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Sport related stereotypes and their relationships with goal orientation and behavioral regulation in Ethiopian athletes

By

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Abstract

The aim of the present research was to develop and test a new measure of sport stereotypes, and to investigate the relationship between sport related stereotypes and behavioral regulations and goal orientations. Four studies were conducted. The first study was an interview with Ethiopian long distance athletes to assess their thought reasons for their success in their sport. The second study tested the psychometric properties and the factor structure of the sport stereotype scale **(SSS)** through exploratory factor analysis in the Amharic language. The results showed that the need of another construct since one factor split in to two different factors. The third study has two purposes; i.e. (1) to examine the psychometric properties and the factor structure of the second version of the sport stereotype scale **(SSS)** through confirmatory factor analysis, and (2) to translate and adapt two scales (Behavioral Regulation Sport Questionnaire (BRSQ; Lonsdale, Hodge, & Rose, 2008) and the Achievement Goals Questionnaire (AGQ; Papaioannou et al, 2007)) in to Amharic language. The results showed that an acceptable psychometric properties and factorial structure of the second version of **SSS,** and the two questionnaires were translated and adapted to the Amharic language. The fourth study had three purposes: (1) to further measure the psychometric property of the Amharic versions of SSS, BRSQ, and AGQ, (2) to identify the most prominent stereotypic beliefs of the Ethiopian athletes regarding their sport, and (3) to examine the relationships between athletes' stereotypic beliefs, their goal achievement, behavioral regulations. The results provided adequate support for the five-factor model of the SSS, and an acceptable internal consistency. The results of the study also provided supportive evidence for the construct validity of the Amharic version of the two questionnaires (AGQ and BRSQ). Although some items and constructs were removed, the remaining items and constructs produced an instrument matching better the original AGQ and BRSQ. The results showed that Ethiopian athletes scored moderately high with the highest scores observed for the Ethiopian tradition (M=4.02) and commitment (M=3.94) stereotypes. Finally, the three individual stereotype dimensions correlated positively and significantly with social approval of AGQ. Commitment stereotype had highest positive correlations with athletes' goal orientation of social approval, performance approach, and mastery. On the other hand, the correlation between natural stereotype and

mastery goal orientation of the athletes was the only negative correlation. The Ethiopian tradition factor showed a moderate positive correlation with the three factors of AGQ, Overall, the results of the present investigation provided considerable evidence and support for the validity of the sport stereotype scale. The results also confirmed that Ethiopian athletes hold stereotypes of different stable external factors ranges from Natural ability stereotype to life style, environmental, commitment, and traditional. The most prominent stereotypes found were the Ethiopian tradition factors, commitment factors, and physical environment factors. These beliefs showed significant relationships with athletes' behavioral regulation, and goal orientations.

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INTRODUCTION

Until the 1960s, almost all sprint champions were Caucasians (Coakley, 1998). Like Scandinavian distance runners in the early 20th century who won 28 of 36 possible Olympic medals over 5 and 10 km. Today, however, Black men absolutely dominate sprinting, holding 95% of the top times throughout the world (Entine, 2000). In the past decade the international middle and long distance running scene has been dominated by athletes of African descent (Castellini, 2008). In the past five Olympics, up to and including Sydney, all 40 finalists in the men's 100 meters have been Black. The only runners ever to break the 10-second barrier for 100 meters have all been Black men, and they have done so more than 200 times (Entine, 2000). Today's few elite White sprinters can run no faster than their predecessors from the 1970s, despite improved equipment, support, and facilities (George, 1994).

Outstanding performances and absolute domination of some sports of Blacks, generated the question are blacks better athletes than whites. Many were concerned about this question and tried to find an answer (Sokolove, 1988).Caucasians worldwide are searching for proof of the physical advantage of Black athletes' while handing them on a platter a psychological advantage which, until removed, will perpetuate the current state (Hamilton, 2000).The existing beliefs that stir racial stereotypes about athletes can in part be traced to the historical debate over the perceived differences between Black and White athletic performances. However, the influence of stereotypes could also account for performance differentials, with Whites effectively defeated at the starting line by inflated impressions of Black rivals. It certainly seems that contemporary sprinting is more important in Black subculture, and few Whites choose to participate, perhaps because of perceptions of inferiority (George, 1994).

The event most attracting attention is the absolute dominance of the East Africans (Ethiopians and Kenyans) in long distance race. Hamilton (2000) claimed that psychology plays a critical role in the dominance of East African runners. Psychological factors may perpetuate this dominance by ascribing differences between African and Caucasian runners to stable external factors and in this manner disempowering Caucasian runners and empowering East African

runners. Regardless of the possible existence of physiological advantages or disadvantages, the belief that these differences exist creates a psychological perception that can have considerable effect on performance (Baker and Horton, 2003).

Racial stereotypes about Black and White athletes are known not only by spectators and coaches but also by the athletes themselves. That is, given the long history of the debate over Black superiority in sports, it seemed likely to us that Black and White participants in sports may have knowledge of these cultural stereotypes (Devine, 1989). If so, then it is possible that knowledge of the positive and negative stereotypes about Black and White athletes could have an impact on an athlete's performance in a sports event. Ultimately, these internalized stereotypes can lead to Disidentification and affect participation patterns (Coakley, 2003).

Accordingly, knowledge of stereotypes could affect athlete's participations in a specific sport and overall spot performance since this knowledge of stereotype is believed to be related with athletes' psychological skills (Baker and Horton, 2003). As a result, it is important to study how different stereotypes relate with athletes' mental skills and affect their participation and performance in sport. To this end, this study aimed at developing a structured scale that can distinguish between different types of stereotypic beliefs and study if there are any relationships between athletes' stereotypic beliefs and their mental skills. The development of the stereotype scale should provide a clear pattern to understand athletes' stereotypic beliefs regarding themselves and their sport. It should also measure and distinguish between different stereotype types to give a pattern of relationship with different dimensions of other questionnaires. In general, the study is intended to examine the relationships between athletes' stereotypic beliefs about themselves and those stable external factors (stereotypic belifes) to which they attribute their success to their goal achievement and behavioral regulation (Coakley, 2003, Hamilton, 2000).

LITERATURE REVIEW

"I imagine hell like this: Italian punctuality, German humor and English wine"
Peter Ustinov

Lippmann (1922) was the first to bring the idea stereotype to the field of social science (Furuhata & Oka, 2002), and he thought stereotype was: "*For the most part we do not first see, and then define; we define first and then see. In the great blooming, buzzing confusion of the outer world we pick out what our culture has already defined for us, and we tend to perceive that which we have picked out in the form stereotyped for us by our culture "(p. 81).* After Lippmann, many theorists and researchers have used the term with a variety of different definitions (Sills, 1968). Examples include: "*incorrect beliefs*" (Katz & Braly, 1935, p. 181), "*an inaccurate, rigid, and oversimplified image of members of a social group, especially an out group*" (Coon, 1994, G-21), "*generalized and usually value-laden impressions that members of one social group use in characterizing members of another group*" (Lindgren, 1994, p. 468), and "*the cognitive component of group antagonism*" (Taylor, Peplau, & Sears, 1994, p. 216). As a result, the concept of stereotype has been plagued with excess meanings (Zanna & Olson, 1994).

Brigham (1971) showed the taxonomy of the psychological meaning of the construct of stereotype. He collected many definitions and arranged them into six types of groups of beliefs, according to what the definitions were indicating. They are (1) Stereotype not defined as bad, rather it is generalization, (2) Stereotype not defined as bad; rather it is category/concept, (3) Stereotype defined as a bad generalization/category/concept, because it is incorrectly learned, (4) Stereotype defined as a bad generalization /category/ concept, because it is over generalized, (5) Stereotype defined as a bad generalization /category/ concept, because it is factually incorrect, and (6) Stereotype defined as a bad generalization /category/ concept, because it is rigid.

On the later days researchers like Samovar & Porter (1988) defined stereotype as "*… the perceptions or beliefs we hold about groups or individuals based on previously formed opinions*

and attitudes... When this happens, people often take the easy path and invoke stereotypes. It is both effortless and comfortable to say quickly, "All Jews are. . ." or "He is Mexican; therefore he must..." (Samovar & Porter, 1988, p. 280). Zanden (1988) on his part defined stereotype as *"…are one type of person schema; they are the unscientific and unreliable generalizations that we make about people based on their group membership. For instance, you may have stereotypes of women who work football players, fraternity members, and college professors"* (Zanden, 1988, p. 174).When we believe that all Brazilians play soccer, for instance, this is a belief about a group of individuals. Therefore it is a stereotype. Stereotype can be positive and negative, correct and incorrect, or simple and complicated. This is because there is no ultimate means to distinguish whether a belief about a group of individuals is positive or negative, correct or incorrect, and simple or complicated in many situations. Concerning the belief that all Brazilians play soccer, it is not possible to tell whether this belief is positive or negative.

Racial stereotypes in sport

"***Blacks were physically different from Whites and possessed an accompanying character and temperament that was unique to their species***" (Wiggins, 1997, p. 313).

Racial stereotypes are most frequently constructed around a generalized assessment of skin color, hair type, and stature as well as aptitudes, intelligence, and physical ability (Birrell, 1989; Montagu, 1964). Although inherently inaccurate, such concepts may exert powerful influences on person perception (Madon et al., 1998). The view is widespread that Black individuals of African ancestry are inherently superior in physical ability. Supporting evidence comes from that group's representation level in many sports. For example, East African's dominate distance running (Entine, 2000), and a random African American is about 15 times more likely to reach the NFL and 28 times more likely to reach the NBA than a random non-Black individual (Sailer, 1996). In Britain Blacks represent less than 2% of the total population, but they correspond to at least 50% of First Division basketball players, boxing champions, the British athletics squad, and one in five professional soccer players (Cashmore, 1998; Jarvie, 1991; Owen, 1994). Until the 1960s, almost all sprint champions were White (Coakley, 1998). Today, however, Black men

absolutely dominate sprinting. In the past five Olympics all the finalists in the men's 100 meters have been Black. The only runners ever to break the 10-second barrier for 100 meters have all been Black men (Entine, 2000).

On the other hand, Stereotype about African American inferiority also finds adherents in many segments of American culture, including sport. Steele (1990) argues that one race-oriented component of white superiority and black inferiority is intelligence. Support for the physical superiority myth indirectly contributes to the belief that the African American athlete is mentally and intellectually inferior to the white athletes (Davis, 1990; Hoose, 1989; Sailes, 1991). This racist attitude leads to the discriminatory practice of channeling African Americans away from the central positions (i.e., leadership, decision making) in college and professional sport (Coakley, 1990; Eitzen & Sage, 1989; Leonard, 1988).

