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Achievement goals as predictors of different subjective and psychological well-being measures

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Contents

Abstract

The main aim of the present research was to examine the relationships between achievement goals stemming from different conceptions (models) and different indices of well-being, including both, subjective (hedonic) and eudaimonic (psychological) well-being measures. The sample was convenient and included 634 students (mean age 16.19 years, SD = 1.91 years). The participants were selected from four high-schools, one elementary school, and one sport science faculty on the territory of city of Novi Sad, Serbia. Seven instruments were used: Global Goal Orientations Questionnaire (Papaioannou et al., 2009), Task and Ego Orientation in Physical Education Questionnaire (TEOPEQ; Duda & Nicholls, 1992; Walling & Duda, 1995), Achievement Goal Questionnaire- Revised (AGQ-R; Elliot & Murayama, 2008), The Mental Health Continuum-Short Form (MHC-SF; Keyes et al., 2008), The Scale of Positive and Negative Experience (SPANE; Diener et al., 2010), The Satisfaction With Life Scale (SWLS; Diener et al., 1985), and The Positive and Negative Affect Schedule (PANAS; Watson et al., 1988). Hierarchical regression analysis was used for data analysis. In general, global goal measures at highest level of generalizability and mastery-approach achievement goals explained the most variance of all well-being indicators used in the study as well as proved to be the best and most reliable predictors of subjective, social and psychological well-being. In addition, for social well-being, results showed that performance-approach goals were significant positive predictor at all 3 steps of analysis, and ego orientation significant negative predictor at the 3rd step of analysis. Results of this study are mostly consistent with the results of previous studies. Limitations of this research and possible directions for future studies were also considered.

Keywords: achievement goals, subjective well-being, eudaimonia, hierarchical multiple regression analysis.

Introduction

"True happiness involves the full use of one's power and talents"

John W. Gardner (1912 – 2002)

One of the greatest athletes and one of the most intriguing personalities in the history of sport, Muhhamad Ali (born Cassius Marcellus Clay, Jr.; January 17, 1942 – June 3, 2016), sadly died just days ago. Besides his active personal (political) career, arguably he will be forever remembered for „The Rumbe in the Jungle" boxing match versus another great boxer George Foreman. The historic event was held in Kinshasa, Zaire on October 30, 1974, and was for the world heavyweight title and was later depicted in many documentary films, books, songs, and so on. Before that match, George Foreman was undefeated world heavyweight champion with impressive score of 40 consecutive wins (37 knock outs). Besides that, he was younger than Ali, and had bigger weight, height and reach than Ali. Taking everything into account, Ali was considered by vast majority of media and boxing representatives as an underdog in this fight. As cited in Milwaukee Sentinel before the match: „Foreman is favored because of his brute power, his utter destruction of all recent opponents and his unbeaten record" (Associated Press, 1974, p. 1). However, surprisingly, not to use stronger descriptions such as shockingly or unbelievably, Muhammad Ali won that match by knocking out Foreman in the eighth round. Ali won that match mostly due to the use of unusual boxing tactics called 'rope-a-dope'.

What exactly has happened and how this relates to the topic of this work? Well, psychologically speaking, before the match, and in the beginning of the match, Muhammad Ali

was strongly ego orientated in motivational sense. Which means, he was only concerned with winning the title and in every pre-match interview he was talking only about beating and destrouing Foreman in a dominant manner. In other words, his success criteria and definitions of competence were strongly other-referenced. The match started and Ali was trying to agressively attack Foreman. However, Foreman was „in the zone" (prepared / 'psyched up') and responded in his raw, powerful manner, hence at the end of the first round Ali only increased the chance to get hurt and loose this match in knock out. That tactics led to obviously negative outcomes and Ali started to fear for the first time. In that very break between the first and the second round, he switched the motivational orientation, or more likely, started to pay attention to task orientation, and from the round two he employed a new 'rope-a-dope' tactics, later in his career his trademark, in which he was avoiding Foreman and letting him punch, while being pinned to the ropes considerable amount of time. Finally, that led Foreman to loose the energy and momentum, which enabled Ali to counter-attack and eventually win the contest.

More specifically, in that famous break between rounds 1 and 2, along with the switch in motivational orientation 1 another important thing happened. He turned to his inner-self and his own unique potentials and talents he has got. He let his deep inner feelings (e.g., fear) to overwhelm him and he accepted it. He was okay with that. He could say and ask to himself in that situation „ok, let's suppose he is gonna kill me, but what can I do in the given circumstances to overcome it?". He was fully aware and in the present. Then the flow began and he started to 'dance', to play his own famous game. He was himself and had fulfilled all his potentials. And that's how rope-a-dope is created. Well, at least one of the potential explanations from a sport psychologist. Therefore, there is an idea for this scientific research to study, deeply examine, and understand comprehensively the relationships between achievement goals (achievement

motivation) and well-being, especially well-being defined in more complex way through self-actualization.

Not only were we able to see that there is a connection between these two in this example coming from professional sport, but we were also able to notice what kind of connection we should expect and all that in a single case study. For instance, in the same match, one individual (in this case Ali) started the match ego involved, and that lead to negative outcomes (e.g., anxiety), then he switched involvement towards more task-involvement and produced more adaptive outcomes.What is also interesting in this vignette is tht nature of boxing, perhaps sport / physical education context in general. In boxing, when participants step into the ring, there are no way back and there is no room for escape / avoidance. This justifies the importance of studying achievement motivation and well-being in sport / physical education context, because (real / proper) motivational profiles and well-being can be observed and assessed more clearly.

Studies of subjective well-being are equally exciting as the vignette provided above. Importantly, it is said subjective well-being, because it is immediately quite obvious that there is no such a thing as objective well-being, because what is important is how one individual feels. Even if it is possible to somewhat assess objective well-being, it is also quite clear that doesn't inform us about someones thoughts and feelings about it. However, that doesn't help researchers in the field of positive psychology. On the contraty, to study happiness was always difficult task for psychologists and other related scientists due to numerous reasons. Just to name a few, too indulgent and naive conmprehension of this field of research (hence appearance of numerous TV commercials with „how to become happy in 10 easy steps" approach) or lack of unity between researchers in the field (hence there are too many vague and too different conceptions of happiness (well-being) provided by numerous scientists in this field) (Jovanovic, 2016). This

especially becomes important issue with the introduction of Eudaimonia and psychological well-being (Waterman, 2013). Therefore, this study is designed and developed as certain attempt to clarify and contribute to better understanding of well-being in theoretical, but also applied field.

Achievement Goals Theory

Achievement goal theory is one of, if not the most popular and prominent motivational theory, especially in achievement contexts such as sport or education. Proposed by Nicholls (1989) and later modified, or better say expanded by Elliot (1999) this theory is still in focus of many researchers around the globe. Basic tenets of the theory include achievement goals, that govern one's behavior in achievement context. Achievement goals also affect emotions, cognitions, and personal beliefs, because goals reflect the purposes of one's achievement striving. In other words, people give meaning to their achievement behavior through the goals they adopt. The other basic premise of this theory is that overall goal of action is the desire to develop and demonstrate competence and to avoid demonstrating incompetence in an achievement context (Nicholls, 1984).

However, competence has more than one meaning. According to Nicholls, there are two main conceptions of ability, and consequently two main achievement goals that one person can adopt with different assigned behaviors. One conception is called undifferentiated, and in that conception competence is not differentiated from effort (or concepts of luck and task difficulty in some cases). Logically, the other concept is called differentiated, in which ability and effort are differentiated (Nicholls, 1984; Nicholls, 1989). Based on these concepts, one individual therefore builds criteria to assess success and failure. According to the theory, if one person adopts undifferentiated concept, that person is task involved, while achievement behavior using

differentiated perspective is identified as ego involvement. Therefore, there are two main achievement goals that can be adopted, namely ego and task goals. Person who has highly endorsed task goal (also called task involved person) strives to develop mastery, improvement, or experience learning. That person uses self-referenced criteria for success, hence success is realized when improvement (mastery) is achieved. On the other hand, the goal of action for ego involved person (characterized by high ego goal) is to demonstrate ability relative to others, and that person sees success by outperforming others, while using equal or less effort for doing that (other-referenced or normative criteria).

Another important aspect of achievement goal theory is that task and ego involvement are mutually exclusive (Duda & Hall, 2001; Treasure et al., 2010). That means that one person can be either task or ego involved, but can not be both in the same time. However, the states of involvement are quite dynamic in nature and can change from moment to moment. This means, if one person is task involved in one situation, that doesn't mean that the same person will continue to be task involved in other circumstances, even when situations seem similar. For instance, one athlete can be task involved in the beginning of the competition and as the very same competition advances he or she becomes more and more ego involved, and vice versa.

Although task or ego involvement has the most decisive role in explaining one's behavior, we see that state of involvement is still quite unstable over time and hence difficult to follow (measure). What is more stable throughout the time, yet still informative over one's motivation, is goal orientation. Thus, achievement goal orientations are predispositions to act in an ego- or task-involved manner. Practically, that means if one person is strongly ego orientated, in most achievement situations that person will engage and behave in accordance to that orientation, i.e. will be ego involved. We say that person will be inclined or prone to behave in

the certain manner / pattern. Due to their stability over time, researchers developed questionnaires to measure these orientations. One of the most used questionnaires with good reliability and validity in sport (physical education) is TEOSQ created by Duda and colleagues (Duda & Nicholls, 1992; Duda & Whitehead, 1998; Walling & Duda, 1995). This questionnaire asks participants when exactly do they feel most successful in physical education (e.g. when I'm the best for assessing ego, and when I learn a new skill by trying hard for task orientation). Thus, this questionnaire is in accordance with Nicholls (1989) suggestion that participants should be asked about the criteria that make them feel successful and not just to note their definition of competence. However, these questionnaires are context-specific, usually asking participants about their sport or PE participation. Consequently, to bridge this gap, Papaioannou and colleagues (2009) proposed and tested global goal orientations in life questionnaire. The results of the studies conducted confirmed that global goals are distinctive constructs to achievement goals in PE, i.e., add to variance explained by standard achievement goal measures, and that this new instrument can be used for assessing one's motivation generally in life (Papaioannou, Simou, Kosmidou, Milosis, & Tsigilis, 2009).

Finally, even if we are interested only in capturing states of involvement, which is difficult, some authors (e.g. Roberts, Treasure, & Conroy, 2007) reported that there are some evidences suggesting that is reasonable to assume state of involvement from the goal orientation or motivational climate (depending on what criteria for success and failure are valued, employed, and promoted in specific achievement setting such as the gym or classroom). Notably, goal orientations are in interaction with motivational climate in a way if motivational climate is strong can influence changes in participants' goal orientation (Roberts, Treasure, & Kavussanu, 1997). And, in return, if motivational climates are weak and not salient, individual's dispositional goal

orientation should stay unchanged. Additionally, children and young adolescents usually do not have strongly instilled goal orientations and are hence more susceptible for changes (Roberts & Treasure, 1992).

The most important attribute of achievement goal orientations is that they are orthogonal (Roberts, 2012; Roberts, Treasure, & Kavussanu, 1996). That means that dimensions (orientations) are not correlated and this has important practical implications. Specifically, one person can be task and ego orientated at the same time (high in both dimensions), or be only ego or task orientated (hence obtain high scores only on 1 scale). Or, not motivated at all, when the person achieves low scores on both dimensions.

Based on Nicholls' achievement goal theory in mind, it is possible to draw an optimal motivational profile, or to theoretically conclude why certain group of people with their orientations are more under risk for several ill-being indices such as burn-out or withdrawal from the competition. If the person endorsed task orientation, that person would be focused on constant improvement and learning, so her/his achievement behaviors would be adaptive in a sense of persistence in the face of failure, amount of exerted effort, or interest in the task (Nicholls, 1989). On the other hand, the picture for ego involved participants is less clear and depends on one's ability perception. Briefly, if ego involved individual perceives high ability, that person will engage in challenging tasks and exert effort. However, because these people tend to demonstrate competence relative to others, if they can fulfill the task / goal with less effort, they will chose not to engage (Roberts et al., 2007). Finally, if ego involved individuals perceive low ability, or question their ability for the task given, they will present maladaptive behaviors (e.g. self-handicapping, little effort, drop out, reduced persistence) in order to avoid demonstrating incompetence. Having the orthogonality of goal orientations in mind, we are able

to even rank motivational profiles in terms of adaptiveness. So far, literature has supported high ego – high task orientation, as well as high task – low ego motivational profiles (e.g., Fox, Goudas, Biddle, Duda, & Armstrong, 1994; Hodge & Petlichkoff, 2000; Roberts et al., 1996; Smith, Balaguer, & Duda, 2006). This is important finding, because suggests that high ego orientation doesn't have to necessarily be bad and maladaptive, but we have to take into account the whole picture (motivational profile) (Roberts et al., 2007), especially in real-life situations (Steinberg & Maurer, 1999). One potential explanation why usually high ego and low task orientation is not the best lies in beliefs about competence and success. Namely, research has shown that being task involved is correlated with the belief that hard work and cooperation lead to success in sport, whereas being ego involved is connected with the belief that success is achieved through having high ability and using strategies such as cheating and trying to impress the coach (Duda, Fox, Biddle, & Armstrong, 1992).

Another extensively contemporary employed model in sport and physical education context is Elliot's model, which can be seen as certain extension of Nicholls' achievement goal theory that we have just discussed. However, we say it only can be seen as extension to Nicholls' achievement goals model, because several distinctions can be made between Nicholls' and Elliot's models.

