



THE RELATIONSHIP BETWEEN MOTIVATIONAL CLIMATE, GOAL ORIENTATION AND PSYCHOLOGICAL WELL-BEING AMONG SWEDISH TABLE TENNIS PLAYERS

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Abstract

The objective of this study was to examine the relationship between dispositional goal orientation (task/ego), perceived motivational climate (mastery/performance) and psychological well-being (such as emotional affect and self-esteem) among elite and non-elite table tennis players. Participants were 85 Swedish table tennis players who practice and compete on different levels. The study was carried out quantitatively by using perceptions of success questionnaire, perceived motivational climate inventory, positive and negative affect in sport descriptor, and self-esteem scale. Results showed no significance differences in goal orientations, perceived motivational climate and psychological well-being between elite and non-elite participants. Further analysis however showed significant differences in motivational and psychological well-being patterns that existed within these two groups. The results are discussed in relation to theoretical frameworks and previous research.

Keywords: goal orientation, motivational climate, psychological affect, self-esteem, table tennis players

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Sammanfattning

Studiens övergripande syfte var att undersöka förhållandet mellan målorientering (uppgift/tävling), upplevd motivationsklimat (uppgift/tävlingsorienterat) och psykologisk välbefinnande (emotionell affekt och självkänsla) bland svenska bordtennisspelare. I studien deltog 85 svenska bordtennisspelare som tränar och tävlar på olika nivåer. Studien genomfördes kvantitativt och fyra instrument användes: upplevelse av success, upplevelse av motivationsklimat, positiv och negativ affekt och självkänsla. Resultaten visade inga signifikanta skillnader i målorientering, motivationsklimat och psykologiskt välbefinnade mellan grupperna elit och icke-elit. Ytterligare analyser visade signifikanta skillander i motivationella och psykologiska mönster (självkänsla) som förekom innanför grupperna. Resultaten diskuteras i samband med teoretiska referensram och tidigare forskning.

Nyckelord: bordtennis, målorientering, motivationsklimat, psykologisk affekt, självkänsla

The relationship between motivational climate, goal orientation and psychological well-being among Swedish table tennis players

Understanding and enhancing motivation is one of the most popular areas of research in psychology, as well as in sport and exercise psychology (Roberts, Treasure, & Conroy, 2007). Motivation is the foundation of sport performance and without it even the most talented athlete will unlikely realize his or her complete potential (Duda & Treasure, 2010).

Motivation and Achievement Behavior

According to Roberts and colleagues (2007), motivational process in psychology can be defined as a construct which *energizes*, *directs and regulates achievement behavior*. Using a social-cognitive approach, achievement can be seen as "attainment of a personally or socially valued achievement goal that has meaning for the person in a physical activity context" (Roberts et al., 2007, p. 3). Duda (2007) argued that an extended literature in sport psychology indicates that ability, specifically *perceptions* of that particular ability is fundamental to task execution (e.g., Weinberg, Gould, Yukelson, & Jackson, 1981) and engagement (e.g., Roberts, Kleiber, & Duda, 1981) or disengagement (e.g., Burton & Martens, 1986).

Feltz and Lirgg (2001) stated that a large amount of studies have been grounded in Bandura's (1977) Social Cognitive Theory and have focused on judgments considering task-specific competencies or perceptions of self-efficacy. However, a current understanding of sport motivation recognizes that adaptive versus problematic motivational patterns are not simply whether an athlete has high or low self-efficacy but rather a consideration of the criteria in which athletes decide whether they are able or not. One area of research that may help coaches and sport-psychologists to enhance athletes' motivation is the achievement goal approach, which assumes that differences in the ways in which individuals judge their competence and perceive success, are crucial predictors to variations in direction and intensity of behavior (Duda & Treasure, 2010).

Conceptual Frameworks

Goal Orientation

Based on individuals personal theory of achievement it is assumed that individuals are predisposed to act in terms of either *ego* or *task* involvement. Differences in these approaches may be a consequence of socialization processes through task- or ego involved environments (Nichols, 1989). When individuals are task involved, perceived ability is processed in a self-referenced manner: emphasize lay on task mastery, exertion of effort, and development of one's skills or knowledge of the activity. When ego-involved, striving is marked by demonstration of normative referenced high ability and perception of successful achievement when individuals think they have exceeded or performed equally, or with less effort expended (Balaguer, Duda, & Crespo, 1999). Nicholls (1989) suggested that these two perspectives of goal orientations are orthogonal – individuals can be high in both task and ego orientation, or low in both, or high in one and low in the other (e.g., Roberts, Treasure, Kavassanu, 1997). Furthermore, goal perspectives shouldn't be considered as traits or needs but rather as cognitive schemas that are dynamic to change depending on how information related to one's performance on a task is processed (Roberts et al., 2007).

Perceived Competence

Roberts and colleagues (2007) stated that a key distinction between task- and ego oriented athletes is the way they define and assess competence. When a task goal is manifested, the

concern is the integration of task demand, exerting effort and developing one's competence in a self-referenced manner. When ego goals are manifested individuals' main concern is to demonstrate superior competence in relation to others and/or to normative others. Task-involved individuals are more likely to develop competence over time compared to ego-involved individuals who feel competent when they are compared favorably in relation to others. Therefore, high perceived competence is less likely to be sustained in ego orientation, especially for those who already doubt their ability (Roberts et al., 2007).

Motivational Climate

Amorose (2007) stated that a central variable in predicting the motivation of athletes is situational and relates to the importance of task- and ego involving cues in the achievement context. Duda and Treasure (2010) argued that the way individuals perceive the structure of the environment, namely the *motivational climate* (Ames, 1992; Duda & Balaguer, 2007), can either increase or decrease the probability that a particular goal state (task or ego) is manifested in the domains of practice and competition. Similar to task and ego goal perspectives, Amorose (2007) argued that a mastery (task involving) motivational climate emphasizes learning, improvement, and effort as key variables for success. Coaches and peers who create this type of environment provide optimally challenging and personally meaningful learning activities, where reward, encouragement and evaluation are based on athletes' selfset goals, effort and skill improvement, as well as team cooperation is emphasized. Conversely, a performance (ego involving) oriented climate is characterized by emphasizes on winning and outperforming others, and where criteria for success and failure are processed in a norm-reference manner. This type of climate is marked by that rewards and encouragements are directed toward demonstrations of superior performance and high skilled athletes, where athletes' mistakes are punished and intra-team rivalry is reinforced by the coach.

Psychological Well-Being

Gagné and Blanchard (2007) argued that in the sport psychology literature, well-being has been defined through self-esteem (level, stability and contingency), feelings of guilt and shame, mood, anxiety (trait and state), happiness, sport-related satisfaction, subjective vitality, and physical symptoms. Ryan & Deci (2001) distinguished between *hedonic* and *eudaemonic* views of well-being. Hedonic well-being is associated with happiness, pleasure and positive affect, whereas eudaemonic well-being is related to 'actualization of human potential or the realization of one's true nature'. The main difference between the two perspectives, according to Gagné and Blanchard (2007), is that hedonic well-being refers to the satisfaction of any type of desire, whereas eudaemonic well-being refers to satisfaction of needs that are necessary for personal functioning and human development.

Reinboth and Duda (2006) stated that well-being has been operationalized in various ways in the literature, however most definitions are associated with positive psychological states contrary to the absence of negative cognitions and emotions. Caspersen, Powell, and Merritt (1994) argued that well-being is one of the two fundamental elements of quality of life and refers to the subjective internal states of the individual, or simply the way in which individuals feel both physically and psychologically.

Self-esteem

Harter (1993) stated that one important index of psychological and physical well-being is a person's self-esteem. Elliot (1999) asserted that self-esteem is a personality variable that might be a determinant of goal adoption. According to Fox (2000), self-esteem can be

conceptualized as the extent to which an individual feels positive about the self, and is broadly accepted as key indicator of well-being and regulations to life demands.

