity and thus the one concern is that it assesses current activity rather than motivation to participate in physical activity in general. Also, the levels of the subscales do not correspond as intrinsic motivation is measured with one dimension while extrinsic motivation is multi-dimensional.

Exercise Motivations Inventory (EMI; Markland & Hardy, 1993) has 44 items measuring exercise participation. The 11 subscales are stress management, weight management, recreation, social recognition, enjoyment, appearance, personal development, affiliation, ill-health avoidance, competition, fitness, and health pressures. However, this instrument involves only those who currently engage in physical activity and not non-exercisers. As a result and to cover the deficiencies, EMI-2 was developed. It consists of fourteen subscales with 25 additional items to the original version (Markland & Ingledew, 1997). However, the problem with this instrument is the lack of theoretical framework.

The Motives for Physical Activity Measure (MPAM; Frederick & Ryan, 1993) consists of 23 items measuring three motives: enjoyment, competence and body relatedness. The revised MPAM is a 30 item questionnaire measuring sport and exercise participation motivation and consists of five subscales: enjoyment, competence, appearance, fitness and sociality (MPAM-R; Ryan, Frederick, Lepas, Rubio & Sheldon, 1997).

The Participation Motivation Questionnaire (PMQ; Gill, Gross & Huddleston, 1983) was originally a 30-item measure asking to rate motives for participating in sport and exercise. After several stages of modifications, the questionnaire was expanded to consist of 50 items

with 9 dimensions: skills, challenge, fun, health, affiliation, relaxation/aesthetic, status, environment, and to be occupied (Morris, Clayton, Power, & Han, 1995).

The Sport Motivation Scale (SMS) was originally developed in French and translated to English by Pelletier et al. (1995). The instrument includes 28 items and 7 subscales. The subscales consist of three types of Intrinsic Motivation (IM; IM to know, IM to accomplish things and IM to experience stimulation), three forms of regulation for extrinsic motivation (EM; identified, introjected and external) and Amotivation. As the name implies, this measure was developed for sport settings and thus the applicability to the context of regular exercise can be questioned.

To overcome the deficiencies of the instruments presented above, the Recreational Exercise Motivation Measure was developed (REMM, Rogers & Morris, 2003). The REMM is a 73-item questionnaire with eight subscales: mastery, physical condition, affiliation, psychological condition, appearance, others' expectations, enjoyment, and competition/ego. The inventory was validated in several studies for both exercise and sport settings (e.g Caglar, Canlan & Demir, 2009). However, the obvious deficiency of the REMM is its length (RoyChowdhury, 2012) which affects the applicability of the questionnaire in the field. To meet this limitation, five strongest items from each eight subscales was chosen and thus a shortened version of the REMM, namely the Physical Activity and Leisure Motivation scale was developed (PALMS, Morris & Rogers, 2004). The PALMS (Morris & Rogers, 2004) is a 40-item self-report measure of motives for participation in physical activity, consisting of eight subscales: mastery, enjoyment, affiliation, competition/ego, other's expectations, physical condition, psychological condition and appearance. The PALMS was recently translated to Finnish and adapted to a sample of Finnish High School students by Aypar (2012). In the study, the Finnish version did not support the original 8 factor structure and some modifications were suggested. The Finnish version of the instrument will be further examined in the current study.

4 CLASSICAL BALLET AND DANCE

There are altogether an estimated 20 000 dancers representing different dance forms in Finland and only one school offering the opportunity to graduate as a professional ballet dancer, namely the Finnish national opera ballet school. All dance forms, foremost classical ballet, put both the body and mind under a lot of pressure. Technical and physical requirements include extreme agility, strength, balance and coordination, and the daily training hours can rise up to 8 hours. For example, when standing on her toes, the dancer carries 20 times her weight on her toes and the leaps are measured to rise up to 39.2 cm and 55.3 cm in women and men respectively. Mental requirements include for example high self-confidence, good concentration skills and motivation. Also, dancers are often required to have a certain type of appearance and a lean body. Additionally, the artistic component differentiates dance from most types of sports, the dancer has to be both an athlete and an actor at the same time (Lagerstedt, 2011).