The character of racial stereotypes about athletes

Outstanding performances and absolute domination of some sports of Blacks, generated the question are blacks better athletes than whites? Many were concerned about this question and tried to find an answer to it (Sokolove, 1988). The existing beliefs that stir racial stereotypes about athletes can in part be traced to the historical debate over the perceived differences between Black and White athletic performances. According to Wiggins (1997) during those times people were attempting to explain why some Black athletes consistently outperformed popular White athletes in sports previously dominated by majority group members.

People also argued that Black athletes have superior physical abilities that can be attributed to a form of Social Darwinism—the average Black man possesses superior physical qualities because the hardship of slavery "weeded out" those who did not possess adaptive physical characteristics (Kane, 1971). Kane acknowledged that motivation and opportunity are important, but he stated that the average Black athlete possesses superior physical athletic qualities because only the genetic material of the fittest was passed on after decades of enslavement. However, Cobb (1934) argued that differences in the performance of Black and White athletes could be attributed to socialization, proper training, and certain incentives.

Harry Edwards (1973) also argued that surviving slavery had as much to do with intelligence and character as it did with physical strength and speed.

Devine and Baker (1991) found that the attributes assigned to the social category of Black athlete included unintelligent and ostentatious, and Biernat and Manis (1994) reported that Black males were perceived to be more athletic than White males. Sailes (1996) asked Black and White college students to rate the intelligence, academic preparation, athletic style of play, competitiveness, physical superiority, athletic ability, and mental temperament of Black and White college athletes. The results showed that White participants rated Black athletes as significantly less intelligent, less academically prepared, and more temperamental, whereas Black participants rated White athletes as significantly less competitive and as exhibiting less "athletic style."Thus, judgments about the characteristics of Black and White athletes tend to reflect the stereotype that Black athletes are physically superior but intellectually inferior to White athletes.

People hold racial stereotypes about athletes that are both positive and negative. Specifically, Black athletes are perceived to have natural athletic ability (which is a positive sports attribute) but are thought to be less intelligent, even in a sports context (negative sports attribute). In contrast, White athletes are perceived to have less natural athletic ability (a negative sports attribute) but are thought to be intelligent and perhaps harder working (positive sports attributes).

Nevertheless, most myths attempting to rationalize the dominance of African Americans in specific sports generally have little scientific credibility. According to Coakley (1990) many believe that African American athletes are physically superior to white athletes, and that their body build is genetically determined, which gave them an advantage over their white counterparts. Although some physical differences are apparent between African Americans and whites as a whole, it remains to be demonstrated that anatomical and/or physiological differences between African American and white athletes contribute significantly to the

dominance of either over the other in sports competition (Coakley, 1990; Leonard, 1988; Sokolove, 1988). Why black athletes seem to dominate some sports (Kane, 1971; Worthy & Markle, 1970) or appear to play sports differently than white athletes (Jones & Hochner, 1973) were very debatable in the 20th century. They all tried to explain the issues as nature and nurture.

Effects of stereotype in sport context

The perception of the athletic superiority of black people is widespread, with the media contributing substantially to such thinking. Assumptions concerning sporting potential are a likely component of the Black stereotype as presented in the media and elsewhere. One consequence of this stereotype is that it may be internalized by Black individuals who may then favor a particular career. For example, in the United States, it appears that self-schemas in early adolescent individuals of African American descent conform to sport stereotypes associated with this group. These emphasize, for example, participation in basketball, boxing, and sprinting (Harrison, Lee, & Belcher, 1999). Also, Edwards (1986) reported that Black families were four times more likely to push their children towards careers in sport and that this was often at the neglect of other areas of personal and cultural development.

Within sport dynamics itself, racial stereotypes are thought to be apparent in stacking. This is the term used to describe the phenomenon in which a coach assigns athletes to certain playing positions in team sports based on their supposed racial attributes, such as speed and power, rather than their actual achieved performance (Leonard, 1987; Loy & McElvogue, 1970). Consequently, more often than not, Blacks are relegated to positions that emphasize physical rather than mental prowess with the decision-making or leadership positions filled by White athletes. Research indicates that stacking of Black players in certain positions in games such as soccer (Norris & Jones, 1998), rugby union (Jarvie, 1991), and rugby league (Long, Carrington, & Spracklen, 1997) has been a common practice in the United Kingdom in the past.

Stereotype threat

Stereotype threat is the concern or worry one feels when one is at risk of confirming, as self-characteristic, a negative stereotype about one's group (Steele & Aronson, 1995). This concern or worry takes the form of a disruptive apprehension or anxiety that has a debilitating effect on the individual's performance (Aronson, Fried, & Good, 2002). For example, because there is a negative stereotype regarding their intellectual capabilities, African Americans are more likely to experience stereotype threat when taking cognitive ability tests (Aronson et al., 2002). Stereotype threat has proven to be a robust phenomenon, applying to a diverse set of groups, including African Americans, White men, women, and people with low socioeconomic status and social class (Aronson et al., 1999; Leyens, Desert, Croizet, & Darcis, 2000; Spencer et al., 1999; Steele & Aronson, 1995).

There has also been substantial research about the relationship between stereotype threat and performance. For instance, Schmader (2002) found that performance was significantly impaired only among women who strongly identified with their gender group when taking a math test investigating gender differences. Aronson et al. (1999) suggested that people who considered a particular domain important were the ones who were most likely to be affected by stereotype threat. These studies suggest that group identification, stigma consciousness, and the importance of the task, moderate the relationship between stereotype threat and performance outcomes.

In a typical stereotype threat experiment, participants who are aware of being at risk for behaving consistently with a negative stereotype (e.g., being poor at math, athletics, academics, etc.) performed significantly more poorly than participants who did not feel that they were threatened by the stereotype. Removing stereotype threat can have a large effect; Spencer et al. (1999) erased gender differences in complex mathematics performance by describing their math test as one that did not produce gender differences, and Aronson et al. (1998) eliminated racial differences in math performance by presenting the test as "non diagnostic."

Steele and Aronson (1995) found that African American participants under conditions of stereotype threat showed increased activation of stereotypes about African Americans and

more self doubt than African Americans who were not under stereotype threat and White Americans. Steele and Aronson argue that these findings are evidence of a disruptive evaluation apprehension in stereotype-threatened participants.

A study by Blascovich, Spencer, Quinn, and Steele (2001) found that stereotype threat elevated blood pressure in American Blacks. Black and White Americans took an “intelligence test” while researchers measured their cardiovascular activity. To enhance stereotype threat, participants first watched a video of a White professor who presented the test as “an intelligence test developed at Stanford.” To reduce threat, a video with a Black professor presented the test as racially unbiased. Under conditions of stereotype threat, Blacks’ blood pressure rose more quickly and to a higher level than Whites, but under conditions of reduced threat, Blacks did not have higher blood pressure than Whites. These data suggest that stereotype threat creates arousal. Spencer et al. (1999) showed that stereotype threat increase anxiety, but they did not find conclusive evidence that anxiety, self-efficacy, or evaluation apprehension mediated the link between stereotype threat and performance in spite of the fact that anxiety, self-efficacy, and evaluation apprehension have been clearly linked to decreased performance in other literatures (e.g., Ashcraft, 2002).

Threat effect on sport performance

Racial stereotypes about Black and White athletes are known not only by spectators and coaches but also by the athletes themselves. That is, given the long history of the debate over Black superiority in sports, it seemed likely to us that Black and White participants in sports may have knowledge of these cultural stereotypes (Devine, 1989). If so, then it is possible that knowledge of the positive and negative stereotypes about Black and White athletes could have an impact on an athlete's performance in a sports event. Baker and Horton (2003) argue that stereotype threat may perpetuate East African distance-running dominance, by attributing racial differences to stable external factors and disempowering White runners by strengthening perceptions of inferiority. Ultimately, these internalized stereotypes can lead to Disidentification and affect participation patterns (Coakley, 2003). Evidence also suggests that a

similar mechanism may operate in reverse, with positive self-stereotyping promoting a stereotype lift effect (Walton & Cohen, 2003).

Coakley (2003) contends that societal emphasis on Black physicality and encouragement to excel in selected sports, along with limited socioeconomic opportunities elsewhere, causes belief in a bio-cultural destiny and thus the motivation to develop abilities. Similarly, Smith (1995) speculates that Blacks may spend longer practicing, due to having narrower opportunities, whereas Jones (2002) found that Black footballers felt they had to be much better than Whites to succeed, and trying harder was the best response to racial taunting.

Despite improved equipment, support, and facilities, a lot of White sprinters cannot run faster than their predecessors from the 1970s (George, 1994). Proposed racial physiological differences would not adequately explain White sprinting stagnation over a quarter of a century. Proponents of biological determinism might stress that although racial athletic differences are small, split seconds can separate champions and also-rans (Entine, 2000). However, the influence of stereotypes could also account for performance differentials, with Whites effectively defeated at the starting line by inflated impressions of Black rivals.It certainly seems that contemporary sprinting is more important in Black subculture (George, 1994), and few Whites choose to participate, perhaps because of perceptions of inferiority.

Walton and Cohen (2003) suggested that stereotype-induced improvements (stereotype lift) may be observed not only when a positive stereotype is associated with one's own group, but also for members of higher status groups who are aware of negative stereotypes associated with lower status groups. For example, a White quarterback may show performance improvement merely because he is aware of the stereotype that Blacks are not as athletically intelligent as Whites. Walton and Cohen further suggest that stereotype lift may even occur when such stereotypes are not explicitly mentioned, reflecting the automatic nature of how stereotypes affect behavior. It should be noted that in the work of Stone et al. (1999) positive stereotypes made salient about Whites ("sports intelligence") and Blacks ("natural athletic

ability") while performing a golf task did not enhance performance relative to White and Black individuals who did not receive this information. Thus the pervasiveness of stereotype lift in sport has yet to be established.

Consequences of stereotype threat

First, stereotype threat may induce a self-fulfilling prophecy in which negative performance stereotypes lead to poor performance, which in turn perpetuate the stereotype. Second, stereotype threat may also result in withdrawal from the performance domains in which the negative stereotypes occur (Steele, 1997) or in reduced effort in the stereotyped skill area (Stone, 2002). For example, the number of Blacks in professional golf and other sports thought to implicate athletic intelligence is surprisingly low. And to the extent that negative athletic stereotypes steer individuals away from challenging these notions, a self-perpetuating cycle is maintained.