Theoretical Frameworks Achievement Goal Theory (AGT)

In the AGT (Nicholls, 1989) it is proposed that individuals are active and goal-oriented organisms that act rationally, and that achievement goals guide achievement beliefs, decision making and behavior in achievement domains (Roberts et al., 2007). A fundamental assumption of the achievement goal framework is that the meaning of achievement activities is what colors ensuing affective responses, cognitions, and behaviors. These meanings derive from the achievement goals endorsed by individuals (Ames 1992a; Nicholls, 1984, 1989). Thus, it is assumed that achievement goals are the interpretive lens influencing how we think, feel, and act while engaged in achievement activities (Duda, 2007).

According to Roberts et al. (2007), a comprehensive goal of action in AGT is assumed to be the desire to develop and demonstrate competence, and to avoid demonstrating incompetence, which can be seen as an energizing process in AGT. Nicholls (1984) stated that individuals possess more than one conception of ability, and achievement goals and behaviors differ depending on perceptions of ability defined by the individual. Nicholls (1984) argued that two conceptions of ability are manifested in achievement contexts: (a) an undifferentiated concept of ability, where ability and effort are not differentiated by the person, either because the individual is not able to differentiate (such as children), or because the individual consciously chooses not to differentiate; and (b) a differentiated concept of ability, where ability and effort is differentiated by the individual. Nicholls (1976, 1978, 1980) argued that children primary possess undifferentiated concept of ability; they cannot differentiate between luck, task difficulty, effort and ability, hence children associate ability with learning through effort. Individuals approaching a task or activity reflect on their perceptions and beliefs about the activity they are involved in, and the form of ability they wish to demonstrate. Thus, these perceptions and beliefs form a personal theory of achievement during the activity, which reflects the individual's perceptions regarding how things operate in achievement contexts. These personal theories affect one's beliefs about how to achieve success and how to avoid failure respectively. Based on the personal theory of achievement, individuals will differ in their conceptions of ability, criteria of success and failure, and the ways they use them (Roberts et al., 2007).

Self Determination Theory (SDT)

The SDT (Deci & Ryan, 1985b; Ryan & Deci, 2000b) is a widely accepted theory in sport and exercise psychology. It is the only major theory of human motivation that recognizes spontaneous and intrinsically motivated activity, and specifies the factors that either heighten or diminish it (Ryan & Deci, 2007). SDT, specifically its component theory (Cognitive Evaluation Theory; CET) proposes that three psychological needs, namely *competence*, *autonomy* and *relatedness* are fundamental for enhancement and maintenance of intrinsic motivation. Ryan & Deci (2007) argued that when these psychological needs are supported in the environment, both intrinsic motivation and internalization are facilitated. Conversely, when the social context thwarts or neglects one of these basic needs, intrinsic motivation, internalization, and positive experience diminish.

Deci and Ryan (2002) stated that there are different types of intrinsic motivation which vary along a self-determination continuum. The least determined type of motivation is *amotivation*, where individuals do not experience the reasons of why they are involved in an activity. Next

on the continuum comes the three types of *extrinsic motivation*: (a) *external regulation* with the least autonomy, where behavior is performed to satisfy an external demand or stems from the external rewards a person expects to secure; (b) *introjected regulation*, where athletes take part in sports because they feel they have to (e.g., 'I will practice today but only because I can't deal with the guilt I will feel if I miss it'); and (c) *identified regulation*, where behavior is based on free choice but as a means to an end, with the athlete not considering the behavior as pleasurable (e.g., 'I will not miss any practice sessions, even though they are unpleasant, because I want to improve my physical appearance'). At the opposite end on the self-determination continuum is the one with the highest autonomy: *intrinsic motivation*, that is, individuals participate in a sport activity because of inherent satisfactions ('the sake of the game') (Duda & Treasure, 2010).

According to Hardy, Gould, and Jones (2007), autonomy based on CET, is usually operationalized in terms of *locus of causality*. That is, individuals have an *internal locus of causality* when they perceive that their actions are initiated by themselves and *external locus of causality* when they experience that their actions are initiated (or forced) by external factors. There are at least two implications from CET to sustain high levels of motivation which are fundamental for achievements at a top level: athletes must obtain positive feedback related to their personal competence, and that athletes must feel partially responsible for initiation regarding practice and competition-related behaviors which have led to success. Top level athletes have a basic need to demonstrate personal competence and autonomy – they choose and engage in difficult and highly demanding tasks, and achievements confirm their perceived competence and autonomy that in turn increase their intrinsic motivation in sport achievement contexts (Hardy et al., 2007).

In the SDT it is proposed that psychological well-being originates from need satisfaction, which Deci & Ryan (2001) defines as "innate psychological nutriments that are essential for ongoing psychological growth, integrity, and well-being" (p. 244). The theory posits three basic needs: autonomy, competence and relatedness, which are closely related to the definition of needs and their influence on well-being (Gagné & Blanchard, 2007). The authors argued that a need is fundamental because thwarting or neglect of needs affect maladaptive patterns such as decrease in psychological or physical well-being.

Previous Research

According to Amorose (2007), an appreciable amount of research based on achievement theory frameworks of motivation, indicate that the climate created by teachers and coaches in educational or athletic domains may have important implications for participants. Individuals who perceive that they participate under mastery emphasized milieu report positive achievement-related outcomes, such as greater enjoyment, more adaptive coping strategies, perceived competence, greater team cohesion, and higher levels of moral functioning (Duda & Treasure, 2010). Parish & Treasure (2003) investigated the influence of perception of the motivational climate and perceived ability on situational motivation and physical activity behavior among adolescents. In accordance with the achievement goal theory, the results showed that perceptions of the mastery climate were strongly related to self-determined motivational patterns, such as intrinsic and identified motivation, and most significantly predicted the actual physical activity behavior of the participants (Roberts et al., 2007). Roberts et al. (2007) argued that a large amount of literature in exercise and sport contexts illustrated that creation of a mastery oriented motivational climate has a considerable importance for optimizing positive (e.g., well-being, sportspersonship, persistence, task perseverance, adaptive achievement strategies) and debilitating negative (i.e., overtraining,

self-handicapping) responses (e.g., Kuczka & Treasure, 2005; Ommundsen & Roberts, 1999; Treasure & Roberts, 2001).

According to Duda (2007), a considerable extent of studies on student-athletes, elite sportsmen, and high level competitors, (e.g., Duda, 1989; Roberts & Ommundsen, 1996) supported the interdependencies between goal orientations and perceptions of causes of success. Biddle, Wang, Kavussanu, and Spray (2003) examined 10 studies on the relationship between goal orientations and athletes' beliefs about what the wider purposes of sport involvement should be (e.g., Carpenter & Yates, 1997). Results showed that task orientation tend to correspond to beliefs that sport participation should promote a work-ethic orientation to mastery (effect size = 0.56), foster social responsibility and citizenship (effect size = 0.32) and encourage active lifestyle (effect size = 0.37). Ego orientation was related to the belief that an important function of sport participation is to enhance social status (effect size = 0.53) (Duda, 2007).

A meta-analysis (Ntoumanis & Biddle, 1999) summarizing the effect of task- and ego-involvement in sport on athletes' affective responses demonstrated that being task oriented when practicing sport was related to higher positive affect. The authors explained that task oriented individuals are likely to be more intrinsically motivated and have an enhanced sense of control which may result in greater perceived well-being. In another meta-analysis (Ntoumanis & Biddle, 1998), researchers examined whether climates that emphasize task vs. ego orientation influenced well-being. Results indicated that a mastery-climate was positively related to positive affect and intrinsic motivation, and negatively related to feelings of worry. In contrary, performance-climate was negatively related to positive affect and intrinsic motivation, and positively related to feelings of worry.