Nicholas (1975) compared the mental and physical requirements of 61 sports and dance forms and found that classical ballet exceeded every other activity. Furthermore, Van Staden, Myburgh and Poggenpoel (2009) found in their pilot study with classical ballet dancers that there is a tendency of the environment to stimulate externalized goals, possibly leading to maladaptive behaviors such as eating disorders, depression and problems with career transitions. Indeed, studies show that problems emerging among ballet dancers include eating disorders, perfectionism and a difficulty in emotion expression (Lagerstedt, 2011). Also, Laws (2005) stated that there is an inherent risk for burnout in dancers training full time. In the light of these findings and the knowledge gained from earlier studies (Deci & Ryan, 2000; Reinboth & Duda, 2006; Ryan, Frederick, Lipes, Rubio, & Sheldon, 1997; Quested & Duda, 2009; 2010) that more intrinsic and self-determined forms of motivation enhance well-being in dance, exercise and sport settings, it could be argued that in such an extreme setting like classical ballet, the basic needs satisfaction (motivation) plays an exceptionally big role in adaptation to the competitive environment. One aim of the current study is to compare the motivation to participate in dance training between classical ballet students and student representing other dance forms.

5 PURPOSE OF THE STUDY

The purpose of the current study was to explore the behavior regulation and motives of students for participating in dance. A secondary aim was to investigate the group differences in participation motivation and behavior regulations across age, competitive level and dance form.

Hypothesis 1, age: Previous studies (Cooper et al., 2012; Digelidis et al., 2005; Yli-Piipari et al., 2009) from school PE settings indicated that intrinsic motivation towards physical activity diminishes with age. Thus we expected to find a similar pattern among dance students.

Hypothesis 2, competitive level: Based on studies conducted with athletes, the motives regarding competition and ego-orientation increase when competitive level increases (Andrade, Salguero, Márquez & Silva, 2006; Gernigon & Le Bars, 2000). Furthermore, in a study with dancers, Kamarova (2010) found that intrinsic forms of behavior regulation decrease as the competitive level increases. Thus, a similar pattern was expected to be found in the current study.

Hypothesis 3, dance form: The environment of classical ballet is very competitive and requires extreme mental and physical skills in order to reach certain goals. Van Staden, et al. (2009) found in their pilot study that the environment of classical ballet has a tendency to stimulate externalized goals. Thus, ballet dance students were expected to have more motives related to external outcomes whereas dancers from other dance forms were expected to be more intrinsically motivated.

6 METHODS

6.1 Participants

The participants for the study were recruited from The Finnish national opera ballet school as well as from two schools offering a dance path for students. All the schools were located in Southern Finland. Altogether 103 dance students (96 females and 7 males) took part in the study. The mean age of the participants was 16.07 (SD = 1.76), and they represented six different school levels from the secondary school levels to the high school levels.

6.2 Measurements

Two questionnaires were used to measure the dancers' motives for participation and behavior regulation.

The Physical Activity and Leisure Measurement Scale (PALMS, Morris & Rogers, 2004) is a 40-item self-report measure of motives for participation in physical activity, answering the stem question "I undertake physical activity...". The scale consists of eight subscales: 1) mastery (e.g. "to get better in an activity"), 2) enjoyment (e.g. "because it's fun"), 3) affiliation (e.g. "to do something in common with friends"), 4) competition/ego (e.g. "to work harder than others"), 5) others' expectations (e.g. "because people tell me I need to"), 6) physical condition (e.g. "because it helps me maintain a healthy body"), 7) psychological condition (e.g. "because it acts as a stress release"), and 8) appearance (e.g. "to improve body shape"). Each item uses a 5-point Likert scale ranging from 1 = strongly disagree to 5 = strongly agree. The Finnish version of the measurement used in the current study has yielded mostly acceptable internal consistencies, with Cronbach alphas ranging from .53 (other's expectations) to .93 (affiliation) (Aypar, 2012).