Perhaps the most damaging effects of stereotype threat are long term, such as feelings of dissatisfaction and ultimately dropout from sport. Just as negative stereotypes can lead women away from math based careers in finance or engineering, there is evidence to suggest that athletes may be choosing their sports based on athletic stereotypes. Coakley (2001) notes that young athletes have internalized these stereotypes and are choosing sport participation accordingly. He speculates that this is the reason why white running times in certain events have actually decreased over the past few years; whites are opting out of some sports based on perceived genetic inferiority.

One of the many properties and functions of stereotypes is that they create expectations for how targets of the stereotype behave (Hamilton et al. 1990).Darley and Gross (1983) found that stereotypes related to social class influenced participants' interpretation of a young female student's ambiguous academic performance and their subsequent prediction of her academic abilities and potential. Stereotypic-expectancies can also influence perceivers' own behavior toward targets, who, consequently, may respond in such a way as to confirm the perceiver's expectancy (Snyder et al. 1977).

Preference for stereotype-consistent behavior may also be greater when the stereotype is perceived as especially fitting or appropriate for target group members, as is often the case with positive stereotypes. In addition to common negative stereotypes, most social groups are also stereotyped in evaluatively favorable ways as well. For example, women are believed to be warm, caring, and nurturing (Eagly and Mladinic 1989; Glick and Fiske 1996); Asians are perceived as academically and financially successful (Jackson et al. 1996; Lin et al. 2005); and African Americans are thought of as having superior athletic skills and rhythmic ability (Czopp and Monteith 2006; Madon et al. 2001).

Positive stereotypes are often considered by majority group members (but not by group members associated with the stereotypes) as praiseworthy attributes and group-specific strengths that confer advantages over non-members (Czopp 2008). Moreover, many researchers have pointed out that positive stereotypes are often more prescriptive than negative stereotypes (Fiske and Stevens 1993; Heilman 2001). That is, positive stereotypes not only describe how group members are, they imply strong expectations for how group members should be (Prentice and Carranza 2002). Because of the perceived appropriateness of positive stereotype-consistent behavior, majority group perceivers may knowingly or unknowingly reinforce target group members for behaviors that fulfill the prescriptions of positive stereotypes.

Generally, any form of stereotype belief that may exist in the athletes' overall beliefs may affect how athletes behave and pursue goals in their sport. It might also be related to athletes sport choice and participation in general since it is related to athletes' mental skills (Baker and Horton, 2003). As a result we need to have a specific scale that can measure and distinguish between different types of stereotypic beliefs in order to facilitate and promote future researches in the area of sport stereotype. There is an indication that stereotypes are related to motivational aspects of sport since sport choice and participation are related to stereotypes (Baker and Horton, 2003; Coakley, 2003,). To this end we aimed to develop the scale and study if there are any relationships between athletes' stereotypic beliefs and athletes' behavioral regulation and goal orientations.

Two of the most prominent theories of motivation the last decades are self determination theory (Deci & Ryan, 1985) and achievement goal theory (Ames, 1992a, 1992b; Dweck, 1986; Nicholls, 1989). Self-determination theory (Deci & Ryan, 1985) is an organismic-dialectic framework of motivation that considers humans to be actively seeking optimal challenges and new experiences to master and integrate (Deci & Ryan, 1991). Considering the individual to be an intentional organism, self determination theory holds that individuals are motivated to achieve differing objectives (Deci, Ryan, & Williams, 1996). To this end, Deci and Ryan (1985) identified three types of motivation, namely intrinsic motivation, extrinsic motivation, and amotivation to account for the different reasons why individuals engage in activities. Self-determination theory proffers that more autonomous motivational regulations lead to greater levels of effective functioning and personal adjustment than those considered more controlling (Deci & Ryan, 1991). Another central tenet of self-determination theory (Deci & Ryan, 1985, 1991; Ryan & Deci, 2000a, 2002) is that intrinsic motivation and optimal psychological functioning are not a direct function of social factors, but are dependent on the degree to which these social factors satisfy three innate psychological needs.

On the other hand, a key aspect of achievement goal theory is that individuals involve themselves in achievement situations to demonstrate competence (Nicholls, 1989). However, evaluations of competence vary as a function of individuals' achievement goals. Early work identified two types of achievement goals, namely mastery and performance, also termed ''task'' and ''ego''; these goals reflect different criteria for defining success and evaluating competence (Ames & Archer, 1988; Dweck, 1986; Nicholls, 1984, 1989; Nicholls & Miller, 1983).

In conclusion, as athlete's motivation towards their sport and their goal orientations in their sport are crucial to perform at any level, the athletes' belief about themselves should have a considerable effect on their behavioral regulation and goal orientations. When athletes hold any form of stereotype beliefs it has a substantial effect on their sport performance, emotion, sport choice, and sport participation (Baker and Horton, 2003; Coakley, 2003, Steele, 1997). As a result, here we are trying to study any pattern of relationship that may exist between stereotype beliefs and athletes' behavioral regulation and goal orientations.

Behavioral regulation

Self-determination theory (Deci & Ryan, 1985) as the most prominent theory of the last couple of decades has a lot to do with different mental skills of athlete's. Motivation is considered to be a complex multi-dimensional construct. Specifically, three major forms of motivation have been described along a continuum of self determination: Intrinsic motivation, extrinsic motivation and amotivation. Intrinsic motivation represents the more self-determined motivation. An athlete is intrinsically motivated when he or she is involved in an activity for pleasure and satisfaction inherent in the activity (Deci, 1975). Furthermore Vallerand and colleagues (Vallerand, Blais, Briere, & Pelletier, 1989) have proposed three types of intrinsic motivation, namely intrinsic motivation to accomplish, intrinsic motivation to know, and intrinsic motivation to experience stimulation. Intrinsic motivation to accomplish things can be defined as engaging in an activity for the satisfaction of attempting to surpass oneself. Intrinsic motivation to know occurs when individuals perform activities for the pleasure they feel while they try to understand something new. Intrinsic motivation to experience stimulation refers to engaging in activity to experience pleasant sensations derived from the activity itself.

On the other hand, Deci and Ryan (1985, 1991) have proposed three forms of extrinsic motivation: identified regulation, introjected regulation, and external regulation. Identified regulation is the most self-determined form of extrinsic motivation, followed by introjected regulation and external regulation. Identified regulation involves engaging in an activity that is freely chosen even if it is not attractive in itself. An athlete is motivated by identified regulation when he or she practices because he or she believes that it is one of the best ways to develop other aspects of him or herself. Introjected regulation occurs when behaviors are performed to avoid negative feelings or to obtain social approval. In this case the athlete practices a sport because he or she would feel bad if he or she was not taking the time to do it. External regulation refers to behaviors that are regulated by rewards or external constraints (e.g. trophies, prizes or money).

Amotivation reflects a lack of motivation and is associated with sport dropout (Pelletier, Fortier, Vallerand, & Briere, 2001). Amotivated athletes do not perceive contingencies between their actions and their consequences. They also experience feelings of incompetence and uncontrollability. As a result, amotivation is the most no self determined type of motivation.

Following this theoretical conceptualization of motivation, Vallerand (1997) has developed a hierarchical model of intrinsic and extrinsic motivation that includes some elements of self determination theory. In line with cognitive evaluation theory (Deci, 1975: Deci 7 Ryan, 1980), a sub-theory of self determination theory, he considers that athletes' perception of autonomy, competence, and relatedness constitute psychological mediators of the impact of social factors on their motivation. These perceptions relate to the three basic psychological human needs identified in the self-determination theory. The need for autonomy reflects the need to perceive behavior as freely chosen (deCharms 1968). The need for competence refers to individuals' propensity to interact effectively with their environment (White, 1959). The need for relatedness pertains to the desire to feel connected and to be accepted by others (Deci & Ryan, 2000). According to self determination theory (Deci & Ryan, 1985; Ryan & Deci, 2000), social events perceived to be supportive of one's feeling of competence, autonomy, and relatedness will have a positive influence on intrinsic motivation. Conversely, social factors that negatively affect these individual perceptions will weaken athletes' self determined motivation.

In a competitive sport setting, performance was found to be a significant determinant of motivation (Vallerand & Losier, 1999). According to self determination theory (Deci & Ryan, 1985, 1991), when someone fails, his or her perceptions of competence and his or her intrinsic motivation for the given activity degrease. On the other hand, success increases one's feeling of competence and subsequent intrinsic motivation.

Motivational Determinants

According to cognitive evaluation theory (Deci & Ryan, 1985, 1991), people's motivation varies in line with changes in their perceptions of competence and self-determination. Events that lead to gains in either one of these feelings should increase intrinsic motivation and identification while decreasing introjection, external regulation, and amotivation. On the other

hand, events that undermine one's feelings of competence or self-determination should lead to a loss of IM and identification, but to an increase in introjection, external regulation, and amotivation.

Past research involving perception of teachers' behaviors (Ryan & Grolnick, 1986), coaches' behaviors (Pelletier et al., 1988), and parents' behaviors (Grolnick, Ryan, & Deci, 1991) have shown that informational behaviors, those providing feedback of competence and a clear structure or rationale for doing an activity, foster self-determined forms of motivation and undermine amotivation. A similar effect has been found for autonomy supportive behaviors and interpersonal behaviors providing opportunities for choice where the individual's sense of autonomy is enhanced. On the other hand, impersonal behaviors where, for example, coaches do not care for athletes, have been shown to undermine intrinsic motivation and identification and to foster amotivation.

Culture influences motivation

Motivation for athletic success may be shaped and influenced by social and cultural forces including living standards. Jarvie (2006, p.374) says “to a European athlete, an Olympic gold medal is the pinnacle of his or her career; however for an athletes from a developing country it may simply be a gateway to earn money that will transform the lives of the athlete and his or her community”. According to Elbe, Madsen and Midtgaard’s (2010) cross cultural research where they compared Kenyan and Danish athletes, the Kenyan athletes were found out to be motivated extrinsically, i.e., because of hoping possible breakthrough, discovery by agent, and a chance to escape poverty and compete outside Kenya, unlike the Danish athletes doing their sport for intrinsic factors such as health and well being or social reasons.

Cultural identity appears to be an important determinant of motivational factors in as much as cultural groups are seen to differ in how they derive feelings of personal competence within the competitive setting (Hayashi & Weiss, 1994; Markus & Kitayama, 1991). This difference could possibly present itself in the form of differences in task and ego orientations as well as

differences in achievement motives, as both have been found to be of relevance in investigating elite athletes in western culture.

