



# The role of dispositional factors achievement goals and volition in the formation of athletic identity people with physical disability

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*Authors' Contribution: A – Study Design, B – Data Collection, C – Statistical Analysis, D – Manuscript Preparation, E – Funds Collection*

## Abstract

*Introduction:* According to cognitive identity theory internal components can be likely to influence athletic identity formation. The purpose of the present study was to examine relationship between athletic identity of people with physical disabilities and goal perspectives (task and ego) and volitional competences (persistence, purposefulness and expedience). *Material and methods:* The participants were 134 people with physical disability (n=103 men, and n=31 women). Their age ranging from 14 to 67 years (M=34.98, SD=10.59). All participants participated in physical activities (competitive and recreational). The subjects filled in three questionnaires: Athletic Identity Measurement Scale (AIMS), Task and Ego Orientation in Sports Questionnaire (TEOSQ) and Measure Athletes' Volition – Short (MAV-S). *Results:* The results revealed that goal orientations and volitional competencies can be predictors of athletic identity dimensions for people with disabilities participating in physical activities. In addition, they suggested that task orientation predicts the three identities (social  $\beta=0.43$ , exclusivity  $\beta=0.31$  and negative affectivity  $\beta=0.38$ ), purposefulness competence predicts two identities (social  $\beta=0.34$  and exclusivity  $\beta=0.30$ ), while persistence competence predicts the negative affectivity identity ( $\beta=0.49$ ). *Conclusions:* In conclusion, dispositional factors achievement goals and volitional competencies can be predicting the athletic identity dimensions.

**Keywords:** physical disability, athletic identity, goal orientations, volition

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## INTRODUCTION

Initially, in terms of identity, it is a concept that has caused quite a lot of interest in social psychology researchers (see [1]) because it helps to understand individuals who are in a lasting social interaction within a specific social environment (social structure). The social structures in which a person takes part in, is a cause of formation and his/her identity [2]. The participation of a person in athletic social structures is a cause of the development of a separate identity which is called "athletic identity" and is one of the identities which a person develops during its life [3].

Athletic identity refers to the degree to which an individual identifies himself with role of an athlete [4]. Brewer et al. [4] have shown that athletic identity is a unique and important dimension of the self-concept that can be regarded not only as both a cognitive structure or self-schema, but also as a social role. According to self-schema theory a schema like the athletic identity shows a cognitive structure which is involved in the processing and organization of self-related information [5]. For instance, items (concepts) used as references or standards that guide behavior.

Brewer and his colleagues indicated that the construct of athletic identity is consistent of social identity, exclusivity, and negative affective factors [4,6]. However, their model may not be complete due to the lack of details regarding external (i.e., structural identity theory) and internal (i.e., cognitive identity theory) components that influence athletic identity formation. In the context of internal components, concepts containing cognitive components may be likely to influence the formation of athletic identity. As such concepts may be those related to the perception of self-concept. Stets and Biga [7] reported that the self and one's identity importantly guide behavior, and that these effects are independent of the effects of attitudes on behavior.

Such a concept may be the perception of the ability that defines the goal of action. Goals depict an individual's purposeful motivational strivings [8]. Markus and Wurf [3] argued that goals is a component element of the self-concept which are shows behaviors. In context the achievement goal theory, Nicholls [9] was argued that more than one conception of competence exists and that we can understand achievement behavior in terms of the conception of competence adopted. The perception of competence demonstration differs among people and environment and happens according to two goal orientations (task and ego) [10]. Task orientation for achievement goal illustrates the trend of someone's perception of competence and success using self-referenced criteria. The person high in task orientation feels most successful when he or she has exerted high levels of effort and observed mastery of a skill. While, ego orientation illustrates the trend of perception of competence and success compared to others [11]. The ego-oriented individual judges the feelings of competence and adequacy by employing normative or other-referenced criteria. Roberts [12] and White [11] argued that a dominant predisposition can be either task- and/or ego-oriented, however it may be possible to be high or low in both.

According to self-determination theory humans have need to be autonomous in performing an activity. This need is stronger in people with physical disability. Autonomy is an integrated sense of self and involves being volition [13]. This leads us to the consideration that volition affects the formation of athletic identity. Volition is a psychic phenomenon that directs goal-oriented behavior, particularly in adverse conditions [14]. Kuhl [15] defines volition as a mediating factor that "energizes the maintenance and enactment of intended actions" [15] and therefore goes beyond motivation. To estimation of the strength of the volitional competences of the participants in physical activities (competitive and recreational) was developed the instrument Measurement Athletes' Volition - Short (MAV-S; [16]). The items of MAV-S contained constructs relevant to the elements of volition such are continuous effort, effort with difficulties, decision making, persistence in the effort, intention and goal that explain the three volitional competencies (persistence, expedience, and purposefulness).