The Behavior Regulations in Sport Questionnaire (BRSQ, Lonsdale, Hodge & Rose 2008) is a 24-item inventory that measures competitive athletes' motivation regulation grounded in the self-determination theory (Deci & Ryan, 2000). The participants answer a stem question "I participate in my sport...", and the scale consists of 6 subscales: 1) intrinsic motivation (e.g. "because I enjoy it"), 2) integrated regulation (e.g. "because it's a part of who I am"), 3) identified regulation (e.g. "because the benefits of sport are important to

me”), 4) introjected regulation (e.g. “because I would feel ashamed if I quit”), 5) external regulation (e.g. “because if I don’t other people will not be pleased with me”) and amotivation (e.g. “but I wonder what the point is”). Each item uses a 7-point Likert scale ranging from 1 = not at all true to 7 = very true. The Finnish version of the scale was used (Ruiz, Haapanen, Tolvanen, & Robazza, under review). Internal consistency of this version was acceptable with Cronbach alphas ranging from .72 (integrated regulation) to .88 (intrinsic motivation).

Also, the participants were asked to state the number of days engaging in physical activity during a typical week and how important / useful / interesting exercise is for them, rated in a 5-point Likert scale ranging from 1 = nothing at all to 5 = very much. The questions are based on the expectancy-value theory of achievement motivation (Eccles, Adler, Futterman, Goff, Kaczala, Meece & Midgley, 1983).

6.3 Procedure

After getting the approval from the Ethical Committee of the University of Jyväskylä, the principals of the schools were contacted via e-mail. The permission to conduct the study was gained and then the written consents from the participants or their responsible adults were gathered. The data were collected during or right after the school day, in a quiet classroom, under the supervision of the author. In addition to the questionnaires measuring motivation, the demographic information was collected including the age, gender, member of sport club, type of sport, years of training, age of initiating competing career and level of competition. The questionnaires were administered during the fall 2013. It took approximately 20 minutes to fill in the questionnaire.

6.4 Data Analyses

SPSS 20 was used for the statistical analyses. First, the data were screened for exploring the data and the missing values. Then the Cronbach’s alphas were calculated to check the internal consistencies of the subscales of the measurements. Pearson correlation coefficient was analyzed to examine the inter-subscale correlations. Comparisons in dancers’ motives were examined across age, competitive level and dance form. An independent-samples t-test was used to examine the group differences across age and form of dance. For the group comparisons across age, the sample was divided into two groups and as being the median

value, age 16 was chosen as the cut-off point. A one-way analysis of variance (ANOVA) was used to investigate the group differences across competitive level.

7 RESULTS

7.1 Demographics

The age range of the participants varied between 12 and 21 years and the number of dancers younger than 16 years was 62. 41 dancers were older than 16 years. The dancers reported competing in regional ($N = 13$), national ($N = 50$) and international ($N = 17$) levels. Regarding dance form, the number of ballet dancers (from the Finnish national opera ballet school) was 38, and dancers representing other dance forms (including e.g. jazz-, contemporary- and street dancers) were altogether 65. On average, the starting age of the participants was 5.77 years ($SD = 2.89$).

There were significant differences in practice hours per week between ballet dancers and dancers from other dance forms: $t(101) = 4.704$, $p < .001$. Ballet dancers reported practicing on average 16.4 hours ($SD = 5.05$) per week while dancers from other dance forms (including all non-ballet dancers) reported on average 11.5 ($SD = 5.02$) weekly practice hours.

Next sections will present the results of the initial examination of the subscales, the reliability analysis of the subscales as well as the inter-subscale correlations and the results of the t-tests and ANOVA across groups.

7.2 Descriptive statistics

The mean, standard deviation, kurtosis and skewness were explored for the studied variables (see Table 1). The lowest mean scores in the PALMS were reported for the subscale other's expectations ($M = 1.97$), and the highest for enjoyment ($M = 4.81$). In the BRSQ, the lowest scores were reported for the subscale external regulation ($M = 1.41$), and the highest for intrinsic motivation ($M = 6.61$). Regarding the skewness and kurtosis values, the PALMS subscales mastery, enjoyment and psychological condition were heavily negatively skewed (high scores typical). Also, the BRSQ subscale intrinsic motivation was negatively skewed. On the contrary, the subscales BRSQ external regulation and amotivation were heavily positively skewed (low scores typical). All the subscales, apart from the PALMS subscale appearance were non-normally distributed.