First, Elliot named achievement goals slightly differently and instead of ego he used the term performance and instead of task, the term mastery. Then he has split performance goal into performance-approach and performance-avoidance goals and hence developed trichotomous model of achievement goals (Elliot & Church, 1997; Elliot & Harackiewicz, 1996). To tell the truth, Papaioannou, Zourbanos, Krommidas, and Ampatzoglou (2012) based on the results of Papaioannou's previous studies (e.g. Papaioannou et al., 2009) argue that Elliot didn't quite split

ego goal from Nicholls' model, but rather created 2 new constructs. Anyway, we say split here for the sake of easier understanding. Finally, chronologically, following the same pattern and idea, the mastery goal was split into mastery-approach goal and mastery - avoidance goal (Elliot & Thrash, 2001). This model is known as 2x2 model of achievement goals. As suffixes suggest, individuals scoring high in approach goals strive to gain positive evaluation for their abilities (performance-approach) or attain task mastery and personal improvement (mastery-approach). On the other hand, people high on avoidance scales, tend to avoid negative evaluations of their abilities for performance-avoidance goal (e.g. 'My aim is to avoid doing worse than other students.') or to avoid losing mastery, abilities, and knowledge for mastery-avoidance (e.g. 'My aim is to avoid learning less than I possibly could.'). Recently, Elliot, Murayama, and Pekrun (2011) extended 2x2 model making it 3x2 achievement goal model. Keeping the positive and negative valence dimension (approach-avoidance tendencies), the authors proposed that competence can be defined in 3 different ways: Absolute (task), Intrapersonal (self), and Interpersonal (other) way. Therefore, this mastery goal division forms 6 achievement goals: task-approach, task-avoidance, self-approach, self-avoidance, other-approach, and other-avoidance. However, stronger empirical support for this new model is still advisable (needed).

One conceptual difference between Nicholls' and Elliot's models is a difference on the nature of achievement goals. For instance, Elliot claimed that the cause underlying different goals are different individual needs and that achievement goals are nothing else than manifestation of the needs of achievement motivation (Elliot & Church, 1997), while Nicholls stated that different definitions of competence stem from different definitions of success and that adoption of achievement goals is intentional and the outcome of internalization of social influences, too. In other words, Elliot centered his approach solely on the individual, whereas

Nicholls put individual's achievement goals into the social context. Moreover, Nicholls' different meanings of success are result of nurture and one's involvement in social situations that emphasize different achievement goals and notions of success, hence also include greater impact on the society. For instance, success defined by highly ego orientated persons is associated with pursuit of superiority and power and they do not bother about social inequalities (otherwise they will not be able to dominate). On the contrary, success can also be defined, and in fact is defined by task-orientated individuals as equality, social welfare, social justice, ecological harmony, and importantly, attainment of these ideals has positive consequences for both the person and society, because high effort (crucial point of task-involvement) has positive consequences for the person without undermining others' positions (Nicholls, 1989).

Another important difference between these two models is the position of the aim and the reason in achievement goals. For Elliot, the reason (why of behavior) and the aim (what of behavior) should be separated in investigation of achievement goals, because aim without reason cannot establish disposition. In Nicholls' model, aim and reason are associated and as Papaioannou and colleagues (2012) neatly point: "No rational person consistently seeks to achieve something without reason."

On top of that, there are some measurement disputes between these two models that we should acknowledge here. According to Papaioannou and colleagues (2012), Elliot's measures do not capture different conceptions of success but different definitions of standards used to evaluate competence (i.e., intrapersonal or normative), while Nicholls' measures do. Specifically, measures constructed to capture goals according to dichotomous model (e.g. Duda's TEOPEQ) do not separate aim from a reason, hence in the mentioned questionnaires participants are asked to answer when do they feel successful, i.e., to provide a reason (why of the behavior).

Therefore, each item in this questionnaire starts with "I feel most successful in physical education when…" and then continues with different conceptions of success (e.g. I'm the best or I work really hard). On the contrary, Elliot's measures are more focused on aims, hence all items in his inventories start with "My aim is…", "I'm striving to…", or "My goal is…". Actually, the latest Elliot measure (AGQ-R; Elliot & Murayama, 2008) is solely based on aims, because in this version they even excluded items connecting achievement goals to values and beliefs. We can conclude based on Papaioannou and colleagues (2012) opinion that Elliot's instrument is rather situation specific capturing situation-specific goals (at a particular moment), compared to instruments based on Nicholls' model of achievement goals that are more appropriate for assessing dispositional goal orientations.

In conclusion, we should also mention that some researchers expressed concerns over the very existence of Mastery-avoidance goal, at least in the youth and sport context (Ciani & Sheldon, 2010; Sideridis & Mouratidis, 2008), even whether participants understand avoidance goal items the same way as researchers and proponents of that theory do (Ciani & Sheldon, 2010; Urdan & Mestas, 2006). Therefore, we should bear this scepticism in mind when using Elliot's model.

At last, but not the least, based on Elliot's model, adaptive profile would include both approach goals (performance and mastery). In other words, according to the theory, performance goals can be adaptive as long as they are connected with approach and not with avoidance tendencies (Elliot, 2005). Some preliminary research supported this notion linking approach goals with certain positive outcomes (Adie & Bartholomew, 2013; Harackiewicz, Barron, Pintrich, Elliot, & Thrash, 2002; Harackiewicz, Durik, Barron, Linnenbrink-Garcia, & Tauer, 2008; Mendez-Gimenez, Cecchini-Estrada, & Fernandez-Rio, 2014; Ommundsen, 2004) and

avoidance goals with negative outcomes (Adie & Bartholomew, 2013; Elliot & McGregor, 2001; Elliot & Sheldon, 1997; Ommundsen, 2004; Senko, Hulleman, & Harackiewicz, 2011; Senko & Miles, 2007; Tuominen-Soini, Salmela-Aro, & Niemivirta, 2012).

Well-Being: Happiness or True Happiness?

In defining well-being starting point in mainstream positive psychology was and still is hedonia (hedonism), greek word known internationally and translated in English as happiness. Followingly the famous Aristotle quote „Happiness is the Highest Good", scholars around the globe coming firstly from clinical psychology (e.g., Jahoda (1958)) but after that from newly-established positive psychology domain quickly understood that psychological health is not only the absence of illness, including mental issues, but rather assumed that well-being includes promotion and development of subjective feeling of happiness and content. Therefore, subjective well-being was defined through the ratio of positive and negative affect. No matter how deep that feeling is it is still based mainly on maximizing positive affect and effort to minimize the negative emotions we experience. Indeed, majority of today's well-being instruments contain emotional (positive and negative affect) and cognitive (life satisfaction) scales (Jovanovic, 2016). No wonder, because most of them are based on tripartite subjective well-being model proposed by Edward Diener in 1984., consisted of 3 components, namely, positive and negative affect, and life satisfaction. This is the first well-being model using subjective indicators and also most cited and used well-being model until today (Diener, 1984; Diener, 2000). Ed Diener also proposed one of the most used and famous measures for 3-component subjective well-being stemming from this model such as Satisfaction with life scale (SWLS; Diener, Emmons, Larsen, & Griffin, 1985) and The Scale for Positive and Negative Experience (SPANE; Diener et al., 2010). Besides Diener's measures, very popular and in fact most common instrument for

assessing affective states is Positive and Negative Affect Schedule (PANAS) proposed by Watson, Clark, and Tellegen (1988).

However, Aristotle didn't have just that 'whatever makes you happy' approach in his mind when sharing ideas on how one individual should live the good life. In that sense, to make distinction with hedonia, he introduced the term eudaimonia, nowadays translated into English as 'true happiness'. According to Alan Waterman (2013), Aristotle considered eudaimonia as „virtue", „excellence", the very „best within us", and shifted focus of the good life from the outcome (the end state) solely to the means by which happiness is achieved. In other words, main distinction between hedonia and eudaimonia can be seen through different focus. Eudaimonia is based on activity reflecting virtue, excellence, and the full developement of our potentials, while Hedonia is based on happiness as pleasure, enjoyment, and absence of distress. Therefore, eudaimonia is seen as a way of behaving, whereas hedonia is seen as a way of feeling (Huta & Ryan, 2010; Huta & Waterman, 2014). On top of that, Viktor Frankl (1962), influental Austrian neurologist and psychiatrist, well-known for his logotherapy, which he based on his experiences in the concentration death camps during the second world war and one man's search for meaning. What he wanted to point out is that finding meaning is essential for leading fully funcitonal life and that well-being is much more than just feeling good.

As we can see, many scholars, philosophers, psychologists, sociologists, and others, got interested and excited by this Aristotle's ideas, and published their own views on this topic. For instance, in accordance with Aristotle, Fowers, Mollica, and Procacci (2010) speak about eudaimonic mindset which main characteristic is greater focus on the quality of the activity itself, and not its end result. Furthermore, some philosophers wanted to outline objective meaning of eudaimonia and traslated it not as happiness but as flourishing (e.g., Haybron, 2008; Rasmussen,

1999). Psychologists, as we have already seen, were more prone to present and empirically test new models of eudaimonic well-being (different from subjective well-being model based on hedonism that we have just presented), among which the most famous is certainly psychological well-being model proposed by Carol Ryff (1989). There are also noted interesting and thought-provoking attempts of combining and integrating these two traditions into single model (e.g. Keyes, 2002), but first things first.

Waterman (2013) grouped psychological models that touch upon well-being into 3 groups, of which the first group is subjective well-being group seeing well-being as happiness (Diener's conception as most representative example). Other 2 groups are dealing with eudaimonic well-being, namely, psychological well-being (PWB) and eudaimonic well-being (EWB). According to Waterman, but other authors, too (e.g., Deci & Ryan, 2008), psychological well-being has broad focus, sees PWB as individual difference variable, and well-being is configured as flourishing (e.g., Fowers, 2012). Most notable works of this conception are the model of eudaimonic functioning proposed by Ryan, Huta, & Deci (2008) and already mentioned Carol Ryff's (1989) multidimensional model of eudaimonic well-being. Briefly, model of eudaimonic functioning, deeply rooted in self-determination theory (SDT; Deci & Ryan, 2011), is based on 4 motivational concepts: (1) the pursuit of intrinsic goals and values; (2) behavior that is self-directed and autonomous; (3) being mindful and acting with a sense of awareness (full attention to internal and external events or experiences); and (4) behaving in ways that satisfy basic psychological needs for autonomy, competence and relatedness. Carol Ryff's model is based on six core components of eudaimonic well-being, namely Positive Relations With Others, Personal Growth (continued development, openness to experience), Purpose in Life (having goals, intentions, and a sense of direction), Environmental Mastery

(effective use of surrounding opportunities), Self-Acceptance (acceptance of self and of one's past life), and Autonomy (self-determination and independence), where obviously some of them overlap with Ryan, Huta, & Deci's conception. For recent detailed description of dimensions, model's philosophical foundation, and empirical findings see Ryff (2013).

Lastly, third group of models of well-being has narrow(er) focus and seeks for eudaimonia in particular activities. Compared to Ryff's multidimensional definition, in this approach eudaimonia is usually captured with 1 single scale (e.g., QEWB; Waterman et al., 2010). The authors, proponents of this approach (e.g., Waterman, 1993), define well-being as self-realization (actualizing one's human potentials). EWB usually contains these four elements: (1) self-discovery of one's aptitudes or latent talents, (2) putting effort in development of those aptitudes, (3) finding meaning and purpose in life in which those aptitudes and talents can be used; and finally (4) seeking for and using opportunities connected with further growth of these expressed talents and aptitudes (Waterman, 2013). Additionally, some important contributors (e.g., Sheldon, 2013) from this perspective introduced the term, self-concordance, which represents the feelings of personal expressiveness, i.e., experience we sense while fulfilling our potentials for meaningful purposes.

This Waterman's attempt to coherently present different well-being perspectives in his book, led and encouraged him to publish the systemic review on eudaimonia (Huta & Waterman, 2014). Among already mentioned, in that review there are presented some other known and interesitng approaches that contributed to the eudaimonic well-being understanding. For instance, we should acknowledge Huta's eudaimonic and hedonic motives for activities (Huta, 2016; Huta & Ryan, 2010), that are more focused on certain aspects of eudaimonia, as well as Corey Keyes' attempt to integrate both traditions and capture social well-being in formation

known as Mental Health Continuum (Keyes, 2002; Keyes, 2006). Huta is interested in motives (strivings to use and develop the best in oneself and especially the reasons and aims underlying these strivings) and hence is talking about hedonic and eudaimonic pursuits, both equally important important and benefitial for one's well-being (hedonic pursuits in short run, and eudaimonic pursuits at later point of time). However, eudaimonic pursuits appear to contribute more than hedonia to the well-being of other people (Huta, 2013; Huta, Pelletier, Baxter, & Thompson, 2012).