Duda (2007) suggested that an exciting future perspective of the achievement goal theory application is studying the role of achievement goals in relation to the *quality* and *quantity* of motivation. Quantity of motivation refers to how an individual is performing and the degree of sport investment at a specific point of time; the quality of motivation is related to the athlete's perceived physical, psychological, emotional, and moral development in the long-term. Studies examining the quality of athlete's achievement endeavor showed dispositionally and situationally emphasized achievement goals to predict moral attitudes and behaviors among athletes (e.g., Duda, Olson, & Templin, 1991; Kavussanu & Roberts, 2001). Results indicated that that task involvement tend to correspond to better sportspersonship, whereas ego involvement, and/or perceived performance-climate showed a stronger link to cheating and aggressive behavior (Duda, 2007).

According to Duda (2007), research in the achievement goal frameworks (e.g., Reinboth & Duda, 2004) examined the reciprocal interaction between achievement goals and indicators of sport participants' psychological welfare. For example, Kaplan and Maehr (1999) studied the interplay between achievement goals and self-worth, and stated that goal orientations may operate as 'self-primes', and when ego goal is manifested there is a presumed increase in self-awareness and a concern with 'validating one's sense of self' throughout the activity. Thus, "when ego goal is endorsed, it focuses attention on who one is, what one can be, or what one can do" (Duda & Hall, 2001, p. 244, cited in Duda, 2007). Conversely, when individuals emphasize task orientated criteria for success, their attention is directed toward on what they are doing (Duda, 2007).

A large extent of studies investigating the relationship between goal orientations and perceived self-worth indicated that task involvement positively correlates with the level of self-esteem (Duda, 2007). In the study of McArdle, Duda, and Hall (2004), young British athletes were sorted out based on their goal involvement and other achievement-related salient features (e.g., regulation and perfectionistic tendencies). Athletes who reported high task involvement showed the highest levels of self-esteem, whereas high task and low ego athletes demonstrated the lowest degree of labile self-esteem. Highest levels of labile self-esteem were reported by athletes with high ego and low task orientation. One reasonable explanation for the findings of McArdle et al. (2004) is that these athletes' self-evaluations as people were based on how they were doing in sports, which illustrates that their perceptions of self-worth were dependent on demonstration of superior sport ability (Duda, 2007).

Another study by Reinboth and Duda (2004) on 265 young male soccer and cricket athletes, examined the relationship between the perceived motivational climate and perceptions of ability related to psychological and physical well-being. Results illustrated that contingent self-esteem was positively related to perception of performance-climate. In accordance with Dweck's (1999) and Nicholls's (1989) predictions, reported self-worth showed lower levels among athletes with low perceived ability who participated in a milieu that was perceived to be high in ego orientation (Duda, 2007).

Studies by Pensgaard & Roberts (2000, 2001) dealt with goal orientation profiles among Norwegian Olympians and indicated that even though these athletes score high on both ego and task orientation, a high task involvement is desirable for further personal improvements. Furthermore, the authors in their studies showed that elite athletes emphasize the role of a coach, as the main architect, is important in that he or she is supportive and heightens athletes' self-confidence (Roberts et al., 2007; Duda, 2007).

Methodological Approaches

Achievement goal frameworks have dominated in research on achievement motivation in the athletic domain since 1990's. This primarily has been based on conceptual contributions of Nicholls (1984, 1989), and has had a major impact on sport motivation research since. A large amount of research was, according to Duda (2007), directed to motivational processes in physical education classes (e.g., Biddle, 2001; Duda & Ntoumanis, 2003), and exercise contents from an achievement goal perspective (e.g., Biddle, Soos, & Chatzisarantis, 1999; Kimiecik, Horn, & Shurin, 1996). A systematic review of published articles by Biddle, Wang, and Kavassanu (2003) on correlations of goal orientations in the sport domain involved 98 studies, with 110 independent samples (total N = 21,076), illustrated the extensiveness of this line of research (Duda, 2007). Today there is a plethora of studies grounded in achievement goal theory, but most of them are cross-sectional and only a few describe long-term interventions (e.g., Christodoulidis, Papaioannou, & Digelidis, 2001). The majority of research from a self-determination view in sports has basically focused on recreational or nonelite athletes (such as youth and university participants) (Treasure, Lemyre, Kuczka, & Standage, 2007). Treasure et al. (2007) argued that there is less extent of research regarding insight into motivational processes at elite level which by definition represent a very small segment of the general sport population.

Roberts and colleagues (Roberts & Balague, 1989; Roberts et al., 1998; Treasure & Roberts, 1994b) have developed the Perceptions of Success Questionnaire (POSQ), and Duda and colleagues (Duda & Nicholls, 1992; Duda & Whitehead, 1998) have developed the Task and

Ego Orientation in Sport Questionnaire (TEOSQ). Both have acceptable reliability and construct validity (e.g., Duda & Whitehead, 1998) (Roberts et al., 2007).

Duda (2007) stated that the majority of work conducted in the sport domain was concentrated on the perceptions of the motivational climate created by coaches via either version 1 or 2 of the Perceived Motivational Climate in Sport Questionnaire (PMCSQ-1 or PMCSQ-2; Newton, Duda, & Yin, 2000; Seifriz, Duda, & Chi, 1992; Walling, Duda, & Chi 1993), instruments which assess task and ego dimensions of the situational structure (Duda, 2007).

Suls (2006) stated that Rosenberg's Self-Esteem Scale (RSES; Rosenberg, 1965) is one of the most frequently used measures of global self-esteem. Several studies investigated the interdependence between dispositional goal orientations and reported psychological affect (e.g., Duda, Fox, Biddle, & Armstrong, 1992), where the Positive and Negative Affect Scale (PANAS; Watson, Clark, & Tellegen (1988) was used (Duda, 2007).

Reflections and Future Directions

Roberts et al. (2007) argued that it is the goals themselves that are critical determinants of achievement cognition, affect and behavior, which give meaning for the person to invest personal resources, as these reflect the underlying causes of achievement behavior in achievement domains. The authors underlined that the way a person interprets own performance, reflects what the person considers to be essential in a particular situation, and the person's beliefs about what it takes to be successful in a particular context (Roberts et al., 2007), and consequences of sport participation (Duda, 2007). It seems reasonable to state that individual differences in goal orientation need to be considered in systematic study of human motivation in the sport context (Duda, 2007).

Wang and Biddle (2007) argued that autonomous motives from a self-determination view, together with concepts from achievement goal perspective, demonstrate a direct relationship with people's motivational patterns, physical activity participation, perceptions of self-esteem, and physical self-worth. The mediation effect on longitudinal studies that investigate the interplay between goal orientations and perceptions of the motivational climate over time will contribute to a deeper understanding of the interdependencies between individual differences and situational achievement goals in sport settings (Duda, 2007). The achievement goal perspective is a major approach underpinning achievement motivation research in the sport domain today (Duda, 2007). The few intervention studies that have been carried out illustrate that a mastery-climate has positive cognitive, behavioral and affective consequences (Roberts et al., 2007). Roberts et al. (2007) argued that all of the studies in the goal achievement framework have been short-term and are limited in what they assess. The authors conclude that randomized and longitudinal studies are necessary to assess the causal role of motivational climates and motivational consequences (Roberts et al., 2007).

Summary

According to Roberts et al. (2007), performance goals are more likely to lead to maladaptive achievement behavior, especially when individuals' perceive competence to be low, are concerned with failure, or are invested in protecting self-worth. In such circumstances, evidence illustrate decreased motivational levels, low task investment, low persistence, poor performance, low satisfaction and enjoyment, and participants feel more negative about themselves in achievement domains. However, high ego (or performance) goals with high perceptions of competence might be facilitative and motivational for some individuals (e.g., Pensgaard & Roberts, 2002), but are more fragile and can lead to maladaptive achievement

behavior as context information is processed (e.g., Dweck & Leggett, 1988). Conversely, task-involved individuals' who perceive mastery criteria in the environment, motivation is optimized, individuals are task-invested, their persistence is higher, performance is higher, satisfaction and enjoyment is higher, and they feel more positively about themselves. Task-involvement has consistently been associated with desirable cognitive and affective reactions. Sport psychologists recommend leaders and peers to promote task involvement as well as create mastery-oriented climates to facilitate effective motivational patterns, even if individuals are high on ego orientation (Roberts et al., 2007).