As it has been discussed above, motivation can be influenced by different factors specific to the athlete. Cultural identity of the athlete (Hayashi & Weiss, 1994; Markus & Kitayama, 1991) and other social factors found out to be the important determinants of motivation (Javier, 2006, Elbe, Madsen, and Midtgaard 2010). Accordingly, the culture and social factors should also form athlete's belief about their ability in their sport. This belief might not be credible in the eyes of science but could influence how athletes choose their sport, regulate their behavior and pursue goals (Czopp, 2008; Leonard, 1987; Loy & McElvogue, 1970; Harrison, Lee, & Belcher, 1999).

Achievement goal

Achievement goal theory is a social psychological model that aims to understand the role of generalized motivational orientations regarding competence on behavioral and psychological outcomes (Fox &Corbin, 1989). Central to the theory is the individual's view of competence and the effect of environment or motivational climate – the social environment in which an actor operates – on subsequent motivational orientations and actions. According to the theory, a person can hold two views of competence in achievement situations and this gives rise to two distinct but related motivational orientations. These orientations are termed ''task orientation'' and ''ego orientation''. For task-oriented individuals the criterion for the evaluation of competence is self mastery, whereas in the case of ego orientation competence is based on outperforming others and demonstrating superior ability. Both orientations can lead to high perceptions of competence – a person that feels competent in domains where he or she aspires to excel is likely to feel successful. However, under conditions of failure, individuals with high ego orientation and low task orientation tend to feel incompetent because they are unsuccessful according to the set criterion for success – being superior relative to a normative standard or bettering others. They have no mastery goals to fall back on and therefore tend to avoid or drop out of the activity due to low perceptions of success.

According to the achievement goals theory (e.g., Elliot & Church, 1997), individuals in achievement contexts can pursue different goals. Specifically, when they define competence as outperforming others, they are likely to endorse a performance-approach goal, referring to the desire to perform better than the others, or a performance-avoidance goal, corresponding to the desire to avoid performing worse than the others. Whereas a performance-approach goal is usually associated with positive consequences on performance and motivation, performance-avoidance goal is associated with negative outcomes, such as increase in anxiety, loss of motivation, poor performance (e.g., Cury, Elliot, Sarrazin, Da Fonseca, &Rufo, 2002; Elliot & McGregor, 2001).

Smith (2004) has integrated performance-avoidance goals as a mediator of stereotype threat in the *stereotyped task engagement process* model. Specifically, this model predicts that a stereotype threat situation triggers a performance-avoidance goal that leads to self-regulation strategies (e.g., minimal effort, self-handicapping, minimal risk taking) and phenomenological experience (e.g., decrease in interest, anxiety, confidence) resulting in the performance decrease. Based on this model, two studies examined the role of performance-avoidance goal in the mechanisms of stereotype threat (Smith, 2006; Smith, Sansone, & White, 2007). Smith (2006) reported that compared to men, women in a stereotype salient math situation had lower performance expectations for math. This relationship was mediated by the endorsement of performance-avoidance goal, which was higher for females than males.

In another research (Smith et al., 2007), achievement goals were manipulated along with stereotype threat. Results showed that females' interest in a computer science task was as low in the stereotype threat condition in which no achievement goals were activated, as in the stereotype threat condition in which performance-avoidance goal was activated. The authors suggested that this absence of difference in interest was due to the fact that performance-avoidance goal was "naturally" involved in the stereotype threat condition in which performance-avoidance goal was not activated.

Although females may be explicitly reminded of the stereotype in a natural context, stereotypes may also be activated more subtly. Indeed, previous studies showed that when a

stereotype is well-known, implicit cues may be sufficient to make it salient (e.g., Croizet & Claire, 1998; Croizet et al., 2004; Schmader & Johns, 2003; Steele & Aronson, 1995; Stone et al., 1999). For example, Stone et al. (1999) introduced a task as diagnostic of natural athletic ability, reasoning that this framing would activate the stereotype about the poor athletic ability of White athletes. Indeed, results showed that White males performed more poorly in this condition than in the control condition.

Generally speaking it is clear that achievement goals were manipulated along with stereotype threat; and stereotype threat situation may trigger a performance-avoidance goal that leads to self-regulation strategies and phenomenological experience resulting in the performance decrease. As a result, it is rather important to study the relationship between stereotype conditions with athlete's goal orientations.

The case of east Africans

East African (Ethiopians and Kenyans) middle and long distance runners are currently the dominant force in athletics. As well as dominating the track events at the last several Olympic Games, they are also dominant on the American and European road racing circuit and world cross country events. Although many physiological and anatomical factors have been proposed to explain east African dominance, research into these variables has not yet revealed any definitive advantage for the Africans. Traditional social and cultural factors have often been described as "advantageous", and, although these factors may be to a greater or lesser extent involved in the East African dominance, it is probable that both the African and Caucasian psychology or "mindset" are now additional important factors in maintaining that dominance. Like Scandinavian distance runners in the early 20th century, who won 28 of 36 possible Olympic medals over 5000 and 10 000 m, the East Africans have developed an aura of invincibility, both in their own minds and the minds of their Caucasian opponents (Hamilton, 2000). Caucasians worldwide are searching for proof of the physical advantage of the East Africans while handing them on a platter a psychological advantage which, until removed, will perpetuate the current state (Hamilton, 2000).

In reality, excellence is developed through adaptive qualities resulting from cultural values and strenuous training. Hence, a more integrative approach is needed that recognizes that both nature and nurture inextricably interact (Singer & Janelle, 1999), with certain genes responding to environmental stimuli (Shermer, 2000). Athletic performance can only be explained by a complex combination of factors, including opportunities, motivation, and economics. Speculated average physiological differences between races are only part of the puzzle and have little bearing on individual achievements. Nonetheless, simplistic assessments based on stereotypes could lead some coaches to jump to false conclusions (Coakley, 2003).

Proposed factors involved in the success of East African athletes include environmental, genetic endowment, and social development (Bouchard, 1997), while the psychological makeup of the East African is rarely considered. Hamilton (2000) examined empirical evidence for a range of influences that may contribute to East African running dominance, including environmental, social, psychological, and physiological variables.

In the case of the East African runner, it is widely believed that birth and living at altitude produces great athletes, despite the great range in athletic productivity observed between areas of similar altitude (Bale & Sang, 1996). If altitude were the only factor involved, then all African countries with high altitude populations, as well as countries such as Nepal, Peru, and Mexico, should be producing many world class athletes (Bale & Sang, 1996).Saltin *et al* (1995) found that Scandinavian athletes living at sea level had a higher muscle buffering capacity than Kenyan athletes, and that altitude training enhanced muscle buffering capacity in sea level residents training at altitude, but not in Kenyans who reside at altitude. Hence, although it is clear that living and training at altitude results in a variety of physiological adaptations, the exact nature and relative importance of these adaptations to the success of athletes from altitude are yet to be elucidated.

Weston et al. (1999) found African runners to have a lower percentage of type I muscle fiber, the fiber type that is typically associated with endurance performance. This is in contrast with the classical expectations of elite distance runners and the findings of others (Coetzer et al,

1993), but Weston et al account for this by suggesting that this is an appropriate adaptation for the increased speed and hence glycolytic demands of modern 10 km running.

Years of running to and from school as children and adolescents has often been quoted as contributing to the development of elite East African runners. Indeed, Saltin et al (1995) describe their elite subjects as having run or walked an average of 8–12 km a day, five days a week from age 7–8 years, increasing to 90 km a week as adolescents. They also found that Kenyan children who did not have to walk great distances to school had maximal oxygen uptakes 30% lower than those required to travel to school by foot, and hence similar to that of Danish children. However, they also describe how Kenyan teenagers "out of training" had significantly lower maximal oxygen consumptions than students who had just begun regular training. Hence, this may in fact suggest that organized training plays a significant role in the development of high maximal oxygen consumption in Kenyan adolescents. In comparison, Bale and Sang (1996) report that 14 of 20 elite Kenyan athletes interviewed never had been required to run to school.

There is clearly more to the East African success story than their physiology, genetics, and childhood athletic endeavors (Hamilton, 2000). Regardless of physical attributes, the tougher athlete often prevails and the difference between success and failure is often more easily and perhaps more appropriately, attributed to factors such as psychology (Iso-Ahola, 1995). Psychologically, performance can be considered to be a function of the interaction between a person and the environment, or, by extension, the interaction of intrapersonal and interpersonal factors (Iso-Ahola, 1995). Intrapersonal factors such as belief in oneself, motivation, achievement orientation are critical to performance. Therefore, if one considers that there is no advantage in being an East African in terms of athletic performance, and yet is consistently confronted with Caucasian defeats, cognitive dissonance is created. To reduce this dissonance, either Caucasian results must improve or beliefs about the advantages of being African must change. Clearly if the latter occurs, a belief structure is set in place that will aid only the East African.

Hence, from a Caucasian point of view, a person's cognitive understanding of a group such as East African runners, although not directly predicting behavior, when combined with other factors such as social situation will certainly influence the person's behavioral pattern. If therefore a person believes that Kenyan runners have an advantage for whatever reason, then this has the potential to affect their performance negatively, especially if this belief is being supported by peers and social constructs. Clearly this may result in the formation of a self fulfilling prophecy.

Finally, it is important to consider the factors to which individuals attribute their successes and failures. Gill (1986) describes the attribution of failure to stable external factors—for example, task difficulty, better opponents—as reducing the shame associated with failure, but as having the worst prognosis for future performance. Understandably, this is the process Caucasian runners may use whenever looking for a genetic, developmental or physiological advantage in being East African. In comparison, East Africans may now believe that they have physiological advantages that explain their success. This stable internal attribution style will have a positive effect on their future performance. It is clear that there is a theoretical rationale that psychology plays a critical role in the dominance of the East African runner. The attitudes of both the African and Caucasian may be providing an advantage as great as, or greater than, any of the more tangible factors more traditionally studied.

Hamilton (2000) after examining research from various disciplines, he concluded that there was no clear explanation for the East African supremacy. However, Hamilton argued that psychological factors may perpetuate this dominance by attributing differences between African and white running performances to stable external factors, thereby disempowering white runners and empowering East African runners. Regardless of the possible existence of physiological advantages in East African runners, belief that such differences exist creates a psychological atmosphere that can have significant consequences on performance. Hamilton also states his concern saying although many factors contribute to East African running success, present Caucasian belief and attitude systems may be a significant perpetuating influence. Until

our athletes, coaches, and support staff accept responsibility for their own performance, the current level & of athletic domination by East African athletes may continue.