Speaking of which (social contribution), Keyes even introduced additional form of well-being, named social well-being (Keyes, 1998), consisted of 5 features: social contribution (e.g., 'that you had something important to contribute to society'), social integration (e.g., 'that you belonged to a community (like a social group, or your neighborhood)'), social coherence (e.g., 'that the way our society works makes sense to you'), social actualization (e.g., 'that our society is a good place, or is becoming a better place, for all people'), and social acceptance (e.g., 'that people are basically good'). Later he added this social well-being to Ryff's Psychological well-being and subjective well-being scales (he calls Hedonia Emotional Well-Being, though) to create Mental Health Continuum (EWB + PWB + SWB). Finally, similar view shares another prominent researcher in this field, Martin Seligman, who defines eudaimonia as identifying one's virtues and strengths, developing them, and then using them in the service of greater goods, particularly the welfare of humankind (Peterson, Park, & Seligman, 2005). These notions are not without deep roots in the economy, biology, and empirical background. For example, Ryan, Curren, and Deci (2013) argue that "human nature is prone toward connectedness and evolved to find inherent satisfactions in helping.". They back-up these arguments firstly on some evolutionary evidences that economic growth and well-being are not due to human selfishness,

but on the contrary – human cooperation (e.g., De Waal, 2009). There are also empirical studies (some using the self-reports (diaries), some of them even experimental) proving that intentional help to others actually enhances both, 'care-giver' and 'care-receiver's levels of eudaimonic well-being, because the aim was clearly on the action / activity and not the potential outcomes (Weinstein & Ryan, 2010). Other empirical studies associated parts of eudaimonic well-being with more ecologically responsible behavior (Brown & Kasser, 2005), and more responsive and constructive interactions within relationships (Barnes, Brown, Krusemark, Campbell, & Rogge, 2009). Another interesting finding comes from qualitative study in which Bauer, McAdams, and Pals (2008) investigated people's life stories and views on what the good life means to them. People define eudaimonia, or the good life, in terms of pleasure, but also sense of meaningfulness and rich psychosocial integration.

In conclusion, as we have just seen, there is no single truth or consensual definition of eudaminc well-being. Yet, it is probably the best to look at all presented approaches in a way that all the proposed definitions seem not to counteract with each other, but rather supplement what eudamonia is and in what ways is different from hedonia.

Specifically in sport, according to Adie & Bartholomew's review (2013), well-being has been defined through indicators from both eudaimonic and hedonic perspectives. Regarding subjective well-being, most of the measures included positive and negative affect, whereas eudaimonia has been defined usually in terms of subjective vitality (e.g., Vansteenkiste, Mouratidis, & Lens, 2010), engagement (e.g., Hodge, Lonsdale, & Jackson, 2009), or personal expresiveness (e.g., Sage & Kavussanu, 2010).

Summary of empirical findings

Achievement goals and happiness (well-being)

Most of extant literature on various indices of well-being and achievement goals used 2x2 achievement goals framework. Regarding well-being indices, vast majority of studies done in the field so far contained various affective (emotional well-being) indicators, but only few of them used eudaimonic (psychological, eudaimonic, or social) well-being items.

Interestingly, in a recent study on relatively large sample of Spanish secondary school boys and girls (aged 12 – 17), Mendez-Gimenez, Cecchini-Estrada, and Fernandez-Rio (2014) using cluster analysis identified 4 motivational profiles: high, moderate, and low achievement goals, with the last cluster of fairly high mastery goals and low performance goals. In effect, 'high achievement goals' group proved to show the highest scores on positive affect measured with PANAS scale. The authors explained this result by reporting that this cluster was mostly consisted of participants with high approach goals dominance, and in fact both approach goals were positively correlated with positive affect. Less, but still positive correlation was established between avoidance goals and positive affect. Complementary to these results, there are publications connecting avoidance orientation with several indices of subjective and academic ill-being (e.g., depressive symptoms, dissatisfaction with educational choice) (Tuominen-Soini, Salmela-Aro, & Niemivirta, 2008; Tuominen-Soini et al., 2012). Perhaps, one of the most convincing findings for this assumption is the study from Morris and Kavussanu (2009) in which adolescents' avoidance goals positively predicted worry, whereas for approach goals correlations were not significant. In the same study, mastery-approach goal also positively predicted enjoyment. Finally, similar results for approach – avoidance distinction, i.e., adaptive outcomes associated with approach and maladaptive with avoidance tendencies, can be found in several studies concerning (academic) satisfaction, enjoyment or positive affect in general (e.g., Adie, Duda, & Ntoumanis, 2008; Adie, Duda, & Ntoumanis, 2010; Castillo, Duda, Alvarez, Merce, &

Balaguer, 2011; Gillet, Lafreniere, Vallerand, Huart, & Fouquereau, 2014; Jaakkola, Ntoumanis, & Liukkonen, 2016; Vansteenkiste et al., 2010; Verner-Filion & Gaudreau, 2010), depression symptoms, state test anxiety, worry, or negative affect in general (e.g., Adie et al., 2008; Adie et al., 2010; Chen & Lu, 2015); Elliot & McGregor, 2001), as well as somewhat indicators of psychological well-being such as self-esteem, estimated gains in personal development and subjective vitality (Adie et al., 2008; Adie et al., 2010; Castillo et al., 2011; Chen & Lu, 2015; Vansteenkiste et al., 2010). What is more, Elliot and Sheldon (1997) reported following a 1 academic year longitudinal study that pursuing avoidance goals deteriorated subjective well-being (positive/negative affect and life satisfaction).

Notably, in some other cluster analysis, conducted in collectivistic society (Singapore), slightly different results were obtained. In this study on enjoyment and boredom, based on results and 4 profiles extracted (same as in previous study), optimal motivational profile included high scores on all 4 achievement goals, and vice versa, the lowest scores on these 2 affective outcome variables reported participants low on all 4 goals (Wang, Biddle, & Elliot, 2007). Similar results were obtained in repeated study on different sample, addition of somewhat psychological well-being indicator (self-esteem), and with 3 clusters this time – cluster with 3 achievement goals high (Mastery-approach, Master-avoidance, and Performance-avoidance) showed highest enjoyment and self-esteem, compared to low all 3 goals (Wang et al., 2008).

There are also studies that utilized dichotomous and trichotomous achievement goals models stemming from Nicholls' theory. One such study tested predictability of discreet achievement emotions in the school setting. Specifically, the authors proposed and tested a model in which Performance-approach and Mastery goals predict different positive emotions, while Performance-avoidance goals predict negative affectivity. Indeed, simultaneous multiple

regression analyses proved these claims in a way that mastery and performance-approach goals were positive predictors of enjoyment and hope, whereas performance-avoidance goals were positive predictors of anxiety and hopelessness, as well as negative predictors of hope (Pekrun, Elliot, & Maier, 2009). However, in this study, performance-approach goals were not significant predictors of many emotions (not a strong predictor), and this finding is in accordance with some other studies. For instance, Roeser, Strobel, and Quihuis (2002) reported in study with similar emotions in early adolescents, namely feelings of sadness and anger, that performance-approach goals were not related to these feelings, whereas mastery goals were negatively correlated at the $p<.01$ significance level with both of these feelings. Finally, performance-avoidance was positively correlated with feelings of sadness, but not with anger.

Regarding state anxiety and trichotomous model, similar, if not completely the same pattern was observed in the experimental situations. In two experiments with basketball dribbling task, the group of French authors assigned groups of 13 to 15 years old French early adolescents to 3 conditions: Mastery goals group, Performance-approach group, and Performance-avoidance goals group. The results of experimental studies showed that Mastery goals group reported less state anxiety than Performance-avoidance group, whereas there was no difference between Performance-approach and Mastery goals groups. The second experiment confirmed these findings – pupils in Performance-avoidance group reported higher state anxiety than those in other 2 groups (Cury, Elliot, Sarrazin, Da Fonseca, & Rufo, 2002; Cury, Fonseca, Rufo, Peres, & Sarrazin, 2003). Same findings were obtained in correlational study as well – performance-avoidance was the only significant positive predictor of test anxiety in the group of 150 undergraduate psychology students (McGregor & Elliot, 2002).

Furthermore, in the same study, McGregor & Elliot (2002) reported that performance-avoidance goals negatively predicted state ability-related self-esteem. A bit later, this finding has been confirmed by Sideridis (2005) utilizing Rosenberg's Self-Esteem Inventory. He found that Self-esteem was negatively associated with performance-avoidance goals, as well as positively related with mastery goals. On top of that, same author reported positive correlation between children's depression measure and performance-avoidance tendency, as well as negative correlations with other two achievement goals measures.

Lastly, the focus of number of studies was on the relationships between trichotomous achievement goals model and life, sport, and job satisfaction. Satisfaction was positively related to mastery and performance-approach goals, as well as negatively to performance-avoidance goals (Diseth & Samdal, 2014; Papaioannou, Ampatzoglou, Kalogiannis, & Sagovits, 2008; Papaioannou & Christodoulidis, 2007; Papaioannou et al., 2009).

Finally, there are studies that conceptualized achievement goals in accordance with Nicholls' theory and related them with different well-being measures. In fact, one of the oldest studies in this field were conceived by Nicholls and Duda themselves, back in 1992. Task orientation proved to be (positive) predictor of satisfaction (enjoyment) in schoolwork and sport, and negative predictor of boredom. On the other hand, ego orientation was positively associated with boredom in school and sport (Duda et al., 1992; Duda & Nicholls, 1992). Regarding task enjoyment, Barron & Harackiewicz (2001) confirmed this finding, whereas Hodge, Allen, & Smellie (2008) added that not only task orientation is positively related to it, but ego orientation is also negative predictor of task enjoyment. Other studies corroborated finding on boredom and other negative deactivating emotions in the elementary physical education classroom (e.g., Mouratidis, Vansteenkiste, Lens, & Auweele, 2009). Regarding affect, in some studies negative

activating emotions such as anxiety, anger, dejection, shame or worry has been positively related with ego orientations, and negatively with task orientation (e.g., White & Zellner, 1996), and in some others, these assumptions were confirmed only for task orientation (e.g., Dewar & Kavussanu, 2011). Further, positive activating emotions (e.g., enjoyment, hope, pride) have positive correlation with both, ego and task orientation (e.g., Mouratidis et al., 2009), positive only with task orientation (e.g., Kavussanu, Dewar, & Boardley, 2014; McCarthy, Jones, & Clark-Carter, 2008), or positive with task and negative with ego orientation (e.g., Kaplan & Bos, 1995; Kaplan & Maehr, 1999).

As we can see, seldom researchers utilized eudaimonic or psychological well-being measures. Nevertheless, some preliminary findings suggest that positive peer relationships (e.g., 'I think that other people like me', 'I don't find it difficult to start new friendships') are positively related with task, and not related at all with ego orientation (Kaplan & Bos, 1995; Kaplan & Maehr, 1999). In another recent study, the focus was on grit. In psychology, grit can be seen as subjective vitality and mental toughness. As some authors put it: "The individual who has grit is never tired" (Akin & Arslan, 2014, p. 268). Especially, the focus is on long run, persistence despite adversity, hence in a way it can be seen as a form of eudaimonia. In that study, mastery-approach goals were the only positive predictor of grit, whereas mastery-avoidance, performance-approach, and performance-avoidance goals were negative predictors of grit (Akin & Arslan, 2014). In Table 1 (see Appendix), the overview of all presented studies with details about samples, well-being indicators, and achievement goals is presented in order to add to better comprehension of the topic.

Purpose of the study and Hypotheses

The main aim of this research is to examine the relationships between achievement goals stemming from different conceptions (models) and different indices of well-being, including both, subjective (hedonic) and eudaimonic well-being measures. Thus, the research question arised from the studies presented above is what is the optimal motivational profile for subjective and eudaimonic well-being?

When it comes to prediction of well-being through achievement goals, extant literature on the topic is adversarial, vague, non-consistent, and imprecise. In terms of adaptiveness, previous research has found that most adaptive motivational profiles stemming from Nicholls' theory are high task – high ego orientation, or high task – low ego motivational profiles (e.g., Fox et al., 1994; Hodge & Petlichkoff, 2000; Roberts et al., 1996; Smith et al., 2006). Furthermore, taking 2 x 2 model into consideration, research associated approach goals with certain positive outcomes (Adie & Bartholomew, 2013; Harackiewicz et al., 2002; Harackiewicz et al., 2008; Mendez-Gimenez et al., 2014; Ommundsen, 2004) and avoidance goals with negative outcomes (Adie & Bartholomew, 2013; Elliot & McGregor, 2001; Elliot & Sheldon, 1997; Ommundsen, 2004; Senko et al., 2011; Senko & Miles, 2007; Tuominen-Soini et al., 2012).

Concerning optimal motivational profiles related specifically to subjective well-being indices, there are articles connecting avoidance orientation with several indices of subjective and academic ill-being (e.g., depressive symptoms, dissatisfaction with educational choice, state test anxiety, worry, or negative affect in general) (e.g., Adie et al., 2008; Adie et al., 2010; Chen & Lu, 2015; Elliot & Sheldon, 1997; Tuominen-Soini et al., 2008; Tuominen-Soini et al., 2012). On the other hand, approach goals were mostly linked with well-being measures such as (academic) satisfaction, enjoyment or positive affect in general (e.g., Adie et al., 2008; Adie et

al., 2010; Castillo et al., 2011; Gillet et al., 2014; Jaakkola et al., 2016; Vansteenkiste et al., 2010; Verner-Filion & Gaudreau, 2010). Studies using trichotomous model of achievement goals obtained similar results, with mastery goals (in this case mastery-approach and mastery-avoidance goals combined) positively related to subjective well-being and negatively to ill-being (e.g., Cury et al., 2002; Cury et al., 2003; Diseth & Samdal, 2014; McGregor & Elliot, 2002; Papaioannou et al., 2009; Pekrun et al., 2009; Roeser et al., 2002). For dichotomous conceptualization of achievement goals, adversarial findings were obtained. These adversarial results can be explained by the findings of one meta-analytical study / review, in which the authors compared and systematically examined (reviewed) 243 correlational studies in total (more than 90 thousand participants), all of which used self-reported achievement goal measures. The main finding suggests that correlations between apparently same measures differed significantly from study to study. Thus, the authors conclude and warn that many researchers in the field of achievement motivation use the same labels for conceptually quite different constructs (Hulleman, Schrager, Bodmann, & Harackiewicz, 2010).