Objectives

The objective of this study is to investigate the relationship between motivational climate, dispositional goal orientations and psychological well-being among elite and non-elite Swedish table tennis players. Two research questions are of interest:

- (a) Are there significant differences in perceived motivational climate, goal orientations, and psychological well-being between elite and non-elite athletes?
- (b) Are there specific patterns in relationships between perceived motivational climate, goal orientations, and psychological well-being within the elite and non-elite groups?

Method

Participants

The total sample of this study involved 85 table tennis players (69 males; 16 females) from four different elite clubs located in the southeastern part of Sweden. The athletes' mean age were 18.40 years (SD = 5.23). The actual competitive level of the participants ranged from local to international with 35 elite athletes competing on national/international competitions, and 48 non-elite athletes engaged in local/regional competitions.

Table 1. Description of the sample

	Age	Gender	Class	Level
Mean	18.40			
Standard deviation	5.23			
Frequency		Male (69)	Senior (30)	Elite (35)
		Female (16)	Junior (33)	Non-elite (48)
			Cadet (22)	

Instruments

The instrument-package was composed in both paper and digital versions. Both instrument types were identical and were distributed personally and electronically (e.g., sent by e-mail or a link to the survey was attached on the club's homepage) (see Appendix 1). The Perception of Success Questionnaire (POSQ; Roberts, Treasure, & Balagué, 1998) was used to measure levels of task and ego orientation variables. The third version of Perception of the Motivational Climate in Sport Questionnaire (PMCSQ-3; Newton, Duda, & Yin, 2000) was used to assess mastery and performance oriented dimensions of the motivational climate. Additionally, Rosenberg's Self-Esteem Scale (RSES; Rosenberg, 1965) and Positive Affect and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988) were used to assess the participants' global self-esteem and psychological affect respectively.

Perception of Success Questionnaire

The Swedish version of POSQ (Roberts et al., 1998; translated by Christensen, 2010) was used to measure athletes' dispositional goal orientation. This 12-item instrument with task and ego subscales has previously showed acceptable reliability and validity as well as strong conceptual congruity across a variety of samples (Duda & Whitehead, 1998). The Cronbach alpha of the Swedish version showed acceptable reliability, and the coefficient alphas for task and ego subscales were .77 and .72 respectively (Christensen, 2010). Examples of ego orientation items were "I feel successful in sport when I defeat others", and items reflecting respondents task orientation were "I feel successful in sport when I overcome obstacles". In order to stimulate answers that are relevant to table tennis participation, the word *sport* was replaced with *table tennis*. Item responses are rated on a five-point Likert-type scale, ranging from 1, *strongly agree*, to 5, *strongly disagree*.

Perception of the Motivational Climate in Sport Questionnaire

Athletes responded to the Swedish version of PMCSQ-3 which contained 38-items examining the degree to which the climate created by the coach was deemed to be more or less mastery-or performance-oriented. Mastery oriented climate has four sub-dimensions (corporate learning, improvement, important role, and reinforcement of effort) whereas performance oriented climate has three sub-dimensions (punishment of mistakes, unequal recognition, and intra-team rivalry). Exemplary mastery-oriented climate item were "In our practice-group, the coach makes sure participants improve on skills they are not good at", and performance-oriented climate item "In our practice-group, participants are encouraged to outperform the other participants". Although PMCSQ-3 is a relatively new instrument and there is no documented reliability, its' previous version PMCSQ-2 on Cronbach alpha test showed .87 on performance and .88 on mastery orientation (Newton, Duda, & Yin, 2000). Item responses were rated on a five-point scale ranging from 1, *strongly agree*, to 5, *strongly disagree*.

Positive Affect and Negative Affect Schedule

The PANAS is a self-report schedule which consists of a 20-item mood scale and was developed to provide brief measures of positive and negative affect. Respondents were asked to rate their extent to which they have experienced each particular emotion during the past week. Examples on items that reflected participants' positive affect were "strong" and "enthusiastic", and reflecting respondents' negative affect was "nervous" and "afraid". The schedule was ranged on a five-point Likert-scale, from 1 'very slightly or not at all', 2 'a little', 3 'moderately', 4 'quite a bit', and 5 'very much'. The Cronbach alpha of the Swedish version showed .73 for the total score, whereas .89 for the positive affect and 0.72 for the negative affect respectively (Geijer, 2010).

The Rosenberg Self-Esteem Scale

The RSES (Rosenberg, 1965; translated by Weibull & Richard, 2009) was used to measure athlete's global self-esteem as overall evaluations of personal worthiness as a human being. This measurement consists of a 10-item scale which are ranged on a 4-point Likert-scale from 1 'strongly agree' to 4 'strongly disagree'. Five of these items' response scales are reversed. Participants were supposed to range their responses on statements such as "On the whole, I'm satisfied with myself" and "I certainly feel useless at times". The total score of the RSES were calculated by summing up the score of all ten items.

Procedure

Four elite clubs' head-coaches were contacted by telephone and e-mail, and the key aspects of the study were introduced. When interest was shown, a meeting was set up to further discuss

the research process and the probable benefits of the study. After a closer look at the study's purpose and its ethical aspects (e.g., confidentiality and the right to withdraw from the study at any time), permission by the coaches was given to carry out the study. Most of the questionnaires were distributed personally on practice sessions. Athletes who were absent (or by free choice) received the survey via e-mail whose e-mail addresses were obtained from the coaches. The survey was also distributed digitally by adding a direct link to the study on the clubs' own website, through which participants could simply get access to the survey by one click (see Appendix 1 to get access to the survey). Immediately after the link was accessible, all the coaches were informed and kindly asked to remind their athletes to take part in the study. A few days after the study has started, another reminder was sent to coaches. Keeping in mind that some athletes might have more than one coach (e.g., school, club, and national team) they usually work with, participants were instructed to respond by referring to the coach who is responsible for practice sessions preceded at the club level.

Data analysis

Data analyses were treated in the statistical software PASW. With the objectives of the study in mind, statistical analyses were made in 4 steps as follows:

- Step 1: Descriptive statistics were computed on the background information provided from the whole sample. Participants were divided into two groups, elite and non-elite, based on their latest official classification by the Swedish Table Tennis Federation (SBTF; Svenska Bordtennisförbundet). Elite participants consisted of 'elite' and 'class 1' players, whereas 'non-elite' players consisted of levels between 'class 2' and 'class 5'.
- Step 2: All the instruments' subscales were computed and their means were calculated. The following sub-dimensions were obtained: task-involvement and ego-involvement; mastery-climate and performance-climate; positive affect and negative affect; and self-esteem (total).
- Step 3: To examine differences in perceived motivational climate, goal orientation, and psychological well-being between elite and non-elite participants, a one-way ANOVA was performed.
- Step 4: To examine how motivational patterns relate to each other within each group based on the measurements' different subscales, a 'split file' method was performed. This method divides elite from non-elite groups from each other so that obtained statistical outputs are presented separately for elite and non-elite participants (Brace, Kemp, & Sneglar, 2009).

Results

The whole sample

Descriptive statistics of the whole sample in the current study indicated that both groups of participants show a higher task then ego involvement, and they perceive that the motivational climate is more mastery then performance oriented. Furthermore, both elite and non-elite participants experience more positive than negative emotions, and their level of global self-esteem is relatively moderate (see Table 2 below for more details).

Table 2. Descriptive statistics for the whole sample (M, SD and range for all variables)

	M	SD	Range
Goal orientation			_
Task	4,21	0,52	1,50-5,00
Ego	5,00	0,80	1,67-4,83
Motivational climate			
Mastery climate	3,72	0,53	2,25-4,90
Performance climate	2,35	0,54	1,22-3,56
Positive and negative affect			
Positive affect	3,35	0,49	2,00-4,80
Negative affect	2,30	0,47	1,50-3,70
Self-Esteem			
Self-Esteem (total)	2,10	0,46	0,70-3,00

Elite vs. non-elite athletes

A one way ANOVA test was performed to examine differences in the relationship between goal orientation, motivational climate and psychological well-being between elite and non-elite athletes. Results indicated no significant differences between elite and non-elite athletes (see Table 3 for more details).