Generally, it all come down to East Africans are not genetically different to have the upper hand in middle and long distance running, their environment is not unique to create an ideal training condition, the life style of these countries can't be taken as a the ultimate factor for their dominance, or it can't be concluded that they train harder than everyone else. Regardless of the fact, knowledge of the positive and negative stereotypes could have an impact on an athlete's performance in a sports event; Baker and Horton (2003) argue that stereotype threat may perpetuate East African distance -running dominance, by attributing racial differences to stable external factors and disempowering White runners by strengthening perceptions of inferiority. Hamilton (2000) also concluded saying it is clear that there is a theoretical rationale that psychology plays a critical role in the dominance of the East African runner East Africans may now believe that they have physiological advantages that explain their success. Psychological factors may perpetuate this dominance by attributing differences between African and white running performances to stable external factors, thereby disempowering white runners and empowering East African runners. Regardless of the possible existence of physiological advantages in East African runners, belief that such differences exist creates a psychological atmosphere that can have significant consequences on performance.

Based on the study of the literature and our research interests, the purpose of this investigation was to identify the stereotypical beliefs that are prominent in Ethiopians to develop a questionnaire that can frame the East African athletics success attribution in the stereotype belief, to find out to what factors East Africans attribute their success in long distance race, and explore how these stereotypic and mythical beliefs relate to the motivational frameworks of achievement goals and behavioral regulation.

METHOD

We have followed quite different methods to ensure the trust worthiness and credibility of the study. As one of the aims of the study was to develop a stereotype questionnaire, we conducted interviews with Ethiopian long distance athletes in order to have a very noteworthy base to begin with. Then we conducted two pilot studies, one after the other, to test the newly created stereotype questionnaire, and to translate and adapt two other questionnaires in to Amharic language. Finally we conducted the main study to further examine the psychometric properties of the scales, to study the relationships between stereotype beliefs and athletes' behavioral regulation and goal orientation.

Interview

We interviewed 8 Ethiopian long distance athletes (2 females and 6 males, between 21 and 27 age) on the basis of their certainty how good they think they are in their sport, and to what factors they attribute their achievement to. These athletes had an experience of 4-8 years, were international competition experience, and still actively pursuing their sport career. We briefed the athletes what we are trying to study, and how it is useful to the field of sport and exercise psychology. We devised our interview questions open ended and without any time limit, i.e. athletes took as long as they needed (a minimum of 4 minutes to a maximum of 9 minutes) to answer the questions presented below. After we got their consent we asked two general questions, recorded their responses, and transcribed their responses for analysis.

The two questions we asked were:

1. "Do you believe you are best in long distance race as Ethiopians"?
2. "What do you think the reason could be"?

All the eight athletes answered "**Yes**" to the first question "Do you believe you are best in long distance race"? We went on asking the second question, "What do you think the reasons could be"? The athletes attributed their achievement to different factors. There reasons include "Because we are Ethiopians", "We have a better genetic makeup which makes us good in long distance race", "Ethiopians are born to run long distance", "Our body is much more convenient

for long distance race", "My family believed that I could make a great long distance athlete and pushed me to it" "Our race is better for long distance race than anybody's", "We live on a high altitude which gives us environmental advantage". " The landscape of the country where we train is so convenient", "The society believes we are so good in the long distance race and I believe the same", "It is like a national identity to run long distance, so I believe it is in my blood", "We train harder than anyone else", "we are very committed" "We have model athletes and it motivates us quite a lot", "The life style in the country is quite demanding and we had to run everywhere as a child, so it helped us to become great in long distance".

Finally, we found 48 different responses, and grouped them into 4 different factors based on their meaning: I. e.

1. **Natural ability factors:** here we included response attributed to talent inherited by birth as Ethiopian, and those responses referring to anatomical and physiological concepts. Example, "We have a better genetic makeup which makes us good in long distance race", "Ethiopians are born to run long distance".
2. **Environmental factors:** here included responses attributed to the physical environment and demography of the country. Example, "The landscape of the country where we train is so convenient", "we live on a high altitude which gives us environmental advantage".
3. **Commitment factors:** here included responses those referred to training and determination. Example, "We train harder", "we are very committed".
4. **Social factors:** here we included those responses attributed to the traditional and social factors of the country. Example, "My family believed that I could make a great long distance athlete and pushed me", "It is like a national identity to run long distance", "The life style in the country is quite demanding and we had to run everywhere as children".

Finally, based on the interview results and what the literature suggests, an initial pool of 48 possible items under four factors was generated and subsequently reduced to 29 items. Items were retained based on their clarity and the extent to which they were similar to but not redundant with other same-factor items.

Pilot study I

The purpose of this first pilot study was to examine the psychometric properties and the factor structure of the sport stereotype scale **(SSS)** through exploratory factor analysis. Our initial goal was to develop a questionnaire that measures the sport related stereotypic beliefs athletes might have towards their specific sport with a user-friendly amount of items.

Method

The first version of the **SSS** was completed by a general population of 148 Ethiopians (79 males and 69 females, mean age 27 (M=27.06, SD=2.44) from quite different professions, social status, background, educational level, (i.e., PE students, office workers, athletes, business owners, university lecturers, and coaches). Subjects completed the GSSS on a 5-point scale anchored by the end points strongly agree (5) and strongly disagree (1) with the midpoint neutral(3).Subjects were informed that we were interested in better understanding the factors which contribute to the success of Ethiopian long distance athletes. Finally, subjects were told not to put their names on the questionnaire, that data from the study would only serve scientific purposes and would therefore remain strictly confidential.

Results

The exploratory factor analysis has confirmed the need of another construct since the **social factors** split in to two factors. As a result we created two factors in replacement of the social factors; the **Ethiopian tradition** and **life style.** In the Ethiopian traditional factors we included those responses attributed to the traditional factors of the country. Example, “My family believed that I could make a great long distance athlete and pushed me”, “It is like a national identity to run long distance”. In Life style factors we included those reasons attributed to the life style of the athletes during their childhood and as a youth. Example, “The life style in the country is quite demanding and we had to run everywhere”. Finally, after rewording some items, we structured the GSSS questionnaire in to 5 constructs with 31 items in general; i.e. 7 items under natural factors, 6 items under environmental factors, 6 items under commitment factors, 6 items under Ethiopian tradition, and 6 items under life style.

Pilot study II

The first purpose of this second pilot study was to further examine the psychometric properties and the factor structure of the second version of the sport stereotype scale **(SSS)** through confirmatory factor analysis. The second purpose was to translate and adapt two scales in to the language the study will be conducted, ***Amharic***. The questionnaires were the Behavioral Regulation Sport Questionnaire (BRSQ; Lonsdale, Hodge, & Rose, 2008) and the Achievement Goals Questionnaire (AGQ; Papaioannou et al, 2007).

Translation of the BRSQ and AGQ into Amharic language

In the second pilot study we added two more questionnaires, the Behavioral Regulation Sport Questionnaire (BRSQ; Lonsdale, Hodge, & Rose, 2008) and Achievement Goals Questionnaire (AGQ; Papaioannou et al, 2007). Since the research is conducted in a different language than the BRSQ and AGQ is created or translated into, we had to translate and adapt these questionnaires using methodologically acceptable procedures. As a result, we followed the procedures outlined by Vallerand (1989) comprised the following three steps: (1) a bilingual individual translated the English BRSQ and AGQ into the target language (Amharic), (2) then another bilingual individuals translated the Amharic translation back to English language, (3) finally we cross checked the back translations with the original BRSQ and AGQ. We used the translated versions of the BRSQ and AGQ in the second pilot.

Method

Participants

102 Physical education college students (40 females and 62 males) with a mean age of 19 years (SD = 2.44) participated in the study. They were first year (n = 23), second year (n = 35), third year (n = 24), fourth year (n = 20), students.

Measures

This SSS had 31 items under five factors, i.e. 7 items under natural factors, 6 items under environmental factors, 6 items under commitment factors, 6 items under Ethiopian tradition, and 6

items under life style. Subjects completed the GSSS on a 5-point scale anchored by the end points strongly agree (5) and strongly disagree (1) with the midpoint neutral (3).

The AGQ(Papaioannou et al, 2007)is a modified version of the original AGQ for physical education classes. It comprised 24 items assessing four dispositional goals, mastery, performance–approach, performance–avoidance and social approval. Following the stem "In the physical education lesson", respondents were asked to indicate how much they agree with each of the 24 statements. Responses were given on a 5-point Likert scale with anchors of 5 = strongly agree, and 1 = strongly disagree.

The BRSQ comprised 24 items (BRSQ; Lonsdale, Hodge, & ose, 2008), which included six 4-item subscales designed to measure amotivation, external regulation, introjected regulation, identified regulation, integrated regulation, and intrinsic motivation. The item stem was ''I participate in my sport because . . .''. Participants responded using the same 7-point rating scale. Previous research involving competitive athletes has supported the reliability, as well as the factorial validity, of the BRSQ scores (for details, see Lonsdale et al., 2008). Subjects were informed that we were interested in better understanding the factors which contribute to the success of Ethiopian long distance athletes. Finally, subjects were told not to put their names on the questionnaire, that data from the study would only serve scientific purposes and would therefore remain strictly confidential.

Results

To assess the extent to which the observed data conformed to the model implied by our exploratory analyses, confirmatory factor analysis (CFA) was conducted using AMOS software (Arbuckle, 2003) within all samples. The complete measurement model was highly restrictive. The five sets of five indicators (i.e., five questionnaire items per factor) were estimated on their corresponding first order factor only, with each indicator assigned a loading of 0 on all other sub factors. Using maximum likelihood estimation, fit between the data and the hypothesized model was assessed using a standardized version of Bentler's (1990) root mean square error of approximation (RMSEA). Then we eliminated some items with poor factorial loadings and the

SSS was left with 25 items under 5 factors, each factor has 5 items, all the 24 items of AGQ under the four dispositional goals, mastery, performance–approach, performance–voidance and social approval, and 21 items for BRSQ under four factors , i. e. intrinsic motivation (3 to accomplish items, 1 to know, 1 to experience stimulation items), extrinsic motivation (4 identified regulation items, 4 external regulation items, 4 introjected regulation items), and Amotivation (4 items) sub scales.

Main study

The main study had three purposes. (1) to further measure the psychometric property of the Amharic versions of SSS, BRSQ, and AGQ, (2) to identify the most prominent stereotypic beliefs of the east Africans regarding their sport, and(3)to examine the relationships between athletes' stereotypic beliefs, their goal achievement, behavioral regulations.