Lastly, somewhat indicators of psychological well-being such as self-esteem, estimated gains in personal development and subjective vitality were positively related with approach tendencies as well (Adie et al., 2008; Adie et al., 2010; Castillo et al., 2011; Chen & Lu, 2015; Vansteenkiste et al., 2010). In addition, some studies using Nicholls' measures found that somewhat eudaimonic measures are positively correlated with task, and not related at all with ego orientation (Kaplan & Bos, 1995; Kaplan & Maehr, 1999).

To date and our knowledge, there is no research study published that was developed only to clarify these achievement goals - happiness issues. Even if we can assume from the studies done in the field so far optimal motivational profile for subjective well-being (positive / negative

affect and life satisfaction), we still do not know how this relates to eudaimonic well-being measures. Importantly, subjective, psychological, and eudaimonic well-being in particular, are similar, but different constructs. In a study with the sample consisted of more than nine thousand college students, obtained correlations between subjective, psychological, and strictly eudaimonic well-being were high (.60 for SWB-PWB, .65 for PWB-EWB, and .48 for SWB-EWB), but still not indicating that they are a single construct (Schwartz et al., 2011). On top of that, especially interesting aspect of this study is the use of Keyes' measures to capture EWB, consisted of among others, items capturing social well-being. This social aspect of well-being can be seen as certain superstructure of current understanding of Eudaimonia. In other words, the potential importance of social aspect in defining eudaimonic well-being has been well documented both theoretically (e.g., Ryan et al., 2013) and empirically (e.g., Bauer et al., 2008). Therefore, one of the goals is to determine whether there are differences in prediction of social well-being compared to prediction of psychological and emotional (subjective) well-being.

Finally, it is advisable to shed light on differences between different conceptions of achievement goals and investigate how different operationalisations of achievement goals as well as achievement goals on different levels of generalizability relate to different well-being indices.

To sum up, taking everything into account, we expect that (a) task orientation positively predicts subjective and emotional well-being indices, namely positive affect and life satisfaction as well as negatively predicts negative affect, whereas ego orientation is not significantly related to these well-being measures; (b) task orientation positively predicts psychological and social well-being indices from Mental Health Continuum, whereas ego orientation is not significantly correlated with these measures; (c) both approach goals (performance and mastery) positively predict emotional well-being from mental health continuum as well as positive affect and life

satisfaction, and negatively predict negative affect, whereas both avoidance goals negatively predict emotional well-being measures and positive affect and life satisfaction, and finally, positively predict negative affect; (d) both approach goals positively predict psychological and social well-being, whereas avoidance goals negatively predict psychological and social well-being from Mental Health Continuum; (e) personal improvement and ego-enhancing goals positively predict positive affect, life satisfaction, emotional, psychological and social well-being, and negatively predict negative affect; and finally (f) ego-protection goal negatively predicts positive affect, life satisfaction as well as emotional, psychological and social well-being, and positively predicts negative affect scale from PANAS. Lastly, we hypothesize that (g) addition of task/ego goals will add to variance explained by approach/avoidance goals (Elliot's measures), because Duda's measures do not separate aim from reason, and that addition of global goal measures will additionally increase variance explained by task/ego and approach/avoidance achievement goals.

Method

Participants

The sample was convenient and consisted of 634 subjects, predominantly secondary (high-school / grammar (76.34 %) and primary (21.6 %) (elementary) school pupils, making it 97.95 % of the whole sample. The students were recruited from four high-schools, one elementary school, and one sport science faculty on the territory of city of Novi Sad, Serbia. When it comes to the gender structure, sample consisted of 353 females (55.7 %) and 278 (43.8 %) males. 608 (95.9 %) participants in this study practiced sport (including dance/ ballet) in the past, while 330 (52.1 %) of them still practice sport regularly. Age of the participants ranged

from 13 to 26 years (M = 16.19, SD = 1.91). Permission regarding the students' participation in the study was obtained from head teachers and the school directors, who were asked to sign consent forms.

Instruments

In the beginning of the battery, some demographic data were obtained from the participants such as date of birth, previous and current sport participation, levels of physical activity, parents' education and socio-economic information (see Appendix 2).

Global Goal Orientations Questionnaire (Papaioannou et al., 2009). The main idea for development of this self-report measure stemmed from a need of sport / life skills practitioners and teachers to evaluate promotion of life skills programs in domains of life other than school or sport, i.e., generally in life. Thus, the questionnaire contained 15 items in total (5 items for each achievement goal) assessing global goal orientations in life. Each item was a statement starting with "Generally speaking, in my life...", and was answered on a 5-point Likert type scale from "strongly disagree" to "strongly agree". The goals captured with this instrument are personal improvement (e.g., "One of my principles is to always give my best."), ego-enhancing (e.g., "My principle is to prove that I am superior to others."), and ego-protection (e.g., "I often worry about how I look in front of others.") (see Appendix 3). Psychometric characteristics of the scale are very good. On representative sample of 1589 Greek students from North Greece schools, all scales had at least acceptable reliability with Cronbach's Alpha coefficient ranging from .71 to .88. Cronbach's Alpha coefficients for this study are presented in Table 2.

Task and Ego Orientation in Physical Education Questionnaire (TEOPEQ; Chi & Duda, 1995; Duda & Nicholls, 1992; Walling & Duda, 1995). TEOPEQ instrument comprises 13 items to assess students' achievement motivation in physical education classes. Following the

stem ‘‘I feel most successful in physical education when…’’), students respond to the seven task-oriented items (e.g. ‘‘I do my very best’’) and six ego-oriented items (e.g. ‘‘I can do better than my friends’’) of the questionnaire. Students respond to a 5-point Likert scale (1 = Strongly disagree, 5 = Strongly agree) (see Appendix 4). This instrument has been shown to have very good psychometric properties for PE classes in English and Greek language (e.g., Digelidis & Papaioannou, 1999), but also in Serbian language (Marjanović, 2014). Cronbach’s alpha coefficients in this study are displayed in Table 2.

Achievement Goal Questionnaire- Revised (AGQ-R; Elliot & Murayama, 2008). This self-report measure was administered to assess students’ achievement goals in physical education classes. The questionnaire consists of 12 items assessing four achievement goals (hence 3 items per goal). Following a stem “In the Physical Education class”, participants respond to statements capturing mastery-approach goal (e.g., ‘I am striving to understand the content of this course as thoroughly as possible.’), mastery-avoidance (e.g., ‘My aim is to avoid learning less than I possibly could.’), performance-approach (e.g., ‘My goal is to perform better than the other students.’), and performance-avoidance achievement goal (e.g., ‘I am striving to avoid performing worse than others.’), on a Likert type scale ranging from 1 (strongly disagree) to 5 (strongly agree) (see Appendix 5). Previous research obtained good psychometric properties with alphas ranging from .83 to .94 (Elliot & Murayama, 2008). Psychometrics of the scales in this study are presented in Table 2.

The Mental Health Continuum-Short Form (MHC-SF; Keyes et al., 2008) comprises of 14 items capturing emotional (first 3 items), social (5 items), and psychological well-being (last 6 items). Participants were asked to rate how often they felt a certain way during the past month, on a 6-point scale from never to every day (see Appendix 6). The instrument showed good

psychometric properties in multiple languages, among others in Serbian (Jovanovic, 2015). The internal consistency measures obtained in this study are presented in Table 2.

The Scale of Positive and Negative Experience (SPANE; Diener et al., 2010) is measure designed to assess individual's positive and negative affect. The scale contains 12 emotions people experience and their task is to rate how often have they felt that way during the past 4 weeks. 6 items capture positive experiences (e.g., 'positive', 'pleasant') and other 6 negative experiences (e.g., 'angry', 'afraid') (see Appendix 7). Reported psychometric statistics of the scales was good, with Cronbach's Alphas over .8. Psychometric indices in this study are presented in Table 2.

The Satisfaction With Life Scale (SWLS; Diener et al., 1985). This 5 items short scale measures individual perception of global life satisfaction. There are 5 statements capturing different aspects of quality of life (e.g., 'The conditions of my life are excellent', 'So far I have gotten the important things I want in life') and one's subjective satisfaction with it through assigned seven point Likert type scales (1 = completely disagree, 7 = completely agree) (see Appendix 7). The authors reported favorable psychometric properties for this scale. Psychometric properties obtained in this study are presented in Table 2.

The Positive and Negative Affect Schedule (PANAS; Watson et al., 1988). Similar to SPANE scale this scale contains 20 different ways people feel and then participants are being asked to rate how often in the last month have they felt that way on 5 point Likert type scale (see Appendix 7). 10 items assess positive (e.g., 'excited') and other 10 negative affect (e.g., 'afraid'). Alpha reliabilities obtained for scales were .87, which is considered as good reliability. Cronbach's Alphas from this study are presented in Table 2.

Procedure

Participants were assured that the questionnaires were anonymous and that the data would be used solely for research purposes. Nevertheless, the students were also asked to provide their signature on the questionnaires as a confirmation that they are willing to participate voluntary in the study. Notably, both students and teachers were informed about their rights to refuse participation. The assessments took place in the second semester of the school year, during April 2016. The questionnaires were distributed to students in groups during PE classes, while their fulfillment took approximately 25 minutes. All the questionnaires were completed under the supervision of the author and with the presence of teachers.

Data analyses

Hierarchical multiple regression analyses were used to examine whether individual task / ego goal orientation, mastery approach / avoidance, performance approach / avoidance achievement goals, and global goal orientations can contribute in the prediction of different well-being indices, namely positive affect and negative affect (SPANE), positive and negative affect (PANAS), life satisfaction, and emotional, social and psychological well-being. More specifically, scores on achievement goal scales were predictors (in the first step Mastery-approach, Mav, Performance-approach, and Pap goals, in the second task / ego orientation, and finally global goal orientations, personal improvement, ego enhancing, and ego protection goal), whereas criterion variables were scores on well-being indicators. All methods of data processing were performed in the statistical software SPSS and for Windows, version 21.

Results

Internal consistency reliability analysis for all the scales used in this study showed acceptable, good, sometimes even excellent reliability measured through Cronbach's Alpha coefficient. More specifically, internal consistency of global goal orientations scales ranged from $\alpha = .78$ to $\alpha = .91$. Other achievement goal measures also showed high internal consistency: namely, for task and ego scales Cronbach's Alphas were .90 and .91, and for 2 x 2 achievement goal model scales alphas ranged from .80 (Mastery-Avoidance) to .89 (Performance-Avoidance).

Measures of different well-being indices also proved to have high reliability. Therefore, reliability coefficients of well-being scales from mental health continuum ranged from $\alpha = .77$ to $\alpha = .83$, whereas positive / negative affect reliabilities obtained ranged from $\alpha = .79$ to $\alpha = .89$. Final component of subjective well-being, life satisfaction, also showed good reliability ($\alpha = .84$). Last, but not the least, none of the scales' reliabilities would drastically improve if we deleted some of the items, hence we approached main data analyses without changes. Descriptive statistics (scale means and standard deviations) were also calculated and are presented in more details in Table 2.

Table 2

Descriptive statistics and internal consistency (Cronbach's Alpha) for each scale.

	M	SD	α
Global Personal Improvement (GGO)	4.29	.63	.78
Global Ego-Enhancing (GGO)	2.69	1.15	.89
Global Ego Protection (GGO)	2.64	1.15	.91
Task (TEOPEQ)	3.61	.99	.90
Ego (TEOPEQ)	2.76	1.17	.91
Mastery-Approach (AGQ-R)	3.44	1.17	.88
Mastery-Avoidance (AGQ-R)	2.85	1.11	.80
Performance-Approach (AGQ-R)	3.16	1.18	.86
Performance-Avoidance (AGQ-R)	3.50	1.21	.89
Emotional Well-Being (MHC-SF)	3.69	1.07	.81
Social Well-Being (MHC-SF)	2.71	1.17	.77
Psychological Well-Being (MHC-SF)	3.43	1.04	.83
Positive Experience (SPANE)	3.84	.82	.89
Negative Experience (SPANE)	2.33	.73	.79
Satisfaction with Life (SWLS)	4.96	1.27	.84
Positive Affect (PANAS)	3.46	.70	.83
Negative Affect (PANAS)	2.18	.69	.83

Series of bivariate correlations (Pearson Correlation) were conducted to examine the relations between all variables used in this research. The results revealed a significant positive medium effect relationship between mastery-approach goal and Social Well-Being ($r = .38$, $p < .01$), as well as with Psychological Well-Being ($r = .33$, $p < .01$), and slightly less strong positive relationships between Master-Approach goal and Emotional Well-Being ($r = .25$, $p < .01$). Significant positive small effect relationships were obtained between Mastery-Avoidance goals and Social Well-Being ($r = .1$, $p < .05$), and Psychological Well-Being ($r = .09$, $p < .05$), while relationship with Emotional Well-Being was not significant. Performance-Approach goals were positively correlated with Social Well-Being ($r = .21$, $p < .01$), and Psychological Well-Being ($r = .15$, $p < .01$), whereas relationship with Emotional Well-Being was not significant. Significant

small effect positive relationships between Performance-Avoidance and Social and Psychological Well-Being were obtained ($r = .12$, $p < .05$). Relationship between Performance-Avoidance goal and Emotional Well-Being was not significant.