Table 3. Means, standard deviations and F-values between elite and non-elite athletes

	Elite		Non	Non-elite		
	(n =	: 35)	(n =	48)		
	M	SD	M	SD	F	р
Goal orientation						
Task involvement	4,14	0,43	4,29	0,58	1,62	0,21
Ego involvement	3,51	0,74	3,52	0,85	0,00	0,98
Perceived motivational climate						
Mastery climate	3,76	0,61	3,74	0,41	0,03	0,87
Performance climate	2,25	0,52	2,41	0,55	2,00	0,16
Positive and negative affect						
Positive affect	3,33	0,49	3,37	0,50	0,14	0,71
Negative affect	2,26	0,44	2,33	0,50	0,43	0,51
Self-esteem (total)	2,15	0,43	2,07	0,49	0,59	0,45

Note: Df = 1.81

Motivational and psychological patterns within elite and non-elite athletes

Further analysis examined whether typical motivational and psychological patterns exist within elite and non-elite participants. A Pearson's r test was performed between the various subscales of goal orientation (task and ego), perceived motivational climate (mastery and performance), and psychological well-being (positive and negative affect, and self-esteem). Results showed 8 significant correlations within the elite group, and 4 significant correlations within the non-elite group (see Table 3 and 4 for further details).

Elite athletes

The obtained results indicated a positive correlation between task orientation and global self-esteem (r = .461), and a positive correlation between ego orientation and negative affect (r = .383) among elite athletes. Furthermore, results showed that a mastery-oriented climate was positively associated with positive affect (r = .498) and self-esteem (r = .459), and negatively

associated with negative affect (r = -.349). There was a negative correlation between performance-oriented climate and participants' self-esteem (r = -.479). No other significant correlations were found between the different subscales among elite athletes (see Table 3 for further details).

Table 3. Correlations between goal orientation, motivational climate and psychological affect in elite athletes

	Task	Ego	Mastery climate	Performance climate	Positive affect	Nagtive affect	Self-esteem
Task	1	0,11	0,32	-0,14	0,12	-0,25	,461**
Ego		1	-0,103	0,22	0,136	,383 [*]	0,057
Mastery climate			1	-,498 ^{**}	,498**	-,349 [*]	,459 ^{**}
Performance climate				1	-0,19	0,309	-,479 ^{**}
Positive affect					1	0,051	0,242
Negative affect						1	-,631**
Self-esteem							1

^{*}Correlation is significant at 0.05 level

Non-elite athletes

Among non-elite participants, Pearson's r test showed that ego orientation was negatively related to positive affect (r = -.411), and a performance-climate showed negative correlation with self-esteem (r = -.294). Results also illustrated that self-esteem was negatively associated with negative affect (r = -.319), and positively associated with positive affect (r = .376). No further significant correlations were found among non-elite athletes (see Table 4 for more details).

Table 4. Correlations between goal orientation, motivational climate and psychological affect in non-elite athletes

	Task	Ego	Mastery climate	Performance climate	Positive affect	Nagtive affect	Self-esteem
Task	1	0,011	0,223	-0,071	0,068	-0,05	0,092
Ego		1	0,016	0,089	-,411 ^{**}	-0,057	-0,041
Mastery climate			1	-0,219	0,26	-0,01	0,267
Performance climate				1	-0,183	0,044	-,294 [*]
Positive affect					1	-0,116	,376**
Negative affect						1	-,319 [*]
Self-esteem							1

^{*}Correlation is significant at 0.05 level

^{**}Correlation is significant at 0.01 level

^{**}Correlation is significant at 0.01 level

Summarizing the results obtained from the correlation analysis, the study indicated that participants' goal involvement has an impact on psychological affect and self-esteem. More specifically, task involvement is positively related to elite athletes' self-esteem, whereas ego involvement is positively related to negative affect. Furthermore, a perceived mastery-climate is positively associated with positive emotional affects, and a perceived performance-climate is negatively related to elite performers' global self-esteem. Even non-elite participants showed a negative relationship between ego involvement and positive affect, and negative correlations between performance-oriented motivational climate and self-esteem. Additionally, both elite and non-elite athletes showed a negative correlation between negative affect and self-esteem.

Discussion

The research questions of interest in this study were to examine whether there exist: (a) significant differences in perceived motivational climate, goal orientations, and psychological well-being among elite and non-elite Swedish table tennis players; and (b) specific patterns in relationships between perceived motivational climate, goal orientations, and psychological well-being within elite and non-elite groups.

Elite vs. non elite athletes

A one-way ANOVA test showed no significant differences in any of the motivational climate, goal orientation and well-being subscales between the two groups. According to the author's knowledge, there is a less amount of sport specific research that examines differences in these variables comparing elite and recreational (or amateur) participants. A possible interpretation of the result can be related to insufficient sample size, participants' characteristics and the ways in which they were separated, but also to the instruments used in relation to the structure of the sport specific environment.

Motivational and psychological patterns within elite and non-elite groups

Results obtained from Pearson r tests indicate that elite athletes show a double amount of significant correlations compared to non-elite athletes. Most of the correlations were found in the motivational climate and psychological well-being relationship among elite athletes, whereas non-elite athletes only showed a single correlation between these variables. None of the groups showed any relationship between the perceived motivational climate and athletes' goal orientations, which is rather surprising taking into account what previous research has shown (e.g., Ntoumanis & Biddle, 1998; Pensgaard & Roberts, 2002). It is however worth to note that although task involvement and mastery-climate relationship did not show significant correlation, its' value was quite close to significance (r = .32) among elite athletes. The most interesting results obtained in this study are however the number of significant correlations of dispositional goals and perceptions of the climate in relation to self-esteem which is clearly evident especially among elite athletes.

Elite athletes

Results concerning the relationship between goal orientation and psychological well-being among elite participants indicated a positive correlation between task involvement and self-esteem. That is, the higher the task involvement the more athletes feel good about themselves. Furthermore, elite athletes showed a positive correlation between ego involvement and negative affect, meaning, the more ego involvement the higher athletes experience negative emotions. A large amount of studies that investigated the relationship between goal orientations and perceived self-worth indicated that task orientation positively correlates with

the level of self-esteem (Duda, 2001). Study by McArdle et al. (2004) also demonstrated that high task involvement was associated with the highest levels of self-esteem.

Regarding patterns in the relationship between the motivational climate and psychological well-being, elite athletes showed a negative correlation between mastery-climate and negative affect, and a negative correlation between performance-climate and self-esteem. These findings were expected and are supported in meta-analysis by Ntoumanis and Biddle (1998), which examined whether the motivational climate influences athletes psychological well-being, and found that mastery-climate was positively related to positive affect, whereas performance-climate was negatively related to positive affect. Study by Reinboth and Duda (2004) further demonstrated that contingent self-esteem was positively related by perceptions of performance-climate. Elite athletes in this study indicated that perceptions of a mastery-climate influence their psychological well-being in a positive manner, whereas perceptions of a performance-climate affect their well-being in a negative way during practice sessions.

Non-elite athletes

Examining the relationship between goal involvement and well-being among non-elite participants, a negative relationship between ego involvement and positive affect was found, whereas no significant correlations existed between task involvement and other well-being subscales. That ego involved athletes experience less positive affect does support the sport psychology research (e.g., Ntoumanis & Biddle, 1999; Kaplan & Maehr, 1999) which indicated that ego involved athletes tend to relate negatively to positive affect and intrinsic motivation, and positively to feelings of worry. Further results among non-elite athletes showed that performance-climate was negatively related self-esteem. That is, the more non-elite athletes perceive the climate to be performance oriented, the more they feel bad about themselves. This result also supports previous research that investigated the relationship between the motivational climate and well-being (e.g., Ntoumanis & Biddle, 1998, 1999; McArdle et al., 2004). Non-elite participants illustrated that performance-climate affect their self-esteem in a negative manner during practice.