Hypothesis

A vast number of studies confirm that (Entine, 2000; Davis, 1990; Hoose,; 1989,; Sailes, 1991; Coakley, 1990; Eitzen & Sage, 1989; Leonard, 1988) stereotypes are evident in different sports. As the outcome of the interview pointed some of the reasons given were not merely a scientific explanation for ones athletic performance, rather they were simple stereotypic beliefs. To this end we hypothesized that (1) the existence of stereotype beliefs in the Ethiopian athletes are evident; and the Ethiopian tradition and commitment stereotypes are the widely accepted,(2)It was anticipated that different achievement goal orientations and different behavioral regulation dimensions will have different relationships with the dimensions of the stereotypes; nonetheless, no specific hypotheses were not made because this was the first study to use the GSSS; and the aim was to explore the relationships between the different subscales of the AGQ and BRSQ with the newly developed GSSS

Participants and procedure

Two hundred and seventy seven (277) participants (102 females and 175 males) with a mean age of 19.35 years (SD = 2.22) participated in the study. They were short distance runners (n =

30), middle distance runners (n = 33), long distance runners (n = 50), throwers and jumpers (n = 32), college physical education students (n = 132). Participants had an average general competitive sport experience of 4.30 years (SD = 2.06), and an average specific competitive sport experience of 3.04 years (SD = 1.40); and a 2.5 years of college education (SD = 2.22) for the PE students. The athlete participants were actively competing at club or regional level (n= 145). After providing informed consent, athletes completed the questionnaires. Permission to conduct the study was obtained by the institution's research ethics committee.

Measures

Sport stereotype: To assess participants' sport related stereotypic beliefs, the 25 item Sport Stereotype Scale (**SSS**) we developed was used. The GSSS has five sub scales with 5 items under each sub scale. The sub scales are natural factors (e.g. Ethiopians are born to be good in long distance race), environmental factors (e.g. they are among few nations living on high altitude which is good for long distance running), commitment factors (e.g. Ethiopians train harder than everybody else), Ethiopian tradition factors (e.g. Ethiopia has a great history of successful runners and this is a strong motive for young athletes), and life style factor (e.g. walking and running is typical of Ethiopian children's life style). Following the stem "Ethiopian long distance runners are successful. Because…" subjects completed the GSSS on a 5-point scale anchored by the end points strongly agree (5) and strongly disagree (1) with the midpoint neutral (3).

Achievement Goals: The achievement goals were measured by the Amharic version of the Achievement Goals Questionnaire for Sports we translated. Overall, this measure comprised 24items assessing four dispositional goals, mastery, performance–approach, performance–voidance and social approval. Following the stem "In my sport …" respondents were asked to indicate how much they agree with each of the 24 statements. Responses were given on a 5-point Likert scale with anchors of 5 = strongly agree, and 1 = strongly disagree.

Motivation: the edited Amharic version of the Behavioral Regulation in Sport questionnaire (BRSQ) was used. This version has 21 items under intrinsic motivation (3 to accomplish items, 1 to know, 1 to experience stimulation items), extrinsic motivation (4 identified regulation items,

4 external regulation items, 4 introjected regulation items), and Amotivation (4 items) sub scales. Responses were given on a 7-point Likert scale with anchors of 7=absolutely true, 1= absolutely wrong while 4= fairly true.

Analysis

The factor structure of the GSSS, AGQ, and BRSQ was tested through confirmatory factor analysis (CFA) using the AMOS (Arbuckle, 2003). Multiple fit indices were used to assess the adequacy of the tested model: the comparative fit index (CFI), and the root mean square error of approximation (RMSEA). Values greater than 0.90 for the IFI and the CFI, are considered to be indicative of adequate fit, although values approaching the 0.95 are preferable, whereas values smaller than .08 and close to .05 for the RMSEA are considered supportive of good fit. The overall model fit was assessed using multiple goodness-of-fit indexes. Two incremental indexes, the CFI and the TLI, as well as one absolute fit index, the RMSEA, were chosen. The factorial validity of the scores derived from the scales was assessed by examining the item-factor loadings. Factor loadings lower than .40 were considered small and indicated the need for further item development. Third, the discriminant validity of the factor scores was assessed by examining the 95% confidence intervals (±1.96 × standard error of the point estimate) of the inter factor correlations (Φmatrix). The internal consistency of scores from each subscale was assessed by examining Cronbach's alpha coefficients.

Descriptive statistics were analyzed to identify which stereotypic mythical beliefs are prominent in East Africans. Correlations between scales were conducted to examine the relationships between athletes' stereotypic beliefs, their goal achievement, motivation, worry, and intentions to continue or dropout. Regression analyses were performed to test the degree to which stereotypes could predict achievement goal orientations. Analyses of variance, MANOVA were also calculated to test for differences in the dimensions of stereotypes as a function of sport, age group, and gender.

Results

Confirmatory factor analysis

The model tested for the GSSS was a five factors structure with all the five factors allowed to correlate. The results provided adequate support for the five-factor model (χ2=193,*df*=142, x^2/df =1.36, CFI = .93, TLI= .92, RMSEA = .042).The Cronbach's alpha coefficients for the Natural stereotype was .67, Physical environment .63, Life style .79, Commitment .55, and Ethiopian tradition .62. The five factor model of the SSS showed good internal consistency and factorial validity, and it indicates it works quite well with remaining items to measure athlete's stereotypic beliefs regarding their sport success attribution. The remaining items (19 items overall) were 2 under natural ability stereotype, 5 under commitment stereotype, 4 under physical environment stereotype, 4 under life style, and 4 Ethiopian traditions stereotype.

The model tested for the Achievement goal questionnaire was the original four factors model. The results also provided sufficient support for the four factor model (χ2=135.7, *df*=71, x^2/df =1.91, CFI = .93, TLI= .91, RMSEA = .062). The Cronbach's alpha coefficients for the constructs were .79 (Mastery), .64 (Performance avoidance), .61 (Performance approach), and .78 (Social approval).

Table 1: Fit statistics for the SSS, AGQ, and BRSQ models

Model	X^2	CFI	*df*	TLI	RMSEA	$X^2/_{df}$
Five factor GSSS	193	142	.93	.92	.042	1.36
Four factor AGQ	135.7	71	.93	.91	.062	1.91
Four factor BRSQ	128	89	.93	.93	.050	1.53

The model tested for BRSQ was a four factor model, and the resulted provided adequate support for the four factor model (χ2=128, *df*=89, x^2/df =1.53, CFI = .93, TLI= .91, RMSEA = .050). The Cronbach's alphas for the constructs were .55 (Intrinsic), .65 (Amotivation), .58 (Identified regulation), and .77 (External regulation).

The results of the study provided supportive evidence for the construct validity of the Amharic version of the two questionnaires (AGQ and BRSQ). Although some items and constructs were removed, the remaining items and constructs produced an instrument matching better the original AGQ and BRSQ. In sum, the results of the 4-factor model showed good internal consistency and factorial validity, indicating that can be an effective measure for examining athlete's motivation and goal achievement in Amharic language.

Means, standard deviations, and Cronbach's alpha coefficients

Means, standard deviations, and Cronbach's alpha coefficients are presented in Table 2; and correlations between athlete's stereotype beliefs, motivation, achievement goals, worry and intensions are presented in table 3. Cronbach's alpha coefficients were calculated for the scores from each of the sub scales for all the questionnaires (see table 2). All scales of SSS showed acceptable internal consistency (Cronbach's alpha ranging from .62 to .79) except for commitment factor, which demonstrated lower (.55) internal consistency. All the scales of the AGQ showed an acceptable internal consistency (Cronbach's alpha ranging from .61 to .79). Regarding the BRSQ, two of the motivational dimensions showed an acceptable internal consistency (Cronbach's alpha .77 and .65) while the other two scales showed low internal consistency (Cronbach's alpha .55 and .58). The intension scales we created showed a reliability of .71 (intensions to continue) and, .65 (intension to drop out). The scale worry (SAS-2) had a reliability of .79.

Correlations among the Five stereotype scales

The five sub scales of the SSS appeared to be distinct constructs. The moderate correlations among the five factors provide discriminant validity evidence. Specifically, the highest correlation (.47) was found between Ethiopian tradition and commitment factors, and five of the ten correlations were greater than .30 when disattenuated for measurement error (See Table 3). We found the physical environment factor had a moderate positive relationship with all the other factors and a high positive correlation (.46) with life style. The natural stereotype has a weaker relationship with commitment factor (.05) and Ethiopian tradition (.07). It is also

appealing that the mean score for Ethiopian tradition and commitment factors were relatively higher than the other factors.

Table 2: Descriptive statistics and alphas for all the examined variables

Scales	M	SD	α
SSS			
Natural	3.16	1.18	.67
Physical Environment	3.85	.84	.63
Commitment	3.94	.68	.55
Ethiopian tradition	4.02	.75	.62
Life style	3.28	1.04	.79
AGQ			
Mastery	4.50	.69	.79
Performance approach	4.12	1.02	.61
Performance avoidance	2.84	1.06	.64
Social approval	4.10	.92	.78
BRSQ			
Intrinsic motivation	5.37	1.20	.55
Identified regulation	5.53	1.27	.58
External regulation	2.52	1.48	.77
Amotivation	2.48	1.37	.65

Hypothesis testing

In accordance with hypothesis 1, the results showed that Ethiopian athletes scored moderately high with the highest scores observed for the Ethiopian tradition (M=4.02) and commitment (M=3.94) stereotypes. In agreement with hypothesis 2, the three individual stereotype dimensions correlated positively and significantly with social approval of AGQ. Commitment stereotype had highest positive correlations with athletes' goal orientation of social approval, performance approach, and mastery. On the other hand, the correlation between natural stereotype and mastery goal orientation of the athletes was the only negative correlation. The Ethiopian tradition factor showed a moderate positive correlation with the three factors of AGQ,

Correlation between the SSS and AGQ, BRSQ

Commitment and Ethiopian tradition stereotypes have correlated significantly and positively with mastery orientation, performance approach and social approval goal orientation. On the other had natural ability and life style stereotypes have correlated significantly and positively with performance avoidance goal orientation. In addition to that, life style also showed a significant positive correlation with social approval goal orientation. Intrinsic motivation correlated significantly with physical environment stereotype, commitment stereotype, Ethiopian tradition stereotype, and life style stereotype. On the contrary, amotivation showed a significant positive correlation with natural ability and life style stereotypes. External regulation also showed a significant correlation with natural ability stereotype, commitment stereotype, life style stereotype, and Ethiopian tradition stereotype. No significant correlation was observed between identified regulation and any stereotype dimensions (see table 3).