Task orientation was positively related to all three well-being measures. Specifically, small to medium effect size with Psychological ($r = .28$, $p < .01$) and Social Well-Being ($r = .27$, $p < .01$), and small effect size with Emotional Well-Being ($r = .18$, $p < .01$) relationships were obtained. On the other hand, ego orientation was significantly correlated only with Psychological Well-Being ($r = .1$, $p < .05$).

Global Personal Improvement goal orientation was positively correlated with all three well-being measures, with effect sizes small to medium for Emotional ($r = .24$, $p < .01$) and Social WB ($r = .23$, $p < .01$), and medium for Psychological Well-Being ($r = .36$, $p < .01$). Less strong positive relationships were obtained between global ego-enhancing goal and Psychological ($r = .11$, $p < .01$) and Social Well-Being ($r = .08$, $p < .01$). Correlation between ego-enhancing goal and emotional well-being was not significant. Finally, global ego protection orientation was negatively correlated with Emotional ($r = -.17$, $p < .01$) and Psychological Well-Being ($r = -.15$, $p < .01$). Relationship between global ego protection and social well-being was not significant.

Although these results provided initial support for our hypotheses, the focus of our research was still on hierarchical prediction of well-being measures, hence we will here move on to regression analysis results, while all obtained Pearson coefficients, including relationships between predictor set and other well-being measures, are presented in the Table 3 (see Appendix 8).

Thus, in order to test hypothesis stemming from research question and problem stated in the introduction, i.e., predictive power of different motivational concepts of different well-being measures, hierarchical regression analysis was conducted. In fact, 8 separated hierarchical analyses were conducted, each time with the same set of predictors (i.e., Elliot's measures in the first step, task and ego in the second, and global goals measures in the final, third step), and different criterion (dependent variable).

In the first conducted hierarchical regression, dependent variable was Emotional Well-Being from Mental Health Continuum (i.e., mean score on 3 items capturing subjective well-being). In the first step with mastery and performance goals included, the regression model explained 6.5 % of variance in total ($R^2 = .065$). After inclusion of task and ego orientation, the model explained 6.8 % of variance in total ($R^2 = .068$), whereas in the third step, after adding global goals, the model explained in total 12.5 % of variance ($R^2 = .125$). Thus, it is possible to conclude that global goals' contribution to prediction of emotional well-being is around 5.7 % of variance explained, whilst controlling other predictors. The whole regression model is significant in each step (3^{rd} step: $F (9, 560) = 8.88$, $p < .001$). In the first step, mastery-approach goal has significant partial contribution in the prediction of Emotional Well-Being ($\beta = .275$, $p < .001$). In the second step, again the only significant positive predictor is mastery-approach ($\beta = ..233$, $p < .001$). In the third step, alongside mastery-approach ($\beta = .206$, $p < .001$), other significant predictors are Global Personal Improvement goal in positive ($\beta = .182$, $p < .001$) and Global Ego protection goal in negative direction ($\beta = -.182$, $p < .001$). The model summary as well as coefficients are presented in more details in Table 4.

Table 4

Model summary and predictors' partial contribution (Beta coefficients) to the prediction of EWB

	Dependent variable: Emotional Well-Being		
	Step 1	Step 2	Step 3
Mastery-Approach	.275***	.233***	.206***
Mastery-Avoidance	.000	.004	.032
Performance-Approach	-.066	-.043	-.018
Performance-Avoidance	.005	.007	.009
Task		.064	-.013
Ego		-.056	-.051
Global Personal Improvemenet			.182***
Global Ego-Enhancing			-.004
Global Ego Protection			-.182***
R^2	.065	.068	.125
Adjusted R^2	.058	.058	.111
R^2 Change	.065***	.003	.057***
F	9.809***	6.858***	8.881***

* p< .05 ** p< .01 *** p< .001

In the second regression model, criterion was Social Well-Being, or better say mean score on social well-being scale in the Mental Health Continuum. When the first set of variables (2 x 2 achievement goals) is included, the model explained 14.9 % of total variance ($R^2 = 0.149$). When task and ego orientations are included, variance explained by the model is 15.4 % ($R^2 = 0.154$). Finally, when global goals are added, variance explained by the model in whole is 16.7 % ($R^2 = 0.167$), hence variance explained by latter goals solely is around 1.3 %. The model's prediction in total is significant in each step as well (e.g., 3rd step: $F (9, 557) = 12.42$, $p < .000$).

A closer look revealed 2 significant predictors in the first step of analysis: mastery-approach (β = .372, p < .001) and performance-approach goals (β = .106, p < .05). In the second step, mastery-approach (β = .322, p < .001) and performance-approach (β = .145, p < .05) goals keep their significant positive prediction. In the final step, Mastery-Approach (β = .322, p < .001) and Performance-Approach (β = .121, p < .05) are still significant predictors, among others comprised of Ego orientation (β = -.113, p < .05) and Global Personal Improvement (β = .092, p < .05). All coefficients and model summary in more details are presented in Table 5.

Table 5

Model summary and predictors' partial contribution (Beta coefficients) to the prediction of SWB

	Dependent variable: Social Well-Being		
	Step 1	Step 2	Step 3
Mastery-Approach	.372***	.322***	.322***
Mastery-Avoidance	-.021	-.014	-.011
Performance-Approach	.106*	.145*	.121*
Performance-Avoidance	-.090	-.088	-.092
Task		.072	.040
Ego		-.082	-.113*
Global Personal Improvemenet			.092*
Global Ego-Enhancing			.088
Global Ego Protection			-.019
R^2	.149	.154	.167
Adjusted R^2	.143	.145	.154
R^2 Change	.149***	.005	.013*
F	24.606***	17.037***	12.42***

* p< .05 ** p< .01 *** p< .001

Finally, mean score on the items capturing Psychological Well-Being represented dependent variable in the third hierarchical analysis conducted. First set of predictors explained around 11.2 % of variance (R^2 = .112). With the addition of task and ego orientation this percentage increases up to 12% (R^2 = .12). Finally, third set of predictors explained 22.8 % of variance (R^2 = .228), hence we conclude global goals account for 10.8 % of explained variance. The model in a whole is significant in the prediction of psychological well-being in each step (e.g., 3rd step: F (9, 558) = 18.354, $p < .001$). Regarding predictors, mastery-approach goals are the only significant predictor in the first ($\beta = .340$, $p < .001$) as well as in the second step ($\beta = .288$, $p < .001$). In the final step, global goals are also significant predictors besides mastery-approach ($\beta = .275$, $p < .001$). Global Personal Improvement ($\beta = .260$, $p < .001$) and Global Ego-enhancing goal ($\beta = .160$, $p < .01$) are significant positive predictors, whereas Global Ego Protection ($\beta = -.222$, $p < .001$) is significant negative predictor of Psychological well-being. Complete list of predictors and model in summary are presented in Table 6.

Table 6

Model summary and predictors' partial contribution (Beta coefficients) to the prediction of PWB

	Dependent variable: Psychological Well-Being		
	Step 1	Step 2	Step 3
Mastery-Approach	.340***	.288***	.275***
Mastery-Avoidance	-.012	-.020	.008
Performance-Approach	.022	-.017	-.037
Performance-Avoidance	-.028	-.030	-.028
Task		.104	.001
Ego		.035	-.014
Global Personal Improvemenet			.260***
Global Ego-Enhancing			.160**
Global Ego Protection			-.222***
R^2	.112	.120	.228
Adjusted R^2	.106	.111	.216
R^2 Change	.112***	.008	.108***
F	17.776***	12.786***	18.354***

* p< .05 ** p< .01 *** p< .001

The next 2 criterion variables were positive experience (SPANE) and positive affect (PANAS). Both models were significant at all 3 steps and same significance level (for positive experience: F (9, 561) = 7.06, p < .001, and for positive affect: F (9, 550) = 13.54, p < .001). The first set of predictors accounted for 5.1 % of variance (R^2 = .051) of positive experience, whereas that percentage increased to 5.5 % with the second group of predictors (R^2 = .055), and finally almost doubled to 10.2 % with addition of global goals (R^2 = .102). For positive affect, sets of predictors explained more total variance. In the first step 8.6 % (R^2 = .086), the second 9.8 % (R^2

= .098), and final step 16.8 % (R^2 = .168). Regarding predictors solely, in the first step, positive experience is predicted only with mastery-approach goal (β = .248, p < .001), whereas positive affect with mastery-approach (β = .266, p < .001), but also Performance-Approach goal (β = .121, p < .05). In the second step, performance-approach is no longer significant predictor, but task goal orientation (β = .162, p < .01) along with mastery-approach (β = .179, p < .01). For positive experience mastery-approach is only significant predictor (β = .202, p < .001). Addition of global goals explains additional variance, hence there are 3 significant predictors for positive experience as well as for positive affect: mastery-approach (β = .184, p < .01 for PE; β = .156, p < .01 for PA), Global Personal Improvement (β = .175, p < .001 for PE; β = .234, p < .001 for PA), and Global Ego Protection (β = -.156, p < .001 for PE; β = -.181, p < .001 for PA). Complete tables with predictors coefficients and model summaries for both dependent variables are presented in Appendix 9.

Similarly, negative affect indices were used as dependent variables. Both models were significant at each of the 3 steps. For example, at the 3rd step for negative affect F-test results were F (9, 561) = 7.76, p < .001; and for negative experience (SPANE) slightly lower F (9, 561) = 5.66, p < .001. For negative affect, first group of predictors explains 4.6% of variance (R^2 = .046), then that percentage almost stays same in the second step (R^2 = .047), and increases to 11.1 % in the final step (R^2 = .111). For negative experience as criterion, pattern is similar, just the values are a bit lower – 3.8 % (R^2 = .038) in the first, 3.9% in the second step (R^2 = .039) and 8.3% in the third, final step (R^2 = .083). Regarding Beta coefficients, Mastery-approach (in negative direction), mastery-avoidance (positive predictor), and performance-avoidance (positive) are significant predictors of negative experience at both first 2 steps (beta values presented in Appendix 10), whereas performance-avoidance is not significant predictor of

negative affect at neither of first 2 steps (see Appendix 10). In the third step, negative experience is predicted only by 2 predictors: Mastery-approach (β = -.163, $p < .01$) and Global Ego Protection (β = .218, $p < .001$). Negative affect, on the other hand is predicted by 4 predictors: Mastery-approach (β = -.179, $p < .01$), Global Personal Improvement (β = -.125, $p < .01$) in negative direction, and Global Ego Protection (β = .232, $p < .001$) and Mastery-avoidance (β = .091, $p < .05$) in positive.

Finally, life satisfaction was used as criterion in one hierarchical analysis. In the first step, model predicted 6.2 % variance (R^2 = .062), whereas this percentage doesn't increase with addition of task and ego orientation. In the third step, set of predictors was able to predict 15.2 % of total variance (R^2 = .152). Model is significant at each step (e.g., 3rd step: F (9, 561) = 11.19, $p < .001$). In the first step, only mastery-approach is significant predictor (β = .232, $p < .001$). In the second, mastery-approach stays the only significant predictor (β = .232, $p < .001$). With addition of global goals, besides mastery-approach (β = .214, $p < .001$), significant predictors of Satisfaction with life are also Global Personal Improvement (β = .176, $p < .001$), and Global Ego Protection (β = -.269, $p < .001$).

Discussion

The main aim of this research was to examine the relationships between different achievement goals and different indices of well-being, including both, subjective (hedonic) and eudaimonic well-being measures. To answer this research question, hierarchical regression analysis was employed and obtained results mostly corroborated previous research findings and hypotheses of this study. Briefly, global goal measures at highest level of generalizability explained the most variance of all well-being indicators used in the study as well as proved to be

the best and most reliable predictors of subjective, social and psychological well-being. Along with mastery-approach goals, to be precise. Task orientation was positively correlated with well-being indices, whereas ego goals were positively correlated only with PWB. Regarding approach / avoidance valence, mastery-approach goals were positively correlated with all three well-being measures, whereas performance-approach was positively correlated with psychological and social well-being. Interestingly, mastery and performance-avoidance goals, too, were positively associated with well-being (psychological and social, and not emotional), although these correlations were small. Lastly, personal improvement goal was positively correlated with all three measures of well-being, and global ego-enhancing goal with psychological and social well-being. Global ego protection goal was negatively correlated with emotional and psychological well-being, which is also in accordance with assumptions rooted in the extant literature.

Regarding Emotional Well-Being (consisted of positive affect, negative affect and life satisfaction), results indicated that mastery-approach solely is the best predictor of emotional well-being, even when other predictors are included. Addition of task-ego goals, conceptualized in a way that do not separate aims from reason, did not contribute in change of explained variance, i.e., were not significant predictors. Global personal improvement was significant predictor of EWB in positive, and global ego protection in negative direction. These results confirmed results from previous studies (e.g., Adie et al., 2008; Adie et al., 2010; Mouratidis et al., 2009). Moreover, when measures of emotional well-being such as PANAS scales, or Diener's Satisfaction with life scale used in hierarchical analysis independently as criterion variables (and not combined what is the case with emotional well-being scale from Keyes' model of mental health), results obtained confirmed and expanded these results to fit the hypotheses even better.