Kaplan & Maehr (1999) demonstrated that when ego goal is manifested there is a presumed increase in self-awareness and a concern with 'validating one's sense of self' in the activity. Duda (2007) argued that when individuals emphasize task oriented criteria for success, their attention is directed toward on what he or she is doing, not what he or she is (Duda, 2007). It seems reasonable to argue then that when athletes are task involved, the process will most likely activate optimal psychological mechanisms that provide control over the course of action, which in turn facilitates learning, further personal improvement and higher positive emotions. In contrary, ego involvement participants' overall self-evaluations should not be based on how they are doing in sports, which can be a consequence of ego goal involvement, but rather what they are doing in a self-reference manner.

Similarities and differences between elite and non-elite athletes

The correlation analysis results indicated that there exist some similar patterns regarding the relationship between goal involvement and psychological well-being, and perceived motivational climate and well-being within each group. More specifically, both groups showed that ego involvement has a negative impact on emotional affect. Another pattern of similarity found in the study is that elite athletes' task involvement was positively associated with their self-esteem, whereas non-elite athletes did not show any relationship between these variables. Arguments regarding participants' achievement goal differences can be related to various ways in which athletes personally define success and failure in the practice context,

which might be a consequence of the coach-created environment. Elite athletes might have a stronger athletic identity that may affect the way they strive to achieve success. Brewer, Van Raalte, and Linder (1993) argued that athletic identity is a part of a person's self-concept. The athletic identity's influence on the person's self-esteem is being determined by the competence and importance the person attributes to the athletic domain. If self-esteem can be seen more as a trait, compared to emotional affect, which is more like a dynamic state, it may be argued that elite athletes' athletic identity might be more integrated in their global selfesteem, compared to non-elite athletes. This might reflect their higher level of sport engagement which in turn may illustrate their higher level of goal involvement. Furthermore, elite athletes may be more aware of what it takes to improve the technical and tactical qualities in order to progress (know-how), which may be a result of their types and levels of motivation. It can be stated that elite athletes recognize that task involvement might be the only way to improve their game both technically and psychologically, whereas non-elite athletes may not be fully conscious about what the game requires. Additionally, this may also affect the ways in which adepts interpret the quality and the type of the coaches' technical feedbacks and reinforcements, which are based on the players' various levels of table tennis knowledge and experience.

Both elite and non-elite groups reported that a performance-climate has a negative impact on self-esteem. However, only elite athletes showed that a mastery-climate influences their emotional affect during practice. One reasonable argument for this can be that both elite and non-elite athletes recognize the elements of a performance-climate that affect their emotions in a negative fashion. This might be especially the case when the coach stresses elements of the environment (e.g., days before competition) that players associate with a performanceclimate (e.g., intra-team rivalry), which may indicate the negative impact on players' emotional affect. It is however hard to tell whether players' negative affect is a consequence of their ego involvement or it is a consequence of a coach-created performance-climate. However, elite athletes might recognize the elements of a mastery-climate more easily than non-elite participants, which may be grounded in levels of sport specific knowledge and previous experiences. Another argument may be that elite and non-elite athletes view the world differently in terms of success and failure criteria (Nicholls, 1989 in Roberts et al., 2007), which may influence the way in which they interpret and experience the situational variables related to the motivational climate. Elite athletes may have a clearer and identified definition regarding purposes and motives of sport practice, and that their achievement goal orientations match more closely the coach created situational variables. Additionally, it may also be suggested that coaches' frequency and quality of interaction (e.g., instructional feedback and the interpretation of these) with their adepts during practice may differ between elite and non-elite athletes, and might therefore fail to create a more mastery-climate among non-elite participants.

It can be argued that the table tennis culture of the practice environment in Sweden mainly focuses on participants' skill development and the integration of these into an efficient individual playing system. Due to the technical and tactical complexity of the sport, with all the amount of details which are mutually dependent on one another, it can be stated that the system of play consists of three to four subsystems (e.g., service-attack, receive-defense, rallies), which in turn are divided into several sub-dimensions (e.g., different forehand techniques, combining forehand and backhand, footwork etc.). In order to develop an efficient playing style, a player must first of all be able to master the fundamental sub-dimensions of the playing system. The practice-sessions are therefore generally based on four to five individual exercises with clear purposes to develop specific patterns of the playing system,

such as irregularly exchanging forehand and backhand strikes or forehand contra-attack. It is however interesting to note that when or if the main focus is only on miniature patterns of the game, it may lead to that participants fail to evaluate and follow their own development that are related to the 'big picture' and their progress as a whole. It could therefore be argued that being ego involved in table tennis seems to be an unnatural way of striving, especially during practice sessions, where these are basically founded on developing skills related to the game or the tasks that lead to efficacious individual playing systems. It would however be interesting to investigate whether athletes' task and ego involvement changed over time if the structure of the practice environment changed from exercises to complete competition-like games during practices.

Furthermore, individuals' goal orientations can be associated with how the practice environment is created, such as variations in coaching behavior (leadership styles, feedback patterns, and autonomy supportive behaviors) but also interpersonal communication in the environment and what kind of specific criteria is emphasized in the sport specific environment. For example, an instructional feedback may be facilitative for one athlete; the same type of feedback from the coach may be interpreted as controlling by another athlete.

The most interesting results obtained in this study are the amount of correlations of dispositional goals and perceptions of the climate in relation to self-esteem, which is clearly evident in the study, especially among elite athletes. Reasonable assumptions to these results might be associated with that table tennis players may feel confident and competent only when they feel that they can master given tasks and improve during practice (e.g., my backhand defense is getting better). Additionally, a typical structure of a table tennis practice does not include competitions between the participants but rather focuses on skill and ability development, which may result in adaptive and identified emotional patterns, such as feeling good about the self. It may also be suggested that table tennis participants' self-evaluations are mainly based on how successfully they complete certain tasks on practice which may give them a higher perceived competence, personal improvement, and higher sense of control, even though they do not always can relate or fully evaluate their system of play in the big picture.

Results related to theoretical frameworks

The correlation tests on elite athletes showed that task involvement was positively associated with self-esteem, whereas ego-involvement was negatively associated with negative emotional affect among both elite and non-elite participants. Task involved individuals, who are primarily focused on the mastery of a task, are more likely to feel more positive about the self during practice sessions. Conversely, ego orientated individuals, who are mainly concerned with how to accomplish a task compared to others, are more likely to experience unpleasant emotions. Overall findings are in accordance with assumptions of Achievement Goal Theory (AGT; Nicholls, 1989) which suggests that the meaning of achievement activity is what colors ensuing affective responses, cognitions, and behavior, which derive from the achievement goals endorsed by the individuals (Roberts et al., 2007).

Further results among elite participants indicated that athletes' perceptions of mastery-climate were positively related to positive affect and self-esteem. Perceptions of a performance-climate were negatively associated with self-esteem, a pattern that was evident within both elite and non-elite groups. Results are consistent with the tenets of the SDT, in accordance with Amorose (2007), in that fulfillment of the fundamental human needs for competence, autonomy, and relatedness is essential for facilitating self-motivation, social development, and

personal well-being. Furthermore, the theory suggests that all factors that influence these fundamental needs can ultimately affect the type of motivation one develops in a given context. The extent to which individuals become task versus ego involved in an activity affect perceptions of competence, autonomy, and consequently intrinsic motivation (e.g., Duda & Hall, 2001). The SDT approach suggests that any actions from the part of the coach that positively affect an athlete's perceptions of competence, autonomy, or relatedness will ultimately help to facilitate more self-determined forms of motivation in the athlete, whereas behaviors that thwart or inhibit the satisfactions of these needs will have an opposite affect (Amorose, 2007).

Methodological reflections

A quantitative approach was chosen to carry out this study partly because the study wished to see how the motivational climate, athletes' goal orientations and their psychological well-being were related to one another on a larger scale. The advantage of this design is that it makes possible to test a larger group. Although this cross sectional study can bring out a general apprehension about a large sport specific population, a qualitative design where we get a deeper understanding of how athletes experience the interplay between the motivational climate and goal orientations could however provide more in-depth answers to get a deeper understanding of the relationship between these variables on an individual level.