Table 3: Correlations among SSS, AGQ, BRSQ

	1	2	3	4	5	6	7	8	9	10	11	12	13
Natural ability stereotype (1)	1												
Physical environment stereotype (2)	.30**	1											
Commitment stereotype (3)	.05	.22**	1										
Ethiopian tradition stereotype (4)	.07	.37**	.47*.	1									
Life style stereotype (5)	.25**	.46**	.28**	.38**	1								
Mastery orientation (6)	-.03	.06	.23**	.14*	.04	1							
Performance approach (7)	.05	.03	.28**	.13*	.10	.45**	1						
Performance avoidance (8)	.14*	.06	.07	.00	.23**	-.0.5	.16**	1					
Social approval (9)	.08	.06	.32**	.14*	.19**	.37**	.60**	.19**	1				
Intrinsic motivation (10)	.09	.22**	.13*	.17**	.24**	.19**	.17**	.05	.18**	1			
Identified regulation (11)	.08	.10	.06	.07	.11	.18**	.19**	.04	.31**	.51**	1		
External regulation (12)	.25**	.11	.17**	.18**	.36**	-.16**	.02	.35**	.15*	-.05	-.00	1	
Amotivation (13)	.15*	.06	-.02	.04	.14*	-.28**	-.08	.22**	-.11	-.11	-.12	.43**	1

Correlation is significant at *$p < .05$, **$p < .01$.

Analysis of Variance

A 3-way multivariate analysis of variance was calculated to test for differences in the dimensions of stereotypes as a function of sport, age group, and gender. The analysis showed no significant differences regarding sport $F (5, 217) = 4.75$, $p < .23$, and age group $F (4, 221) = 3.55$, $p < .47$. Regarding gender, the analysis revealed a significant multivariate effect, $F (4, 225) = 3.65$, $p < .01$. Examination of the Univariate statistics showed a significant effect for the stereotypes of Ethiopian tradition, $F (1, 225) = 12.5$, $p < .01$ and commitment stereotype $F (1, 225) = 5.93$, $p < .05$. Examination of the mean scores showed that male athletes scored higher than female athletes on Ethiopian tradition stereotypes (M=4.19) and commitment stereotypes (M=4.07).

Regression

Regression analyses were performed to test the degree to which stereotypes could predict achievement goal orientations. Regarding mastery orientation, the analysis showed that stereotypes could predict 7.5% of the variance, $F (5, 213) = 3.40$, $p < .01$, with the commitment stereotype being a significant predictor (beta = .26, $p < .01$). Regarding performance approach orientation, the analysis showed that stereotypes could predict 10.6% of the variance, $F (5, 218) = 5.17$, $p < .01$, with the commitment stereotype being a significant predictor (beta = .31, $p < .01$). Regarding performance avoidance orientation, the analysis showed that stereotypes could predict 7.5% of the variance, $F (5, 214) = 3.44$, $p < .01$, with the life style stereotype being a significant predictor (beta = .22, $p < .05$). Regarding social approval, the analysis showed that stereotypes could predict 15.1% of the variance, $F (5, 217) = 7.72$, $p < .01$, with the commitment stereotype being a significant predictor (beta = .38, $p < .01$). On the part of analysis performed to test the degree to which stereotypes could predict behavioral regulations, analysis showed that stereotypes could predict 16.4% of the variance of extrinsic motivation, $F (5, 209) = 8.21$, $p < .01$, with Life style (beta = .03, $p < .05$) and natural ability stereotypes (beta = .19, $p <0.1$) being significant predictors.

Table4: Correlations and Descriptive Statistics for the 19 Sport Stereotype Scale Items

	Nat4	Nat5	PE2	PE3	PE4	PE5	Com.1	Com.2	Com.3	Com.4	Com5	ET1	ET3	ET4	ET5	LIF1	LIF2	LIF4	LIF5
Nat4	1																		
Nat5	.51**	1																	
PE2	.19**	.09	1																
PE 3	.18**	.15*	.35**	1															
PE 4	.09	.21**	.09	.39**	1														
PE 5	.25**	.24**	.25**	.49**	.24**	1													
Com.1	.02	.04	.10	.01	-.04	.05	1												
Com.2	-.02	.04	.09	.16**	.04	.03	.18**	1											
Com.3	.00	.09	.03	.19**	.20**	.07	.13*	.17**	1										
Com.4	.03	.01	-.01	.08	.06	-.01	.14*	.30**	.21**	1									
Com.5	.08	.03	.21**	.24**	.17**	.08	.20**	.32**	.09	.23**	1								
ET1	-.05	-.04	.15*	.28**	.16*	.09	.10	.27**	.31**	.23**	.23**	1							
ET3	.06	.14*	.17**	.26**	.22**	.11	.05	.27**	.26**	.16**	.13*	.40**	1						
ET4	.03	.07	.11	.24**	.07	.21**	.06	.20**	.18**	.22**	.21**	.24**	.30**	1					
ET5	.13*	.03	.10	.24**	.06	.17**	.06	.13*	.24**	.13*	.29**	.23**	.22**	.35**	1				
LIF1	.19**	.17**	.23**	.27**	.16*	.26**	.10	.12	.25**	.06	.13*	.30**	.16**	.09	.10	1			
LIF2	.12*	.09	.19**	.30**	.25**	.16**	.03	.13*	.27**	.14*	.16**	.25**	.27**	.17**	.13*	.40**	1		
LIF4	.20**	.20**	.18**	.32**	.27**	.26**	-.07	.16**	.17**	.13*	.18**	.18**	.28**	.15*	.24**	.41**	.58**	1	
LIF5	.14*	.20**	.17**	.36**	.30**	.32**	-.01	.11	.26**	.02	.23**	.22**	.27**	.18**	.21**	.50**	.45**	.51**	1
SD	1.40	1.31	1.27	1.27	1.24	1.20	1.26	1.03	1.29	1.04	1.10	1.16	1.23	1.02	.97	1.33	1.37	1.30	1.34
Mean	3.05	3.28	3.80	3.86	3.80	3.83	3.86	4.28	3.40	4.27	3.96	3.93	3.91	4.02	4.21	3.51	3.15	3.28	3.23
Skew	-.06	-.40	-.97	-.96	-.88	-.86	-.98	-1.88	-.53	-1.67	-1.17	-1.17	-1.10	-1.17	-1.62	-.61	-.28	-.30	-.27
kurtosis	-1.37	-1.07	-.19	-.24	-.34	-.35	-.13	3.30	-.78	2.38	.82	.56	.21	.93	2.62	-.85	-1.25	-1.10	-1.19

Note: NAT = Natural stereotype, PE = Physical environment, COM = Commitment, LIF = Life style. N=277

DISCUSSION

The main study had three purposes. First, to further test the psychometric properties of the Amharic version of the scales that were used (SSS, BRSQ, and AGQ), second to examine the relationships between athletes' stereotypic beliefs with their goal achievement, and behavioral regulation, and third to identify the most prominent stereotypic beliefs of east Africans regarding their sport. Overall, the results provided support for the psychometric integrity of the SSS, AGQ, and BRSQ in Amharic language. It is also observed through correlation evidence that there are differences in the relationships between different goal orientations and motivational regulation of athletes' with stereotypic beliefs of athletes'.

Construct Validity of SSS

In the attempt to create a measure of sport stereotypes for Ethiopian long distance runners, we interviewed 8 Ethiopian long distance athletes. Then we grouped their responses in to five broad factors; namely natural stereotype, environmental stereotype, commitment factor stereotype, traditional factor stereotype, and life style stereotype. The outcome of the interview was in agreement with what literatures in the field of sport stereotype say so far. Proposed factors involved in the success of East African athletes include environmental, genetic endowment, and social development (Bouchard, 1997; Larsen, 2003; Saltin, 1996; Scott et al, 2003). Hamilton (2000) was also examined empirical evidence for a range of influences that may contribute to East African running dominance, including environmental, social, psychological, and physiological variables. We have used the specific measure in two pilot studies in Ethiopian samples providing preliminary evidence of the psychometric properties of the scale. In the main study, following some wording revisions that emerged on the basis of the pilot studies results, confirmatory factor analysis provided evidence that the SSS is best represented by a model with five distinct dimensions of behaviors, and 19 items. The results from reliability analysis from the two pilot studies included in the present investigation provided evidence for the internal consistency of the scale. Nonetheless, the commitment factor exhibited a poor Cronbach's alpha of .55 which surely affects the internal consistency of the scale. Overall, the results provided supportive evidence for the integrity of the instrument,

and we are confident in the use of the instrument for examining athletes' stereotype. The measure may be useful in helping researchers and sport psychologists to identify stereotypes influencing athletes' mental skills, like motivation, commitment, determination, and even more.

Stereotype beliefs

All the subscales in the stereotype measure (SSS) had a high mean value. This indicates that the participants have a stereotype beliefs ranges from natural stereotype to life style consistent over age and sport. However, the most prominent stereotypic beliefs found were the traditional stereotypes, commitment stereotypes and physical environment. Participants attributed the success of Ethiopian long distance athletes to the long tradition of the country. They also believe that Ethiopians are much more committed to their training than anyone else. It was also noted that males scored higher on commitment stereotypes and Ethiopian tradition stereotypes. Regardless of the fact, the belief that these differences exist creates a psychological perception that can have considerable effect on performance (Hamilton, 2000; Baker and Horton, 2003).

On contrary of what was expected and believed by many, natural stereotype was the least prominent stereotype belief of all. It is remarkable to know that these athletes are not that much reliant on the physiological and anatomical aspects of their "advantage" even if many researchers and the western public believe so. Wiggins wrote "*Blacks were physically different from Whites and possessed an accompanying character and temperament that was unique to their species*" (Wiggins, 1997, p. 313). Kane (1971) also stated that the average Black athlete possesses superior physical athletic qualities because only the genetic material of the fittest was passed on after decades of enslavement.

Stereotype and goal orientations

Elbe, Madsen and Midtgaard concluded that high task orientation might be contributing factors to the success of Kenyan athletes (very similar to the Ethiopians) and might be essential factor in order to perform at the highest international level in middle and long distance running (Elbe, Madsen and Midtgaard, 2010). In this study, Commitment and Ethiopian tradition stereotypes

have correlated significantly and positively with mastery orientation, performance approach and social approval goal orientation. Specifically, the relationship between commitment factor and social approval has the highest significance of all, which might be also the reason for the task orientation of the athletes.