Therefore, we obtained deeper insight into relationships between achievement goals and subjective well-being. For instance, when Diener's positive affect named positive experience was dependent variable, mastery-approach was also significant positive predictor at all 3 steps of analysis, and again inclusion of global goals accounted for half of variance explained, with global personal improvement and global ego protection being significant positive and negative predictors respectively. Similar results were obtained for positive affect from PANAS scale, which indicated that mastery-approach is significant positive predictor at all stages. However, besides mastery-approach, performance-approach and task orientation were positive predictors as well, in the first and the second step respectively. Their influence disappears, though, with addition of global goals, who again explained around half of total variance explained. Similarly, global personal improvement and global ego protection goals were significant predictors. Mastery-approach and global ego protection goals were significant negative and positive predictors respectively, at all stages of data analysis for negative affect, too, regardless on negative affect measures used. Global personal improvement was again significant predictor, but only for NA scale from PANAS. Importantly, mastery-avoidance was significant positive predictor of negative affect in 5 out of 6 steps for both negative affect measures. Lastly, for negative experience scale performance-avoidance goal was significant positive predictor until the inclusion of global goals measures. Finally, life satisfaction results also corroborated our hypotheses. For instance, mastery-approach goals were positive predictors at each step. In the third step, personal improvement goals proved to be significant positive, and ego protection significant negative predictors. Notably, when life satisfaction was criterion, global goals explained almost the double of explained variance by achievement goals measures combined. Thus, these additional results contributed greatly to clarification and understanding of the

subjective well-being and achievement goals relationship forming more complete picture. These segmented results are also in accordance with previous similar research (e.g., Gillet et al., 2014; Hodge et al., 2008; Morris & Kavussanu, 2009; Papaioannou & Christodoulidis, 2007; Roeser et al., 2002).

One plausible explanation for these results is level of generalizability. The Elliot's and Duda's achievement goal measures used in this study were designed to capture students' motivation in physical education. However, in the third step of analysis we introduced global achievement goals measures, that are designed to capture students' motivation at the highest level of generalizability, i.e., generally in life. Since well-being measures were also created to assess respondent's happiness generally in life, it is possible to assume that there will be greater match between global goals and (global) well-being. In fact, many participants in the study asked during assessment whether they should write down their motivation only in physical education class or generally in school, or finally, their motivation in life. Thus, it is likely that their motivation and achievement goals differ from setting to setting. One another additional finding that speaks in favor of global goals is number of significant predictors per step, where many significant predictors become non-significant with the introduction of global goals in the third step of analysis.

Furthermore, when we look at psychological well-being through these lenses, picture becomes clearer. After all, one of the most important findings of this study is prediction of psychological well-being. In general, these results favor global goal measures as stable, significant predictors. Of other achievement goals measures used in this study, only mastery-approach goals were significant predictors, in positive direction and in each of 3 steps of hierarchical analysis. Similar with EWB findings, global goals explain double the variance that is

explained by other achievement goals measures and all three global goals are significant predictors – personal improvement and ego enhancing goals in positive, and ego protection in negative direction. To date, there are no studies using psychological / eudaimonic well-being measures. However, these results build upon couple of studies that used somewhat psychological well-being measures and associated approach tendencies with PWB (Castillo et al., 2011; Chen & Lu, 2015). Taking into account the level of generalizability as possible explanation, these results actually perfectly fit to that notion. For example, global goals had stronger relationship and explained more total variance for PWB than for previous subjective well-being indices, because we assume psychological well-being is even more related with general life functioning than functioning within school or more specifically, physical education. In other words, students could associate some positive emotions such as enjoyment, fun, pleasure, or positive feelings in general with physical education, hence their motivation in PE. On the contrary, it would be way more difficult to connect real psychological well-being experiences with physical education, hence achievement goal in PE measures still can predict some subjective well-being experiences.

Even more esoteric in that (research) sense is the concept of social well-being introduced by Corey Keyes. And, indeed we found interesting results. As we could see, performance-approach was rarely significant predictor and ego goal from Duda's questionnaire was not significant predictor of any form of well-being, until the social one. However, for social well-being, results showed that performance-approach was significant positive predictor of SWB at all 3 stages, along with mastery-approach. Less significant predictors at the third step were ego orientation in the negative, and personal improvement in the positive direction. At this point we can ask ourselves why these results (significant performance and ego goals) and indeed, intuitively it seems difficult to explain such results. For mastery-approach and personal

improvement goals is logical to predict social well-being, since it is rooted in the achievement goal theory and research about beliefs and purpose for education, for instance. However, after we take deeper insight and reflection, it is possible to extract explanation even for other significant predictors, and explanation might lie in proactive behaviors. Some studies linked approach goals tendencies with certain adaptive outcomes such as energy levels, proactivity, or locus of control. Such individuals, high in approach goals (mastery or performance, nevertheless), tend to take initiative and 'make the first step', and are also motivated to exert effort. Since we are all social beings and live in communities / society, naturally each achievement setting will include other people. In such circumstances, high (approach) motivated individuals will engage in these social situations and interact with others, communicate, even make friends and acquaintances, in order to fulfill their achievement strivings. Thus, no wonder these individuals have the sense of belonging to a group (school or neighborhood), that they have something important to contribute / give to the society, or that how this society works makes perfect sense to them (items from the questionnaire capturing social well-being). Finally, the finding that performance-approach has positive and ego orientation significant negative correlation with SWB also contributes to this view that performance-approach motivation doesn't necessarily have to be negative and obstructive to other people involved.

Further, another important and truly interesting finding of this study is that mastery-approach achievement goal was almost in every step of analysis and for every criterion significant positive predictor. It gets even greater value knowing that Elliot's measures are designed to assess motivation in PE setting and not generally in life. According to the results, it is possible to conclude that these individuals (scoring high on mastery-approach scale) are oblivious to physical education (or any other subject / activity they are not particularly interested

in) by choice, and adopt (create) achievement goals that are going to amuse them, or provoke them to engage / withstand "boring" / not particularly impressive activities they have to attend. Or at least embrace (create) goals to learn something new. Please note that today in psychology / educational field this idea is quite acknowledged and promoted by practitioners – to accept 'negative' experiences in our lives as learning experience or life lesson. So, that in the end we maintain our mental health and get out of 'crisis' / 'negativity' stronger and with built coping mechanisms for next potentially stressful event. And this study shows exactly how one potential mechanism might look alike: by creating / adopting mastery-approach achievement goals, because once again, results confirm that mastery-approach goals positively predicted all indices of optimal mental functioning.

On the other hand, to ego (performance) orientated person competition and activity is of greatest importance. Thus, bearing that in mind, it is possible to assume that disabling them from that would have negative impact on their happiness level. Specifically, if one person really wants to compete and show dominance, that person should be really unhappy if we put that person in competitive / achievement setting, but not in activity that she / he is competent at! For instance, instead of competing in chemistry or geography. This notion is supported with research aimed to explore PE beliefs, in which ego-orientated individuals saw main goal of PE classes as showing physical abilities and not to perhaps become healthier person, to learn something new, or at least to take a break between other subjects in school (physics, literature...).

What is also interesting from this finding, and what should / could be experimentally tested, is that highly ego-orientated individuals tend to see the whole world that way, and hence all the activities and achievement situations, including some particular activities that are not of personal relevance to them (in this case physical education). Eventually, if they are forced to

participate in such activities, they will probably keep their system of beliefs and be resistant to change (towards for instance adopting mastery perspective only for these 'irrelevant' activities), what will consequently make them unhappy. Taking everything into account, these results support mastery goals promotion, because it seems that task orientated individuals have more open-minded focus and are more prone to shift the focus and achievement goals (beliefs), and do not let introduced adversity / current circumstances to affect their well-being.

In order to illustrate this point, let us draw one practical example. Imagine that we have 2 students in front of us who equally dislike PE classes (sounds appalling but more and more students today have only 1 goal in PE setting – to sweat as little as possible). So, we have these 2 persons, and the only difference between them is that one is highly task orientated, and the second one ego. And we say to these two individuals "ok, today, we shoot the penalties in handball" and then observe / record their reactions and responses. We hypothesize that task orientated individuals will adapt more effectively to this instruction and eventually even feel okay / good / positive about the activity in general, or at least about some aspects of the activity. Whereas, ego orientated individuals who are interested in showing higher normative abilities would engage in maladaptive behaviors, since they are unable to dominate in this activity, even though, this activity might not even be personally important to them!

Talking about limitations and possible future directions of research, it will be also interesting to add and investigate, besides the aforementioned experimental studies, it might be interesting to investigate broader perspective of social well-being. Current conception of social well-being includes only relationships with other persons, and does not include one's views and feelings over global environmental issues such as climate changes, sustainable agriculture, or deforestation. Thus, it is still unclear whether performance-approach individuals scored high on

this well-being measure merely due to their proactive behaviors or because they really care about other human beings and want to 'fight' for better society towards cooperation, openness, sincerity, etc. This is important because social well-being is related to eudaimonia, and speaking of which, current results of this study linked performance-approach goals with enhanced psychological well-being and performance-avoidance goals with low levels of PWB.

Another important limitation of this study is that this study is correlational, and not experimental study, which means that it is difficult to claim that certain motivation affects well-being or is it other way round. As we know, correlation doesn't include causation, so proposed experiments will also answer to this dilemma, among other things as well. Additionally, next research in this field may consider of adding other variables of interest into assessment such as students' physical activity (both subjective and objective measures), but also investigate differences between student-athletes and students that are non-athletes, or differences between students who like physical education and find it important subject, and ones who don't. For example, this last proposed study will shed light and explain why we were able only partially to confirm hypothesis of increase in total variance explained as we add different measures and questionnaires into equation. More specifically, we obtained that addition of Duda's measures, which do not separate aim from reason, increased total variance explained, but very little and practically on a level that is not significant. We still believe that differences between these measures are bigger than the results of this study show, just both of these questionnaires were assessing achievement motivation in PE, and not in general life, whereas well-being naturally refers to the whole life and incorporates many aspects of one's personality. And, to support this notion, we remind that total variance explained by both of this achievement goal measures combined was quite little (around 5% each time). However, the only reliable answer and solution

to this dilemma is to conduct new study and control for students' attitudes towards PE, or to use only global goal measures for assessing students' achievement motivation.

The main idea of this research was to try to find optimal motivational profile and this study has some important practical applications, too. We hope that this research will help both, researchers and practitioners, better understand the field of eudaimonia and in future investigate more in details this area, as well as apply research findings in practice in order to instill eudaimonic well-being in high-school students. Therefore, the main practical importance of this study is that now sport psychology practitioners, teachers, physical educators, and many others are able to take some clear steps in order to promote happiness in their classes, especially the "true happiness", or the "very best within us". In that sense, according to the findings of this study, mastery-approach and personal improvement goals should be promoted in the first place, along with suppression of ego protection (performance-avoidance) goals. Moderate levels of performance-approach (ego enhancing) goals are also advisable. In this constellation, optimal conditions for eudaimonic well-being are satisfied (developed).

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Appendix 1

Table 1. *Relationships between various indices of well-being and achievement goals*

Study	Participants	WB indicators	Performance-approach	Performance-avoidance	Mastery-approach	Mastery-avoidance
Adie et al. (2008)	235 Male; 189 Female (24.25+6.24)	Self-esteem Positive affect Negative affect	-.16** NS .19**	-.30** -.11* .24**	.33** .45** -.13*	-.18** NS .30**
Adie et al. (2010)	91 Male (13.82+1.99)	Self-esteem Positive affect Negative affect	NS NS .22*	NS NS NS	.50** .53** NS	-.28** NS .24*
Akin & Arslan (2014)	304 Male; 205 Female (20.45+1.06)	Grit	-.37**	-.55**	.47**	-.38**
Barron & Harackiewicz (2001)	79 Male; 87 Female	Task enjoyment	NS		.39**	
Chen & Lu (2015)	242 Male; 118 Female	Depression symptoms Estimated gains in personal development	NS NS	NS -.16**	NS .24**	.26** -.14*
Cury et al. (2002)	45 Male; 45 Female (13-15)	State anxiety	No difference between PAp and mastery situ.	(+)	(-) Mastery goals group reported less ANX than PAv.	
Cury et al. (2003)	75 Male (13-15)	State anxiety		Pupils in PAv group reported higher ANX than those in other 2 groups		
Dewar & Kavussanu (2011)	200 Male (48.28+12.04)	Happiness Excitement Dejection Anger	.14* NS NS NS		.29*** .18* -.17* -.20**	
Diseth & Samdal (2014)	653 Male; 586 Female (15-16)	Life satisfaction	.21*	.10*	.28*	
Duda & Nicholls (1992)	99 Male; 108 Female (15.1)	Satisfaction/Enjoy. Boredom	NS .14*		.46*** -.23*	
Duda et al. (1992)	68 Male; 74 Female (10.5+0.83)	Enjoyment/Interest Boredom	NS .23**		.54*** -.24**	
Elliot & McGregor (2001)	62 Male; 86 Female	Disorganization State test anxiety Worry	NS NS NS	.38** .26** .24**	NS NS NS	.31** .21* .25**
Gillet et al. (2014)	148 Male; 274 Female (23.87+5.13)	Satisfaction Positive affect	.16* .17*			
Hodge et al. (2008)	189 Male; 184 Female (48+9.6)	Enjoyment	-.18*		.18*	
Jaakkola et al. (2016)	265 (17.03+0.63)	Enjoyment	0.19**	NS	0.52***	NS
Kaplan & Bos (1995) Kaplan & Maehr (1999)	76 Male; 91 Female	Peer relationship Emotional tone (scales of self-image)	NS -.2893**		.2254** .2566**	
Kavussanu et al. (2014)	129 Male; 215 Female (18.83+1.21)	Hope Excitement Worry Somatic anxiety	.13* NS NS NS		.18** .22*** NS -.12*	
McGregor & Elliot (2002)	73 Male; 104 Female (20.01)	Test anxiety Self-esteem	NS -.19*	.43** -.42**	NS NS	
Mendez-Gimenez et al. (2014)	203 Male; 148 Female (12-17)	Positive affect	.32**	.18**	.41**	.29**
Morris & Kavussanu (2009)	139 Male; 110 Female (13.57+1.69)	Enjoyment Worry	NS NS	NS .30**	.37** NS	NS .55**
Mouratidis et al. (2009)	157 Male; 162 Female	Positive activating emotions (enjoyment, hope, pride) Negative act. em.	.30**		.50**	