Examining differences in motivational climate, goal orientations and psychological wellbeing between elite and non-elite participants, a one way ANOVA showed no significant differences in any of POSQ, PMCSQ-3, RSES, and PANAS subscales. Reasonable explanations can among others be related to the sample size, to the participants' characteristics, and to the instruments used in relation to sport specific milieu. First, a bigger sample could probably bring out some more significant differences between elite and nonelite participants. Second, participants' competition level was used as a critical variable to separate athletes into elite and non-elite groups. An athlete's official ranking system is mainly based on how often he or she participates on regional or national competitions, which may not fully reflect an athlete's actual competition level (e.g., older class 2 players can still keep a relatively high level). In addition, participants in this study represented four different clubs; coaches may differ in ways in which they create a motivational climate. Third, the PMCSQ-3 was a crucial instrument in the study which basically is designed for team sports. It may well be that the structure of a table tennis practice environment (e.g., relatively high task involvement) makes that athletes react and respond differently on this type of measurement. Table tennis is a cooperative individual sport – during a practice session a player is fully selfengaged in the activity and additionally in the opponent that he or she is dependent on. This might result in that participants might not be able to fully reflect or recognize the emphasis of the environment (e.g., paying attention to the coaches' interactions with other players) the way participants in team sport do (e.g., soccer). A more sport specific measurement regarding the motivational climate might have shown some different results.

Most of the correlation patterns in this study were found between the motivational climate, emotional affect and self-esteem. In addition, athletes' goal involvements were also related to psychological affect and self-esteem. The study did not find any correlation patterns between the motivational climate and goal orientation within elite and non-elite groups, which is quite surprising. Plausible arguments for this result might also be related to sample size; larger samples might influence the outcome. A clearer criteria regarding distinction between elite and non-elite participants could also have affected the results. Furthermore, the sport specific structure of the environment may have had an impact on the results. That it, it may well be

that situational variables during practice sessions do not interact with the participants' levels of goal involvement due to typical sport specific environment, indifferent to their levels of competence. It may be argued that a table tennis culture is relatively highly task involved and coaches mainly focus on athletes' task improvement and fosters therefore less ego involvement in participants. Generally speaking, table tennis consists of several small details regarding combinations of both technical and tactical components which are reciprocally dependent on one another. In order to develop, an athlete needs to focus on a few details at a time (e.g., in order to successfully attack with forehand after service, depends on the ability to judge the balls' spin, speed and length). According to Duda (2001), studies that investigated the relationship between the coach-created climate and athletes' reported goal orientations illustrated that perceptions of the mastery- or performance-climate tend to be low to moderately associated with athletes' reported task and ego orientation. Given that this kind of studies are cross-sectional, it is hard to tell whether dispositional goals affect what athletes key in on in their social environments and whether the climate influences how athletes judge their competence and define success in sport contexts (Duda & Balaguer, 2007).

Applications

Coaches and peers are actively involved and spend many hours in interacting with athletes, and play therefore a critical role in shaping the quality of athletes' sport experience. In order to maximize athletes' psychological satisfaction and well-being in sport domains, it is essential to recognize and emphasize factors that heighten athletes' task involvement in the social environment. Taking into account what previous research has shown, the current study further underlines the essence of creating a mastery-climate that fosters high task involvement in achievement contexts. The results of this study can help coaches, peers and sport psychology consultants to emphasize that high task involvement is fundamental for further athletic improvements, personal development, and psychological welfare among sport participants. Creating a task oriented climate is especially important for non-elite athletes and younger participants which were evident in the study. Even elite athletes with high perceived ability, who might indicate high ego involvement, high task involvement is necessary to maintain intrinsic motivation in the long-term.

Future research

Although the current study showed some interesting results regarding motivational and psychological patterns among elite and non-elite table tennis players, the study is however short termed and cross-sectional. Longitudinal studies with bigger samples could possibly give a deeper understanding of how and to what degree these variables vary and relate to each other (e.g., goal orientation profiles). Furthermore, this study could not show any cause-and-effect relationship. In order to give utterance about what influences what regarding situational and personal motivational and psychological factors, an experimental design is necessary. Future research should investigate how and in what way participants' perceptions of the motivational climate change right before or right after competitions, and how such change eventually affect athletes' achievement goals. Additionally, it would be an interest to examine how or if these changes interact with participants' self-esteem. Further research regarding relationships in athletes' perceptions of the motivational climate, achievement goals, and psychological well-being should be conducted within various sport specific contexts.

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List of appendixes

Appendix 1: Information and written consent form for athletes, and link to web-survey

Appendix 2: Perception of Success Questionnaire

Appendix 3: Perception of the Motivational Climate Questionnaire

Appendix 4: Rosenberg's Self-Esteem Scale

Appendix 5: Positive Affect and Negative Affect Schedule

Appendix 6: Background information of the participants

Information om informerat samtycke

Jag studerar idrottspsykologi på Högskolan i Halmstad. I samband med en C-uppsats kommer jag att genomföra en studie om motivation och psykologisk välbefinnande i samband med idrott. Syftet med studien är alltså att undersöka hur du som idrottare upplever motivationsklimatet och hur detta påverkar din motivation och tillfredsställelse. Jag är mycket tacksam om du ställer upp på denna undersökning.

Studien kommer att genomföras i början på december och bedrivs vid hjälp av frågeformulär som tar ungefär 12 minuter att besvara. Följande instrument kommer att användas i studien:

Upplevelse av framgång (POSQ; Roberts, Treasure, & Balague, 1998) Upplevt motivationsklimat (PMCSQ-3; Newton, Duda, & Yin, 2000) Rosenbergs Self Esteem Scale (RSES; Rosenberg, 1985) Positive Affect and Negative Affect Schedule (Watson, Clark, & Tellegen, 1988)

Informerat samtycke

Klicka på länken under för att komma till den eletroniska versionen av enkäten:

https://spreadsheets.google.com/viewform?formkev=dGJFS1ZReGVRcIFvOURBc1NaOUxZa1E6MO

Deltagandet i studien är frivilligt och kan avbrytas när som helst. All insamlad information behandlas konfidentielt och resultat redovisas endast på gruppnivå. När studien är avslutad har du möjlighet att ta del av resultatet. Om du har frågor är du välkommen att ringa: 0737 615 333, eller maila till: istmol08@student.hh.s Vänliga hälsningar, Istvan Moldovan

Jag	_bekräftar att:
 -Jag har blivit informerad om hur mina svar kommer behand -Jag kan dra mig ur studien när som helst -Jag har möjlighet att ställa frågor 	llas
Jag är villig att delta i denna studie för att undersöka motivation og	ch tillfredsställelse i samband med idrott.
Namnteckning	Datum
Om du som deltagare är interesserad av att komma i kontakt med en idrottspsykologisk råd Förfrågan har ingenting med studien att göra.	givare i framtiden så vänligen uppge din e-mail adress nedan.

Upplevelsen av framgång

Perception of Success Questionnaire (POSQ; Roberts, Treasure, & Balague, 1998)

Följande tolv frågor udersöker när du känner dig framgångsrik I idrott, med andra ord, när du känner att det går riktigt bra för dig. Inför varje påstående läs först meningen i fet stil: *Jag känner mig mest framgångsrik i bordtennis när...* följt av påståendet.

Sedan avgör du hur pass mycket du instämmer med detta påstående genom att ringa in det alternativ som stämmer bäst in på hur du känner. Det vill säga, antingen *instämmer helt (A), instämmer (B), neutral (C), instämmer något (D)* eller *instämmer inte (E)*.

Exempelvis, för fråga 5 blir påståendet: Jag känner mig mest framgångsrik i bordtennis när jag visar personlig framgång.