Table 1: *Descriptive statistics for the studied variables (N=103)*

	Mean (SD)	Skewness	Kurtosis	Cronbach's alpha
Mastery	4.59 (.43)	-1.25	1.97	.57
Enjoyment	4.81 (.28)	-1.92	3.04	.74
Affiliation	3.81 (.87)	-.55	.26	.88
Competition/Ego	2.24 (.95)	.56	-.55	.85
Other's expectations	1.97 (.62)	.28	-.36	.35
Physical condition	4.17 (.62)	-.76	.32	.75
Psychological condition	3.78 (.75)	-1.28	2.67	.72
Appearance	3.22 (.95)	-.19	-.57	.85
Intrinsic motivation	6.61 (.55)	-1.69	2.57	.77
Integrated regulation	5.97 (.79)	-.66	-.15	.58
Identified regulation	5.69 (1.04)	-.91	.34	.71
Introjected regulation	2.47 (1.14)	.82	.17	.74
External regulation	1.41 (.63)	2.04	3.81	.79
Amotivation	1.54 (.84)	2.13	4.13	.72

The reliability of the subscales was examined by calculating the Cronbach's alpha coefficient (see Table 1). The PALMS subscales mastery and other's expectations indicated low alphas. The Cronbach's alpha of the mastery -subscale was .57. However, if the item 31 ("to keep current skill level") would be deleted from the subscale, the internal consistency would rise up to .63. Also, the reliability of the subscale other's expectations remained very low ($\alpha = .35$), and because of such low internal consistency, this subscale was not included in the group comparisons. Additionally, the reliability of the BRSQ integrated regulation remained low ($\alpha = .58$).

7.3 Inter-subscale correlations

For the PALMS, as expected, motives related to intrinsic motivation and task-orientation (e.g mastery and enjoyment) correlated positively ($p < .01$). The inter-subscale correlations of the BRSQ followed the expected simplex pattern (Ryan & Connell, 1989). Forms of behavior regulations close to each other in the internalization continuum were positively correlated ($p < .01$), and those in the opposite ends of the continuum correlated negatively

($p < .01$). Additionally, as expected based on the assumptions of the self-determination theory, enjoyment subscale of the PALMS was significantly positively correlated with the autonomous forms of behavior regulation ($p < .01$) and negatively with amotivation ($p < .01$) of the BRSQ. The inter-subscale correlations are shown in Table 2.

Table 2: *Inter-subscale correlations*

	1	2	3	4	5	6	7	8	9	10	11	12	13
1 Mastery													
2 Enjoyment	.29**												
3 Affiliation	.29**	.26**											
4 Competition/Ego	.36**	-.10	-.04										
5 Other's expectations	.21*	-.04	.22*	.24*									
6 Physical condition	.39**	.24*	.31**	.27**	.37**								
7 Psychological condition	.20*	.40**	.31**	-.17	.08	.47**							
8 Appearance	.35**	.01	.33**	.41**	.37**	.56**	.07						
9 Intrinsic motivation	.20*	.72**	.08	-.06	-.12	.14	.20*	-.07					
10 Integrated regulation	.23*	.32**	.04	.22*	.09	.12	.15	.04	.38**				
11 Identified regulation	.45**	.30**	.29**	.15	.17	.56**	.33**	.36**	.27**	.33**			
12 Introjected regulation	.11	-.10	-.01	.28**	.21*	.08	-.07	.22*	-.23*	.02	.12		
13 External regulation	-.14	-.25*	-.05	.01	.05	-.12	-.20*	.08	-.53**	-.18	-.11	.47**	
14 Amotivation	-.14	-.30**	-.02	-.01	.11	-.09	-.35**	.03	-.41**	-.27**	-.24*	.40**	.56**

** p < .01, * p < .05

7.4 Group comparisons

An independent-samples t-test was calculated to explore the differences on motives to participate in physical activity between age groups. Supporting the hypotheses of the study, significant difference was found in PALMS subscale mastery with older dance students scoring lower in mastery than their younger counterparts; $t(101) = 2.26, p = .03$. Also, regarding PALMS subscale competition/ego, older dance students reported significantly lower scores than the younger dance students; $t(101) = 2.97, p = .004$. Significant differences were additionally found in the amotivation –subscale of the BRSQ. The older dance students scored higher in amotivation than the younger dance students; $t(101) = -2.26, p = .03$.