		(ANX, anger, shame) Neg. deactivating em. (hopelessness, boredom)	.18** .11*		-.12* -.21**	
Papaioannou & Christodoulidis (2007)	163 Male; 255 Female	Job satisfaction	NS	-.16**	.38***	
Papaioannou et al. (2008)	488 Male; 372 Female	Satisfaction	.09*	-.11**	.35**	
Papaioannou et al. (2009)	294 Male; 281 Female	Life satisfaction	.11*	NS	.31***	
Pekrun et al. (2009)	71 Male; 147 Female (19.43+1.76)	Enjoyment Hope Anxiety Hopelessness Positive affectivity Negative affect.	NS NS NS NS NS .20**	NS NS .22** NS NS .21**	.42** .40** NS -.25** .15* NS	
Roeser et al. (2002)	40 Male; 57 Female (13.08)	Feelings of sadness Feelings of anger	NS NS	0.26** NS	-.33** -.25**	
Sideridis (2005)	115 Male; 99 Female	Rosenberg's Self-Esteem Inventory Children's Depression Invent.	NS -.186*	-.167* .205**	.2** -.29**	
Tuominen-Soini et al. (2008)	1321 (15.97+1.05)	Self-esteem Depressive sympt. Emot.exhaustion Cynicism Inadequacy	NS NS .23** NS NS	-.25** .27** .29** .18** .30**	.28** -.12** NS -.45** -.32**	.19** NS .21** -.46** -.29**
Tuominen-Soini et al. (2012)	291 Male; 288 Female (15.01+0.2)	Emot. Exhaustion Cynicism Inadequacy Satisfaction	.18** NS .14** .13**	.34** .26** .33** -.17**	-.08* -.42** -.30** .41**	.10* -.33** -.21** .32**
Vansteenkiste et al. (2010)	304 Male (24.66+4.9)	Subjective vitality Positive affect Negative affect	.22** .22** NS			
Verner-Filion & Gaudreau (2010)	28 Male; 170 Female (19.18+2.46)	Academic satisfaction	NS	NS	.25*	
Wang et al. (2007)	256 Male; 277 Female (13.92+1.14)	Enjoyment Boredom	.29** NS	.27** -.09*	.65** -.47**	.26** NS
Wang et al. (2008)	222 Male; 262 Female (14.32+.98)	Self-esteem Enjoyment	.37** .30**	.40** .25**	.51** .64**	.35** .34**
White & Zellner (1996)	251	Somatic anxiety Worry	(+) (++)			

Note: NS. = non-significant. *$p < .05$; **$p < .01$; *** $p < .001$.

Appendix 2
Demographic variables

1. Gender: a) Male b) Female

2. Age: _____

3. Ethnicity: _____

4. Previous sport participation (please also include dance / ballet): a) Yes b) No

What sport: _____

For how many years: _____

5. Current sport participation (please also include dance / ballet): a) Yes b) No

What sport: _____

How many times did you practice in the previous week: _____

How many times did you practice in the previous month: _____

How many minutes each time? a) 30 b) 45 c) 60 d) 75 e) 90 f) 120 g) 120+

6. Indicate the frequency of your current sport involvement on a scale ranging from 1 (didn't practice it) to 5 (really high frequency):

1 Didn't practice it	2 Practice a bit	3 Average frequency	4 High frequency	5 Very high frequency

7. Moderate-intensive physical activity (sport, exercise etc.) is the somatic activities that **increase our heart rate and make us sweet**, e.g., jogging, bike, fast walking, relatively fast dance, various sports like football, basketball, swimming etc.

How many hours did you make Moderate-intensive physical activity in the past week?

0	0,5	1	2	3	4	5	6	7	8	9	10	11	12	13	14	Over 14

In the past week, how many times did you make Moderate-intensive physical activity of at least 60 minutes each time?

0	1	2	3	4	5	6	7

On the average, how many hours per week did you make Moderate-intensive physical activity over the past month?

0	0,5	1	2	3	4	5	6	7	8	9	10	11	12	13	14	Over 14

8 How many vehicles does your family own? a) None b) One c) Two or more

9. Do you have your own bedroom for yourself? a) No b) Yes

10. During the past 12 months, how many times did you travel away on holiday with your family?

a) Not at all b) Once c) Twice d) More than twice

11. How many computers does your family own? a) None b) One c) Two

Mother's education	Father's education
❒Doctorate	❒ Doctorate
❒University degree	❒ University degree
❒High school	❒ High school
❒Elementary education	❒ Elementary education
❒Went but didn't finish elementary education	❒ Went but didn't finish elementary education
❒Didn't go to school at all	❒ Didn't go to school at all

Appendix 3

Global goal orientations questionnaire (Papaioannou, Simou, Kosmidou, Milosis, & Tsigilis, 2009)

Generally in my life…	**Strongly disagree**	**Mostly disagree**	**Not sure**	**Mostly agree**	**Strongly agree**
I will never stop trying to become even better	1	2	3	4	5
One of my principles is to always give my best try	1	2	3	4	5
I grow enthusiastic with the idea that I will seem better than others	1	2	3	4	5
My principle is to prove that I am superior to others	1	2	3	4	5
I am striving to prove that I am a more important person than others	1	2	3	4	5
I am trying hard to constantly improve myself	1	2	3	4	5
I am trying hard to improve myself in anything that I am lacking	1	2	3	4	5
I often worry about the possibility of being characterized badly	1	2	3	4	5
I am a person who is afraid of others' negative comments	1	2	3	4	5
The thought that I will appear more important than others makes me try	1	2	3	4	5
I want to seem better than other people in all sectors of life	1	2	3	4	5
I am more pleased when I improve myself in something, that I wasn't so good at before	1	2	3	4	5
I care a lot about how others see me and this makes me often worry	1	2	3	4	5
I often worry that I may be negatively judged by others	1	2	3	4	5
I often worry how I will appear to others.	1	2	3	4	5

Appendix 4

Task and Ego Orientation in Physical Education Questionnaire (TEOPEQ; Duda& Nicholls, 1992; Walling & Duda,1995);

I feel most successful in Physical Education when…	Strongly disagree	Mostly disagree	Not sure	Mostly agree	Strongly agree
1. I learn a new skill and it makes me want to practice more	1	2	3	4	5
2. I'm the best	1	2	3	4	5
3. I learn something that is fun to do	1	2	3	4	5
4. I'm the only one who can do the skill	1	2	3	4	5
5. I learn a new skill by trying hard	1	2	3	4	5
6. Others mess up and I don't	1	2	3	4	5
7. I work really hard	1	2	3	4	5
8. The others can't do as well as me	1	2	3	4	5
9. Something I learn makes me want to go and practice more	1	2	3	4	5
10. I am the best student in the physical education lesson.	1	2	3	4	5
11. A skill I learn really feels right	1	2	3	4	5
12. I can do better than my friends	1	2	3	4	5
13. I do my very best	1	2	3	4	5

Appendix 5

Achievement Goal Questionnaire-Revised (AGQ-R; Elliot & Murayama, 2008);

In the Physical Education class…	Strongly disagree	Mostly disagree	Not sure	Mostly agree	Strongly agree
My aim is to completely master the material presented in this class.	1	2	3	4	5
I am striving to understand the content of this course as thoroughly as possible.	1	2	3	4	5
My goal is to learn as much as possible.	1	2	3	4	5
My aim is to avoid learning less than I possibly could.	1	2	3	4	5
I am striving to avoid an incomplete understanding of the course material.	1	2	3	4	5
My goal is to avoid learning less than it is possible to learn.	1	2	3	4	5
My aim is to perform well relative to other students.	1	2	3	4	5
I am striving to do well compared to other students.	1	2	3	4	5
My goal is to perform better than the other students.	1	2	3	4	5
My aim is to avoid doing worse than other students.	1	2	3	4	5
I am striving to avoid performing worse than others.	1	2	3	4	5
My goal is to avoid performing poorly compared to others.	1	2	3	4	5

Appendix 6

MHC-SF

These questions are about how you have been feeling during the past month. Please circle a number in the box that best represents how often you have experienced or felt the following. Meanings of the numbers are:

never = 0
once or twice = 1
about once a week = 2
about 2 or 3 times a week = 3
almost every day = 4
every day = 5

During the past month, how often did you feel …	NEVER	ONCE OR TWICE	ABOUT ONCE A WEEK	ABOUT 2 OR 3 TIMES A WEEK	ALMOST EVERY DAY	EVERY DAY
1. happy	0	1	2	3	4	5
2. interested in life	0	1	2	3	4	5
3. satisfied with life	0	1	2	3	4	5
4. that you had something important to contribute to society	0	1	2	3	4	5
5. that you belonged to a community (like a social group, or your neighborhood)	0	1	2	3	4	5
6. that our society is a good place, or is becoming a better place, for all people	0	1	2	3	4	5
7. that people are basically good	0	1	2	3	4	5
8. that the way our society works makes sense to you	0	1	2	3	4	5
9. that you liked most parts of your personality	0	1	2	3	4	5
10. good at managing the responsibilities of your daily life	0	1	2	3	4	5
11. that you had warm and trusting relationships with others	0	1	2	3	4	5
12. that you had experiences that challenged you to grow and become a better person	0	1	2	3	4	5
13. confident to think or express your own ideas and opinions	0	1	2	3	4	5
14. that your life has a sense of direction or meaning to it	0	1	2	3	4	5

Appendix 7

SPANE. **Please think about what you have been doing and experiencing during the past 4 weeks. Then report how much you experienced each of the following feelings, using the scale below. For each item, select a number from 1 to 5, and indicate that number on your response sheet. Meaning of the numbers is:**

1 = very rarely or never **2** = rarely **3** = sometimes **4** = often **5** = very often or always

How often during the past 4 weeks have you felt...:

1. ... positive ____	4. ... bad ____	7. ... happy ____	10. ... joyful ____
2. ... negative ____	5. ... pleasant ____	8. ... sad ____	11. ... angry ____
3. ... good ____	6. ... unpleasant ____	9. ... afraid ____	12. ... contented ____

SWLS. Using a scale from 1 to 7, as described below, circle the number that describes the best to what degree you agree with the preceding statement in the same line. Meaning of the numbers is:

1 Completely disagree	**2** Disagree	**3** Partially disagree	**4** Neither agree nor disagree	**5** Partially agree	**6** Agree	**7** Completely agree

1. In most ways my life is close to my ideal.	1	2	3	4	5	6	7
2. The conditions of my life are excellent.	1	2	3	4	5	6	7
3. I am satisfied with my life.	1	2	3	4	5	6	7
4. So far I have gotten the important things I want in life.	1	2	3	4	5	6	7
5. If I could live my life over, I would change almost nothing.	1	2	3	4	5	6	7

PANAS. This scale consists of a number of words that describe different feelings and emotions. Read each item and then mark the number from the scale below which indicates to what extent you have felt that way in the past 4 weeks. The meaning of the numbers is:

1 = Very rarely or never **2 = Rarely** **3 = Sometimes** **4 = Often** **5 = Very often or always**

1. Excited ____	**6.** Guilty ____	**11.** Irritable ____	**16.** Determined ____
2. Distressed ____	**7.** Scared ____	**12.** Alert ____	**17.** Attentive ____
3. Interested ____	**8.** Hostile ____	**13.** Ashamed ____	**18.** Jittery ____
4. Upset ____	**9.** Enthusiastic ____	**14.** Inspired ____	**19.** Active ____
5. Strong ____	**10.** Proud ____	**15.** Nervous ____	**20.** Afraid ____

Table 3
Pearson's Intercorrelations for all scales used in the analysis

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
1. Map	-																
2. Mav	319**	-															
3. PAp	430**	.306**	-														
4. PAv	398**	.338**	.607**	-													
5. Task	626**	.265**	.413**	.336**	-												
6. Ego	175**	.267**	.610**	.390**	.356**	-											
Personal rovement	380**	.103*	.248**	.244**	.463**	.190**	-										
8. Ego-hancing	.027	.172**	.432**	.240**	.130**	.435**	.142**	-									
9. Ego-otection	.084*	.147**	.207**	.194**	.056	.158**	.041	.302**	-								
10. EWB	248**	.059	.055	.074	.175**	-.015	.237**	-.054	-.165**	-							
11. SWB	375**	.100*	.205**	.116**	.271**	.050	.229**	.083*	.028	.536**	-						
12. PWB	334**	.094*	.147**	.116**	.275**	.095*	.361**	.105**	-.154**	.597**	.667**	-					
Pos. Exp.	217**	.009	.063	.057	.176**	.021	.236**	.005	-.133**	.720**	.457**	.542**	-				
Neg. Exp.	-.140**	.053	-.052	.030	-.107*	-.007	-.096*	.007	.201**	-.411**	-.254**	-.330**	-.526**	-			
15. Life tisfaction	244**	.058	.142**	.108**	.166**	.081*	.239**	.023	-.218**	.559**	.411**	.493**	.556**	-.339**	-		
16. PA	289**	.095*	.192**	.109**	.287**	.118**	.333**	.082*	-.127**	.579**	.383**	.553**	.624**	-.333**	.478**	-	
17. NA	-.174**	.058	-.031	-.033	-.114**	.027	-.166**	.082*	.228**	-.353**	-.194**	-.273**	-.435**	.721**	-.371**	-.341**	-

Note: *p < 0.05; **p < 0.01; ***p < 0.001. In normal characters are presented the correlations for the situation while playing against the best, with bold characters are presented the correlations for the situation while playing against the worst.