Jag känner mig mest framgångsrik i bordtennis när	Instämmer helt	Neutral	Instämmer inte
1. Jag slår andra (vinner över)	A B		
2. Jag är helt överlägsen	AB	С	Е
3. Jag är den bästa	AB	С	Е
4. Jag gör en god insats	AB	С	Е
5. Jag visar tydlig personlig förbättring	AB	С	Е
6. Jag gör det bättre än mina lagkamrater	AB	С	Е
7. Jag når ett mål	AB	С	Е
8. Jag övervinner svårigheter	AB	С	Е
9. Jag når mina personliga mål	AB	С	Е
10. Jag vinner	AB	С	Е
11. Jag får visa andra att jag är bäst	AB	С	Е
2. Jag gör så gott jag kan	AB	С	Е

Upplevt motivationsklimat

Perception of the Motivational Climate in Sport Questionnaire (PMCSQ; Newton, Duda, & Yin, 2000)

Påståendena nedan beskriver hur miljön kan vara I en idrottsklubb. Var vänlig läs igenom och besvara noggrant så som du bedömer att det ser ut i din klubb. När du besvarar frågorna vill jag att du ska tänka på hur miljön är NORMALT SETT I DITT LAG. Ringa sedan in det alternativ som stämmer bäst in på vad du tycker stämmer. Det finns inga riktiga eller felaktiga svar.

I vår träningsgrupp	Tar helt avstånd	Instämmer Neutral helt
1hjälper spelarna varandra att lära sig nya saker	AB	C D E
2skäller tränarna på spelarna när de gör misstag	AB	C D E
3har tränarna sina favoriter	AB	C D E
4känner varje spelare att de bidrar med något viktigt	AB	C D E
5blir spelare "psykade" (t ex retade eller får negativa kommentarer) när de gör det bättre ifrån sig än sina lagkamrate	A B	C D E
6känner sig spelarna framgångsrika när de går framåt i utvecklingen	A B	C D E
7betonar tränarna att spelarna alltid ska göra sitt bästa	AB	C D E
8ser tränarna till att spelarna förbättrar färdigheter de ännu inte är bra på	AB	C D E
9uppmärksammar tränarna de allra bästa mest	AB	C D E
10hjälper spelarna varandra att bli bättre och utveckla sig själva	AB	C D E
11blir spelarna bestraffade när de gör misstag	AB	C D E
12känner varje spelare att man har en viktig roll	AB	C D E
13blir man belönad när man försöker göra sitt bästa	AB	C D E
14uppmuntrar tränarna alla spelare till att försöka spela bättre än de andra i träningsgruppen	AB	C D E
15favoriserar tränarna vissa spelare mer än andra	AB	C D E
16arbetar spelarna verkligen tillsammans som ett lag	AB	C D E

I vår träningsgrupp...

		Tar helt avstånd	Neutral	Instämmer helt
17.	anser tränarna att alla spelare är viktiga för att klubben skall lyckas	AB	CD	E
18.	fokuserar vi på att förbättra oss vid varje träning / tävling	A B	С	Е
19.	blir man inte uttagen när man gör misstag under tävling	A B	CD	Е
20.	berömmer tränarna spelarna endast när de spelar bättre än de andra i träningsgruppen	A B	C D	E
21.	betonar tränarna att det är viktigare att försöka och anstränga sig än att prestera resultat i tävlingar	A B	С	Е
22.	är tränarna nöjda så länge spelarna försöker göra sitt bästa	A B	CD	Е
23.	ger tränarna inte spelarna en chans att lära från sina misstag	A B	CD	Е
24.	uppmuntrar tränarna spelarna att lära sig från andra	A B	CD	Е
25.	tycker spelare att de har en viktig roll, oavsett hur duktiga de är	A B	C D	Е
26.	är spelarna angelägna att spela bättre än de andra spelarna i träningsgruppen	A B	C D	Е
27.	uppmärksammas det mycket om spelarna förbättrar sig	AB	CD	Е
28.	uppmärksammar tränarna endast de bästa spelarna	A B	C D	Е
29.	registreras misstag som sedan rättas till under träning	A B	CD	Е
30.	uppmuntrar och motiverar spelarna varandra	AB	CD	Е
31	får tränarna spelarna att känna sig viktiga	A B	C D	Е
32	belönas spelare när de gör bättre ifrån sig än sina träningskamrater	A B	CD	Е
33	uppmuntrar tränarna till extra hårt arbete och påpekar när man inte anstränger sig tillräckligt	A B	C D	E
34	ger tränarna tydliga instruktioner för hur spelarna kan förbättra sig	A B	CD	Е

I vår träningsgrupp...

35 ...låter tränarna de bästa spelarna komma undan med saker (dvs göra lite som de vil)

A B C D E

В

Neutral

C

D

Instämmer

helt

Е

Tar helt

avstånd

A

36 ...är spelarna rädda för att göra misstag på grund av de förväntade konsekvenserna

37 ...får bara de bästa spelarna beröm

A B C D E

38 ...försöker spelare få sina kamrater i träningsgruppen att göra sämre ifrån sig på träning / tävling

A B C D E

Rosenbergs skala för självkänsla

Rosenberg's Self-Esteem Scale (RSES; Rosenberg, 1985)

Nedan finns en lista med påståenden som berör generell självkänsla. Markera det alternativ som stämmer bäst in på vad du tycker stämmer. Det finns inga riktiga eller felaktiga svar.

	Instämmer helt	Instämmer	Instämmer inte	Instämmer inte alls
1. I det stora och hela är jag nöjd med mig själv	A	В	C	D
2. Det finns stunder då jag tycker att jag inte alls duger	A	В	С	D
3. Jag tycker att jag har många goda egenskaper	A	В	С	D
 Jag klarar av att göra saker lika bra som de flesta andra människor 	A	В	С	D
5. Jag tycker inte att jag har mycket att vara stolt över	A	В	С	D
6. Jag känner mig verkligen oduglig ibland	A	В	С	D
7. Jag tycker att jag är en värdefull person, åtminstone lika värdefull som alla andra	A	В	С	D
8. Jag önskar att jag kunde ha mer självrespekt	A	В	С	D
9. I stort sett är jag benägen att känna mig misslyckad	A	В	С	D
10. Jag har en positiv inställning till mig själv	A	В	С	D

PANASPositive Affect and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988)

Den här skalan består av ett antal ord som beskriver känslor och stämningsläge. Ange i vilken utsträckning du känt detta **under de senaste veckorna**. Det gör du genom att läsa varje ord och ringa in det svarsalternativ som du tycker stämmer bäst in på dig.

1 Intresserad	Väldigt lite eller inte alls	Lite	Varken för lite eller för mycket C	Ganska mycket	Extremt mycket
2 Stressad	A	В	С	D	Е
3 Exalterad	A	В	С	D	Е
4. Upprörd	A	В	С	D	Е
5 Stark	A	В	С	D	Е
6. Skyldig	A	В	С	D	Е
7 Skrämd	A	В	С	D	Е
8 Fientlig	A	В	С	D	Е
9 Entusiastisk	A	В	С	D	Е
10 Stolt	A	В	С	D	Е
11 Irriterad	A	В	С	D	Е
12 Alert	A	В	С	D	Е
13 Skamsen	A	В	С	D	Е
14 Inspirerad	A	В	С	D	Е
15 Nervös	A	В	С	D	Е
16 Bestämd	A	В	С	D	Е
17 Uppmärksam	A	В	С	D	Е
18 Skakis	A	В	С	D	Е
19 Aktiv	A	В	С	D	Е
20 Rädd	A	В	С	D	Е

Bakgrundsinformation Appendix 6

Kön	Man	Kvinna			
Ålder					
Åldersklass	Pojkar / Flickor	Junior	Senior		
Klass enligt SBTF HE = Herr Elit, H1 = Herr Klass 1 etc. DE = Dam Elit, D1 = Dam Klass 1 etc.	HErr HE	H1	H2 H3	H4	H5
	DE Dam	D1	D2 D3	D4	D5
Nuvarande ranking enligt SBTF					
Nuvarande klubb du spelar i					

Tack för din medverkan och lycka till vidare!