Contrary to the hypotheses, no differences were found between dancers competing at regional, national and international levels.

Regarding comparisons in motivation between ballet dancers and dancers from other dance forms, an independent-samples t-test was used. As hypothesized, the analyses revealed significant differences in the enjoyment subscale of the PALMS with ballet dancers reporting lower scores than the dancers from other dance forms; $t(101) = -2.19, p = .03$. Regarding the PALMS subscale competition/ego, the ballet dancers reported significantly higher scores than the students representing other dance forms; $t(101) = 3.15, p = .002$. Additionally, it was found that ballet dancers reported significantly lower scores related to psychological condition in the PALMS than the students from other dance forms; $t(101) = -4.3, p < .001$. This indicates that they did not find the activity as relaxing and stress relieving as the students from other dance forms. Regarding the introjected regulation subscale of the BRSQ, the ballet dancers scored significantly higher than the dancers from other dance forms; $t(101) = 2.04, p = .04$.

8 DISCUSSION

The purpose of the current study was to explore the various participation motives and behavior regulation of dance students, as well as to investigate group differences across age, competitive level and dance form. Altogether 103 dance students from three schools across Southern Finland participated in the study.

Regarding the low internal consistency of the mastery subscale, omitting the item number 31 (to keep current skill level) would have corrected the reliability to some extent. During the data collection, this item was brought up several times and some of the participants pointed out that they merely wanted to practice in order to increase (and not to keep) their current skill level. Thus, they might have found the wording of this item as diminishing their actual participation motive and rated it lower than the other mastery items. This might have had an effect on the reliability of the subscale and could be regarded as a finding in itself: an indicator of high task-orientation among the dance students. However, the wording of the PALMS mastery item number 31 should be re-formulated and further research needed to clarify whether the low reliability of this subscale is also evident with other populations. As expected for this age group, the PALMS subscale other's expectations yielded poor reliability. This is consistent with previous studies and as Aypar (2010) discussed, the individual items might all represent separate subscales and thus would not measure the same one. Also, due to the age range of the participants of the current study (12-21 yrs.), some items might have been irrelevant for them (e.g. "because I get paid" or "because it was prescribed by doctor or physio"). So, as the items seem to be rated differently, if using the PALMS with younger participants in the future, it is suggested to use the items of the subscale separately instead of together as a subscale. Due to the low reliability, this subscale was not included in further analyses.

Participation motivation in dance training

The motives rated highest among the dance students were enjoyment, mastery and psychological condition. Also, intrinsic motivation was the highest type of behavior regulation reported among dance students. According to the self-determination theory (Deci

& Ryan, 2000), this kind of participation motivation would facilitate optimal adaptation to training in the competitive environment of dance, and also well-being among the dance students. Previous studies from various sport and exercise settings (Aypar, 2012; Cooper et al., 2012; Chowdhury, 2012; Kilpatrick et al., 2005; Louw, Van Biljon & Mugandani, 2012) have found appearance to be one of the main motives for participation in females, but this was not found in the current study. As the sample consisted mainly of females, it seems like dance participation differs from the participation in other physical activities to some extent, further supporting the finding that dancers are driven by intrinsic reasons to participate. Furthermore, very low scores reported for external regulation as well as amotivation and PALMS other's expectations support the conclusion that dancers overall enjoy and are self-determined to practice and task-involved.