Appendix 9
Results of hierarchical regression analysis for positive affect indices

Model Summary[d]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.304[a]	.092	.086	.66694	.092	14.085	4	555	.000
2	.328[b]	.108	.098	.66243	.015	4.794	2	553	.009
3	.426[c]	.181	.168	.63619	.074	16.523	3	550	.000

a. Predictors: (Constant), Performance-Avoidance, Mastery-Avoidance, Mastery-Approach, Performance-Approach

b. Predictors: (Constant), Performance-Avoidance, Mastery-Avoidance, Mastery-Approach, Performance-Approach, ego_duda, task_duda

c. Predictors: (Constant), Performance-Avoidance, Mastery-Avoidance, Mastery-Approach, Performance-Approach, ego_duda, task_duda, Global Ego Protection, Global Personal Improvement, Global Ego Enhancing

d. Dependent Variable: Positive Affect

Model Summary[d]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.227[a]	.051	.045	.79913	.051	7.679	4	566	.000
2	.235[b]	.055	.045	.79886	.004	1.188	2	564	.305
3	.319[c]	.102	.087	.78113	.046	9.635	3	561	.000

a. Predictors: (Constant), Performance-Avoidance, Mastery-Avoidance, Mastery-Approach, Performance-Approach

b. Predictors: (Constant), Performance-Avoidance, Mastery-Avoidance, Mastery-Approach, Performance-Approach, ego_duda, task_duda

c. Predictors: (Constant), Performance-Avoidance, Mastery-Avoidance, Mastery-Approach, Performance-Approach, ego_duda, task_duda, Global Ego Protection, Global Personal Improvement, Global Ego Enhancing

d. Dependent Variable: Positive Experience

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	2.836	.110		25.846	.000					
	Mastery-Approach	.158	.028	.266	5.721	.000	.289	.236	.231	.758	1.320
	Mastery-Avoidance	-.002	.028	-.004	-.083	.934	.095	-.004	-.003	.839	1.192
	Performance-Approach	.071	.031	.121	2.279	.023	.192	.096	.092	.585	1.709
	Performance-Avoidance	-.039	.030	-.069	-1.303	.193	.109	-.055	-.053	.591	1.691
2	(Constant)	2.665	.123		21.718	.000					
	Mastery-Approach	.106	.033	.179	3.177	.002	.289	.134	.128	.511	1.957
	Mastery-Avoidance	-.007	.028	-.011	-.238	.812	.095	-.010	-.010	.825	1.213
	Performance-Approach	.054	.036	.092	1.497	.135	.192	.064	.060	.429	2.334
	Performance-Avoidance	-.040	.030	-.070	-1.335	.182	.109	-.057	-.054	.591	1.693
	task_duda	.114	.038	.162	2.983	.003	.287	.126	.120	.544	1.837
	ego_duda	.002	.032	.003	.060	.952	.118	.003	.002	.568	1.760
3	(Constant)	1.988	.199		9.971	.000					
	Mastery-Approach	.093	.033	.156	2.839	.005	.289	.120	.110	.493	2.027
	Mastery-Avoidance	.011	.027	.017	.397	.692	.095	.017	.015	.813	1.229
	Performance-Approach	.055	.036	.093	1.542	.124	.192	.066	.059	.405	2.468
	Performance-Avoidance	-.041	.029	-.071	-1.399	.162	.109	-.060	-.054	.583	1.717
	task_duda	.048	.038	.069	1.260	.208	.287	.054	.049	.498	2.010
	ego_duda	-.011	.032	-.019	-.356	.722	.118	-.015	-.014	.523	1.913
	Global Personal Improvement	.260	.049	.234	5.283	.000	.333	.220	.204	.756	1.323
	Global Ego Enhancing	.045	.029	.073	1.547	.122	.082	.066	.060	.664	1.507
	Global Ego Protection	-.110	.025	-.181	-4.404	.000	-.127	-.185	-.170	.885	1.130

a. Dependent Variable: Positive Affect

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	3.437	.130		26.401	.000					
	Mastery-Approach	.173	.033	.248	5.275	.000	.217	.216	.216	.758	1.320
	Mastery-Avoidance	-.045	.033	-.061	-1.375	.170	.009	-.058	-.056	.839	1.192
	Performance-Approach	-.013	.037	-.019	-.357	.721	.063	-.015	-.015	.585	1.709
	Performance-Avoidance	-.006	.036	-.009	-.167	.868	.057	-.007	-.007	.591	1.691
2	(Constant)	3.338	.147		22.777	.000					
	Mastery-Approach	.141	.040	.202	3.526	.000	.217	.147	.144	.511	1.957
	Mastery-Avoidance	-.047	.033	-.064	-1.423	.155	.009	-.060	-.058	.825	1.213
	Performance-Approach	-.020	.043	-.029	-.470	.639	.063	-.020	-.019	.429	2.334
	Performance-Avoidance	-.006	.036	-.009	-.174	.862	.057	-.007	-.007	.591	1.693
	task_duda	.069	.046	.084	1.516	.130	.176	.064	.062	.544	1.837
	ego_duda	-.004	.038	-.006	-.107	.915	.021	-.005	-.004	.568	1.760
3	(Constant)	2.778	.242		11.457	.000					
	Mastery-Approach	.128	.040	.184	3.230	.001	.217	.135	.129	.493	2.027
	Mastery-Avoidance	-.031	.033	-.042	-.936	.350	.009	-.039	-.037	.813	1.229
	Performance-Approach	-.017	.044	-.024	-.379	.705	.063	-.016	-.015	.405	2.468
	Performance-Avoidance	-.005	.035	-.008	-.154	.878	.057	-.007	-.006	.583	1.717
	task_duda	.010	.047	.013	.223	.823	.176	.009	.009	.498	2.010
	ego_duda	-.014	.039	-.019	-.351	.726	.021	-.015	-.014	.523	1.913
	Global Personal Improvement	.228	.060	.175	3.809	.000	.236	.159	.152	.756	1.323
	Global Ego Enhancing	.035	.035	.049	.993	.321	.005	.042	.040	.664	1.507
	Global Ego Protection	-.111	.030	-.156	-3.665	.000	-.133	-.153	-.147	.885	1.130

a. Dependent Variable: Positive Experience

Appendix 10
Results of hierarchical regression analysis for negative affect indices

Model Summary[d]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.213[a]	.046	.039	.65548	.046	6.745	4	566	.000
2	.216[b]	.047	.037	.65623	.001	.357	2	564	.700
3	.333[c]	.111	.096	.63550	.064	13.465	3	561	.000

a. Predictors: (Constant), Performance-Avoidance, Mastery-Avoidance, Mastery-Approach, Performance-Approach

b. Predictors: (Constant), Performance-Avoidance, Mastery-Avoidance, Mastery-Approach, Performance-Approach, ego_duda, task_duda

c. Predictors: (Constant), Performance-Avoidance, Mastery-Avoidance, Mastery-Approach, Performance-Approach, ego_duda, task_duda, Global Ego Protection, Global Personal Improvement, Global Ego Enhancing

d. Dependent Variable: Negative Affect

Model Summary[d]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.196[a]	.038	.032	.71451	.038	5.635	4	566	.000
2	.199[b]	.039	.029	.71536	.001	.328	2	564	.721
3	.288[c]	.083	.069	.70072	.044	8.936	3	561	.000

a. Predictors: (Constant), Performance-Avoidance, Mastery-Avoidance, Mastery-Approach, Performance-Approach

b. Predictors: (Constant), Performance-Avoidance, Mastery-Avoidance, Mastery-Approach, Performance-Approach, ego_duda, task_duda

c. Predictors: (Constant), Performance-Avoidance, Mastery-Avoidance, Mastery-Approach, Performance-Approach, ego_duda, task_duda, Global Ego Protection, Global Personal Improvement, Global Ego Enhancing

d. Dependent Variable: NE_SPANE

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	2.365	.107		22.144	.000					
	Mastery-Approach	-.128	.027	-.225	-4.770	.000	-.174	-.197	-.196	.758	1.320
	Mastery-Avoidance	.073	.027	.122	2.723	.007	.058	.114	.112	.839	1.192
	Performance-Approach	.017	.030	.031	.575	.565	-.031	.024	.024	.585	1.709
	Performance-Avoidance	-.002	.029	-.004	-.071	.943	-.033	-.003	-.003	.591	1.691
2	(Constant)	2.385	.120		19.809	.000					
	Mastery-Approach	-.114	.033	-.200	-3.471	.001	-.174	-.145	-.143	.511	1.957
	Mastery-Avoidance	.072	.027	.120	2.641	.008	.058	.111	.109	.825	1.213
	Performance-Approach	.009	.036	.015	.241	.810	-.031	.010	.010	.429	2.334
	Performance-Avoidance	-.003	.030	-.005	-.089	.929	-.033	-.004	-.004	.591	1.693
	task_duda	-.026	.038	-.038	-.680	.497	-.114	-.029	-.028	.544	1.837
	ego_duda	.020	.031	.036	.656	.512	.027	.028	.027	.568	1.760
3	(Constant)	2.537	.197		12.862	.000					
	Mastery-Approach	-.102	.032	-.179	-3.153	.002	-.174	-.132	-.126	.493	2.027
	Mastery-Avoidance	.054	.027	.091	2.055	.040	.058	.086	.082	.813	1.229
	Performance-Approach	-.011	.035	-.019	-.310	.757	-.031	-.013	-.012	.405	2.468
	Performance-Avoidance	-.009	.029	-.016	-.310	.756	-.033	-.013	-.012	.583	1.717
	task_duda	.015	.038	.022	.390	.697	-.114	.016	.016	.498	2.010
	ego_duda	.013	.032	.022	.405	.685	.027	.017	.016	.523	1.913
	Global Personal Improvement	-.133	.049	-.125	-2.724	.007	-.166	-.114	-.108	.756	1.323
	Global Ego Enhancing	.010	.028	.018	.365	.715	.082	.015	.015	.664	1.507
	Global Ego Protection	.135	.025	.232	5.483	.000	.228	.226	.218	.885	1.130

a. Dependent Variable: Negative Affect

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	2.442	.116		20.977	.000					
	Mastery-Approach	-.115	.029	-.186	-3.920	.000	-.140	-.163	-.162	.758	1.320
	Mastery-Avoidance	.062	.029	.096	2.124	.034	.053	.089	.088	.839	1.192
	Performance-Approach	-.044	.033	-.072	-1.331	.184	-.052	-.056	-.055	.585	1.709
	Performance-Avoidance	.069	.032	.115	2.146	.032	.030	.090	.088	.591	1.691
2	(Constant)	2.485	.131		18.938	.000					
	Mastery-Approach	-.099	.036	-.160	-2.768	.006	-.140	-.116	-.114	.511	1.957
	Mastery-Avoidance	.063	.030	.096	2.119	.035	.053	.089	.087	.825	1.213
	Performance-Approach	-.043	.039	-.070	-1.116	.265	-.052	-.047	-.046	.429	2.334
	Performance-Avoidance	.069	.032	.115	2.142	.033	.030	.090	.088	.591	1.693
	task_duda	-.033	.041	-.045	-.809	.419	-.107	-.034	-.033	.544	1.837
	ego_duda	.006	.034	.010	.180	.857	-.007	.008	.007	.568	1.760
3	(Constant)	2.429	.218		11.168	.000					
	Mastery-Approach	-.101	.036	-.163	-2.828	.005	-.140	-.119	-.114	.493	2.027
	Mastery-Avoidance	.051	.029	.079	1.754	.080	.053	.074	.071	.813	1.229
	Performance-Approach	-.049	.039	-.079	-1.251	.212	-.052	-.053	-.051	.405	2.468
	Performance-Avoidance	.058	.032	.096	1.816	.070	.030	.076	.073	.583	1.717
	task_duda	-.013	.042	-.018	-.310	.757	-.107	-.013	-.013	.498	2.010
	ego_duda	.012	.035	.019	.347	.729	-.007	.015	.014	.523	1.913
	Global Personal Improvement	-.047	.054	-.041	-.882	.378	-.095	-.037	-.036	.756	1.323
	Global Ego Enhancing	-.036	.031	-.058	-1.159	.247	.007	-.049	-.047	.664	1.507
	Global Ego Protection	.138	.027	.218	5.078	.000	.201	.210	.205	.885	1.130

a. Dependent Variable: NE_SPANE