On the other hand, natural ability and life style stereotypes have correlated significantly and positively with performance avoidance goal orientation. The negative relationship observed between natural ability stereotypes and mastery goal orientation is in line with previous findings (example, Dweck *et al.;* 1995).That is, entity beliefs are positively related to ego goal orientation and incremental beliefs associated with task orientation (Chiu *et al.,* 1997; Dweck *et al.;* 1995; Hong *et al.,* 1999). Studies in the sport and exercise domains have arrived at the similar findings. Most previous sport ability beliefs determine goal orientation, that is, incremental beliefs are linked to task orientation and entity beliefs are related to ego orientation. Researches confirmed significant positive correlations between the social comparison goal and conceptions of sport ability as stable, natural gift and general, and between the mastery goal and incremental, learning and specific conceptions (Biddle *et al.,* 1999; Wang & Biddle, 2001).The mastery goal was also found to negatively correlate with stable and gift conceptions (Sarrazin, Biddle, Famose, Cury, Fox & Durand, 1996). Then, indeed, the pursuit of a learning goal becomes pointless, since work is perceived as ineffectual in improving ability. In support of this generalization a significant correlation was observed between natural ability stereotype and performance avoidance goal orientation. Consistent with previous studies, the relationships between sport ability beliefs and goal orientations were supported.

Life style stereotype showed a significant positive correlation with social approval goal orientation. From the social point of view, this might mean that athletes' social approval goal orientation is linked to how they been brought up in the society.

Stereotype and behavioral regulation

Psychological predispositions could manifest themselves as differences in motivational orientation. Motivation is believed by many to be the foundation of sport performance and achievement (Ericsson, Krampe, and Tesch-Romer, 1993). Without motivation, even the most gifted athletes is unlikely to reach his or her athletic potential (Duda and Treasure, 2001). Intrinsic motivation correlated significantly with physical environment stereotype, commitment stereotype, Ethiopian tradition stereotype, and life style stereotype. It happened to be that intrinsic motivation related to four of the five factors of stereotype indicating its strong relationships with stereotypes. This supports the theory motivation for athletic success shaped and influenced by social and cultural forces including living standards (Javier, 2006).

External regulation showed a significant correlation with natural ability stereotype, commitment stereotype, life style stereotype, and Ethiopian tradition stereotype. Amotivation also showed a significant positive correlation with natural ability and life style stereotypes. Self determination theory (Deci and Ryan, 1985) states that External regulation is the least self-determined form and occurs when an athlete participates to obtain rewards, avoid punishment, or satisfy external demand. The natural ability stereotype related with external regulation pointing out that beliefs of stable athletic ability are related with external reasons for performance rather than enjoyment or mastery of skills (Sarrazin, Biddle, Famose, Cury, Fox & Durand, 1996). Javier wrote “to a European athlete, an Olympic medal is the pinnacle of his or her career, however for an athlete from a developing country it may simply be a gateway to earn money that will transform the lives of the athlete and his or her community” (Javier, 2006, p.374).In support of the above conclusion the regression analysis predicted that natural ability is a significant predictor of extrinsic motivation. Amotivation also related to natural ability and life styles supporting the above conclusions.

It is also interesting that no significant correlation was observed between identified regulation and any stereotype dimensions. The reason for this might be the very nature of the identified regulation itself. As the self determination theory (Deci and Ryan, 1985) states Identified regulation involves engaging in an activity that is freely chosen even if it is not attractive in

itself. An athlete is motivated by identified regulation when he or she practices because he or she believes that it is one of the best ways to develop other aspects of him or herself. This form of regulation is internalized based on the outcome it provides to other aspects of life rather than inherent athletic ability or advantages due to external factor.

CONCLUSION

The study tried to develop a sport stereotype scale which can frame stereotypic beliefs in five different constructs. The procedures followed (Vallerand, 1989) to develop the scale were in consistent with the guidelines outlined and accepted in research. The scale consists of those factors has been believed by many (athletes, coaches, public, etc) as a means for performance differences across different races and environmental conditions. Literatures in the specific area (Hamilton, 2000) of east African long distance running is also confirms the factors in the scale are valid to measure stereotypes in the area. As a result, we are confident to say the scale can be interpreted and adapted in to different sports and socio cultural conditions.

As Hamilton (2000) said psychological factors may perpetuate the dominance of East Africans long distance runners by ascribing differences between African and Caucasian runners to stable external factors and in this manner disempowering Caucasian runners and empowering East African runner. In this study, we confirmed that Ethiopian athletes hold stereotypes of different stable external factors ranges from Natural ability stereotype to life style, environmental, commitment, and traditional. The most prominent stereotypes found were the Ethiopian tradition factors, commitment factors, and physical environment factors. These beliefs showed significant relationships with athletes' behavioral regulation, and goal orientations.

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Appendix

Sport Stereotype scale final version

Ethiopian long distance athletes are successful because

1. … they are born to be good at long distance running
2. …the high altitude gives athletes an environmental advantage in long distance running
3. …Ethiopian youngsters walk and run a lot and this had positive influence on long distance running
4. … Ethiopian runners train harder than everybody else
5. … their physical body (physique) is suitable for long distance running
6. … the landscape (geological formations) where athletes live and train facilitates their performance in long distance running
7. … their race is the best for long distance running
8. Ethiopia is internationally known for its successes in long distance running and this magnetizes the most motivated young athletes
9. … Ethiopian runners are very committed to training
10. … Walking and running is in the daily routines in Ethiopian youngsters
11. …Ethiopian runners are extremely motivated
12. Long distance running is the national sport in Ethiopia and it attracts the young athletes with the highest aspirations
13. The demanding lifestyle for most children has positive influence on long distance running
14. Long distance running is very popular in Ethiopia which motivates youngsters
15. … Walking and running is typical of the Ethiopian children's life style
16. … the geography of the country with the mountains is best for long distance running
17. …they inherited the talent for long distance running
18. Long distance running is the sport with the highest value in Ethiopian society and it attracts the most motivated athletes
19. … Ethiopian runners work really hard in training
20. … they have a natural gift to run long distance
21. … training on the mountains is ideal for long distance running
22. …Ethiopian runners enjoy to train hard
23. …they are among few nations living at high altitude which is good for long distance running
24. Ethiopia has a great history of successful runners and this is a strong motive for young athletes
25. … Ethiopian youth have an active life style that involves a lot of walking and running

Sport stereotype scale phase one validation

1. they are born to be good at long distance
2. their physical body (physique) is ideal for long distance race
3. their race is best for long distance race
4. God gave them the talent for long distance race
5. they have a natural gift to run long distance race
6. Their talent in long distance running is in their genes
7. During humans evolution Ethiopians emerged as the most talented in long distance race
8. of the high altitude that gives athletes an environmental advantage
9. the landscape (geological formations) where athletes live is ideal
10. the nature where athletes train is ideal
11. the geography of the country with the mountains is best for long distance running
12. training on the mountains is ideal for long distance running
13. They are among few nations living at high altitude which is good for long distance race
14. Ethiopian runners train harder than everybody else
15. Ethiopian runners are extremely dedicated to their training
16. Ethiopian runners are very committed to training
17. Ethiopian runners are very disciplined
18. Ethiopian runners work really hard in training
19. Ethiopian runners enjoy to train hard
20. Ethiopians have model long distance athletes which motivates young athletes
21. Ethiopians have successful long distance athletes which motivates young athletes
22. The successful tradition of long distance running in Ethiopian motivates young athletes
23. long distance running is very popular in Ethiopia which motivates young athletes
24. Long distance running is the sport with the highest value in Ethiopian society and it attracts the most motivated athletes
25. Ethiopia has a great history of successful runners and this is the strong motive for young athletes
26. As kids/youngsters they use to run to school, and this makes them fit
27. Walking/Running is in the daily routines in Ethiopian youngsters
28. The demanding life style for most children has positive influence for long distance running
29. Walking and running is typical of the Ethiopian children's life style
30. Ethiopian children and youngsters used to walk and run for long distances as a means of transport and this makes them fit
31. Ethiopian youth have an active life style that involves a lot of walking and running

BRSQ-21 Amharic version (BRSQ; Lonsdale, Hodge, & Rose, 2008)

I participate in my sport…

1. But I question why I am putting myself through this
2. Because I get a sense of accomplishment when I strive to achieve my goals
3. Because it is a good way to learn things which could be useful to me in my life
4. But I wonder what's the point
5. Because I enjoy improving my performance in my sport
6. Because the benefits of sport are important to me
7. Because If I don't other people will not be pleased with me
8. But the reasons why are not clear to me anymore
9. Because this sport is very useful to me
10. Because I would feel bad with myself if I quit
11. Because I enjoy the feeling of success when I am working toward something important
12. Because I would feel like a failure if I quit
13. To show other people that I am doing the sport
14. But I question why I continue
15. Because I enjoy learning new techniques
16. Because of the pleasure I experience when I feel completely absorbed in my sport
17. Because I would have various negative feelings if I quit
18. To satisfy people who want me to do the sport
19. Because I value the benefits of my sport
20. Because I feel obligated to continue
21. Because people push me to do the sport

Achievement Goal questionnaire(AGQ; Papaioannou et al, 2007)

1. I feel wonderful when I'm the only one who can do an exercise
2. I'm completely satisfied when I outperform others
3. It is important for me to learn a game or skill and so the others to love me
4. It is my attitude to avoid skills and games for which I may be gibed at, for my abilities
5. My goal is to continuously develop my skills
6. I feel absolutely successful when I'm the only one who can make it in skills and games
7. I'm often worried about being told that I don't have any abilities
8. I'm glad when I develop my abilities and the others love me
9. I intend to try even more in order to learn new skills and games

10. I'll continue avoiding skills and games in which I may look incapable
11. I like learning new skills and games and gaining others' love
12. It is important for me to learn new things all the time
13. I'm concerned whether I look incapable and this often worries me
14. When I learn a skill, this makes me try even more
15. My attitude is always trying to get ahead others in skills and games
16. I often worry that if I try to perform a routine I might look incapable
17. I want to achieve high performances and other people love me
18. I will always try to outperform my classmates
19. I like doing an exercise perfectly and being beloved
20. I like learning new things no matter how difficult they are
21. I want to avoid drills and games in which I may look incapable
22. I feel absolutely successful when I do something right and others love me
23. I'm pleased when others can't make it as good as I do
24. I like to put effort in difficult exercises because this is a way to develop my abilities