Differences in participation motivation between age groups

Older dancers reported higher scores in the amotivation subscale of the BRSQ and also, they were less motivated by mastery and competition than the younger dancers. Thus, supporting the hypotheses of the study and several earlier findings from dance, sport and exercise settings (Cooper et al., 2012; Digelidis et al., 2005; Kamarova, 2010; Yli-Piipari et al., 2009;), the intrinsic participation motivation of the dance students seems to be lower among older compared to younger dancers. Also Kamarova's (2010) findings with dancers from Russian-speaking countries support the findings of the current study: dance students reported more intrinsic forms of behavior regulation as well as less amotivation than professional dancers. Thus, intrinsic motivation towards dance seems to diminish with age and experience. One reason for this decrease might be the increasing pressure from outside. As the dance students are moving towards being professional dancers, practicing is not anymore just about having fun and learning new things but also about being better than others and ultimately getting employed. According to the tenets of the self-determination theory (Deci & Ryan, 2000), the increasing external pressure might undermine the dancer's satisfaction of the basic needs, leading to externalized behavior regulation and ultimately, when getting older, loss of motivation to keep practicing at a high level. Also, competing interests such as other studies, jobs or family issues might provide an alternative explanation for the decline in intrinsic motivation as dancers get older. Professional dancers

practice 6-8 hours daily and perform up to eight times a week (Lagerstedt, 2011), which does not allow one to have other hobbies and leaves very limited time for family and friends. In order to further clarify the decrement of intrinsic motivation with age among dancers, a longitudinal study following the dynamics of motivation across time within dancers and also a qualitative study exploring the participation motivation more deeply would be recommended in the future. With the increasing knowledge, it would be possible to create suitable interventions to prevent the potential maladaptive consequences or drop out caused by deterioration of self-determined motivation among dancers training to fulfill the requirements of dance.

Differences in participation motivation between competitive levels

Regarding competitive levels, the results of the current study did not support the hypotheses as no group differences were found. However, this might merely be a problem of the sampling of the current study than an actual lack of group differences across competitive levels in dance context. The population of the study might have been too homogeneous regarding competitive levels as all the participants were dance students not yet performing in very high levels. Indeed, most of the dance students reported competing in national level and thus the groups were unbalanced. Also, as opposed to sport settings, in dance settings the competitive level is hard to define as for most dancers the competitions are not existent: they merely perform in various levels. Indeed, the question about competitive level awoke confusion among the participants and many of them did not know how to answer it. Further research examining group differences across competitive levels with dancers is needed.

Differences in participation motivation between dance forms

As hypothesized, ballet dance students reported fewer motives regarding enjoyment and more regarding competition/ego than dance students from other dance forms. It could be assumed that as most of the ballet dance students aim for a professional career in dance, the mindset towards practice is somewhat more “serious” and performance-oriented than in other dancers, who merely dance for fun without specific future “egoistic” goals. Thus, ballet dance students would be comparable to professional dancers whereas dance students

from other dance forms would merely be dance hobbyists. Indeed, supporting this assumption, Geme's (2010) findings suggest that dance students regard their dance as a hobby whereas for professional dancers the dancing activity is perceived as an occupation. The significantly higher practice hours reported by the ballet dancers compared to other dancers also support this assumption. Since the employment possibilities for classical ballet dancers are few and the ultimate aim is to get certain roles and to get employed, the environment is understandably very competitive. Thus, in order to reach these performance goals, in addition to task goals, a certain level of ambition and ego-orientation is required among ballet dancers, which might not be evident among dance students from other dance forms. The results indicate that the participation motivation of ballet dancers is close to that of competitive athletes, and indeed as Fox et al. (1994) found with youth athletes, individuals high in both task and ego orientations were the most motivated in sport, and this seems to be the case also in the ballet context. Furthermore, Van Staden et al. (2009) discussed that there is a tendency of the ballet environment to stimulate externalized goals, and the current study supports this finding. Differences were also found regarding psychological condition, and the results indicate that ballet dancers do not find their dance practice as stress relieving and relaxing as the dancers from other dance forms. This finding also supports the assumption that ballet dance students are under a certain amount of stress and pressure while practicing and the motive behind their training is not to relax but merely to master and meet the certain requirements of the ballet in order to be employed in the future. Also in line with the other findings, the behavior of the ballet dance students was found to be somewhat more externally regulated than that of the other dancers. According to Deci and Ryan (2000), in introjected regulation the behavior is governed mostly by the desire to avoid feelings of guilt and shame from not participating, and the results of the current study reveal that this form of behavior regulation is more prominent among ballet compared to other type of dancers. Thus, the ballet dancers seem to be less self-determined to practice than the other dancers. Worth noting is also that almost half of the vocational ballet students of the Finnish national opera ballet school refused to participate in the study while all the dance students from the other schools did participate. Even though there might have been several reasons for the low participation rate of the ballet students, this drop-out rate implicates that when knowing the research being about participation motivation, the

ballet dancers did not find it worth attending. Conversely, it could be assumed that if the ballet students found the participation to be mainly enjoyable and their behavior was purely self-determined, they probably would not have found it offensive at all to participate in the study. Thus, if the ballet dancers experience the environment as facilitating controlled forms of behavior regulation, the results in the long run might be maladaptive, leading to psychological and physical problems. Indeed, according to studies, problems emerging among ballet dancers include eating disorders (Smolak, Murnen & Ruble, 2000; Lagerstedt, 2011), and burn-out (Laws, 2005). So, in order to avoid the possible maladaptive consequences of the ballet settings which are typically regarded as controlling and authoritarian (Aalten 2005), and where the competition is high and requirements extreme, a task-involving and autonomy-supportive motivational climate would be especially relevant for dancers' well-being. This was also stated by several studies with vocational dancers, further underlining the importance of providing consistent autonomy support, thus making the dancers less emotionally vulnerable in the possible occasions when need satisfaction is low (Quested & Duda, 2010; 2013).

However, overall the motives most reported by all of the dance students were enjoyment and mastery, and their behavior was strongly intrinsically regulated suggesting basic need satisfaction among dance students and implicating that dance participation is driven by intrinsic reasons to participate thus enhancing well-being. More research with dancers, including professional dancers in addition to dance students, is needed in order to draw conclusions about the participation motivation and behavior regulation of dancers, and to decide whether a significant and continuous lack of autonomous self-regulation is evident among ballet dancers. Also, it would be interesting to compare dancers with athletes (both amateurs and professionals) in order to reveal the possible differences and similarities in participation motivation facilitated by sports and performing arts.

Conclusions and future recommendations

Overall, the dance students were found to be intrinsically motivated and self-determined to practice. Low scores reported for external regulation and extrinsic motives further indicate high task-orientation among dance students. Thus, as being one of first attempts to study the participation motives of dancers, the current study adds valuable information to the

sport psychological research about the participation motivation of dancers and indicates that overall, dance is a kind of physical activity that mostly brings about joy and well-being. This conclusion can be regarded as the strength of the study, and maybe other physical activity settings could benefit from the information about the seemingly adaptive participation motivation of dancers. However, the results showed that ballet environment would facilitate more external participation motives and performance-orientation compared to other types of dance environments. Additionally, participation motivation was found to diminish with age and experience.

The biggest limitations of the current study concern the sampling and the measurements. First of all, the sample was quite small, and especially the amount of ballet dancers limited. Also, consisting only of dance students, the participation motivation of the more experienced dancers for whom dance is a way of life and also the main source of income remains unexplored. Furthermore, the current study divided the sample roughly to ballet dancers and dancers from other dance forms, thus not elaborating between the other dance styles. Because of the quite different requirements of the various dance forms, it would be interesting to more carefully and systematically examine the motivation of both dance students and professional dancers representing different dance forms. Additionally, the research being cross-sectional, no conclusions can be made about the dynamics of motivation across time within dancers, and for increasing the understanding for example about the role of the dance environment in building and maintaining adaptive motivation, a longitudinal study, involving qualitative research methods would be recommended. Finally, because of the low reliabilities of two of the PALMS subscales, some adjustments would be recommended, and further validation with different populations is needed. To conclude, because of the strong association between participation motivation and well-being clearly shown in studies, it would be important to further clarify the participation motivation of dancers, especially in such environments like ballet where the requirements are extreme.

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