To date, the shaping of athletic identity has focused, mainly, on its relationship with other identities (e.g., racial identity [17]; religious identity [18]), sport participation (e.g., [19,20]), personality characteristics (e.g., self-concept: [21]; personality [22]), motivation (e.g., exercise motivation [23]; achievement goals [24,25] etc. Concerning the achievement goals, Proios [24] supported a relationship athletic identity and dispositional achievement goals. Similar finding has supported by Weiss and Horn [25], that is, a relationship between positive self-concept and motivational orientations (e.g., task- or ego- orientation, or both).

In this study, the examining factors that have a relation with sport settings as achievement goals and volition on whether they affect the formation of the athletic identity of people with physical disability emphasizes the importance of this study. The understanding of the way in which the athletic identity is shaped is significant because it is as a good indicator since it shows the way in which one's athletic involvement and experience can psychologically and cognitively affect the individual. It can help determine one's changes and acceptance of certain beliefs throughout his or her entire athletic career [26,27], and it can to assist coaches, specialists of physical disability in formulating effective goal-setting programs. Moreover, athletic identity as a self-concept can define the way in which an individual evaluates his or her competence and worth [28].

The purpose of the present study is to examine relationship between athletic identity people with physical disabilities and goal perspectives (task and ego) and volitional competencies (persistence, purposefulness and expedience). The hypothesis, in the present study, is that athletic identity dimensions have relation to task- and ego orientation and of volitional competencies persistence, purposefulness, and expedience.

## MATERIALS AND METHODS

### Participants

The participants in this study were 134 people with physical disability ( $n = 103$  men, and  $n = 31$  women). Their age ranging from 14 to 67 years ( $M = 34.98$ ,  $SD = 10.59$ ). All participants were participated in physical activities (competitive and recreational).

### Procedure

Prior to the beginning of the research, ethical approval and relevant permissions were asked from the participants. For individuals that participated in competitive sport activities in public sports organizations, special requests for permission were made for their participation to relevant authorities. Same process was followed for individuals who have not participated in sport activities, asking the relevant permission from the managers of rehabilitation centers. Following, the researchers informed the participants of the content of the questions featured in the questionnaires, as well as of the purpose of the present study.

### Measurements

*Athletic identity.* A validated Greek version [24] of the Athletic Identity Measurement Scale (AIMS; [26]) was used. AIMS consists of seven statements concerning the athletes' perception of their identity in relation to sport. For each item, subjects responded to a 7-point Likert-type scale from 1 (*strongly disagree*) to 7 (*strongly agree*). This scale contained three subscales: Social Identity (three items; e.g., Most of my friends are athletes), Exclusivity (two items; e.g., Sport is the most important part of my life), and Negative Affectivity (two items; e.g., I feel bad about myself when I do poorly in sport" for negative affectivity). Social identity is the degree to which an individual view himself or herself as assuming the role of an athlete. Exclusivity is the degree to which an individual's self-worth is established through participating in the athletic role. Finally, negative affectivity is the degree to which an individual experiences negative emotion due to unwanted sporting outcomes. The multidimensional factorial structure of the seven-item AIMS was supported by several research conclusions (e.g., [26,30]). The reliability of the AIMS was calculated using alpha coefficient. Alpha coefficients for the social identity was ( $\alpha = 0.71$ ), exclusivity ( $\alpha = 0.82$ ) and negative affectivity ( $\alpha = 0.60$ ), indicating good reliability for each (see Table 1). The aforementioned value (0.60) can be considered satisfactory also in this case, as this factor comprises fewer than 10 items (viz., two items; [31,32]).

*Achievement goal:* A validated Greek version [33] of the Task and Ego Orientation in Sports Questionnaire (TEOSQ; [34]) was used in order to assess dispositional goal orientations. The stem was "I feel most successful in my sport when..." TEOSQ is a questionnaire consisting of 13-items and each item using a 5-point Likert-type scale from 1 (*strongly disagree*) to 5 (*strongly agree*). It includes two independent subscales measuring task (seven items; e.g., I learn new skills) and ego (six items; e.g., I come first) orientations as regards participation in sports. TEOSQ has demonstrated adequate

internal consistency with satisfactory alpha coefficients for both the task ( $\alpha = 0.79$ ) and ego ( $\alpha = 0.81$ ) subscales [35]. In the present study, the alpha coefficients were 0.88 and 0.86 for task and ego, respectively.

*Volition:* The Measure Athletes' Volition – Short (MAV-S; [16]) was used to assess the volition of participants. In this scale participants through 15 items describe the range of intensity participants put in some operations in order to achieve their goals in sport and physical activities settings on a 7-point Likert-type scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). The MAV-S consists of three subscales that measure competences as persistence (5-item; e.g., I insist in exercising even though conditions are not good), expedience (6-item; e.g., I feel capable of executing anything I am asked to do) and purposefulness (4-item; e.g., I exercise intensively because I feel satisfaction). The scale has demonstrated acceptable internal consistency for the persistence ( $\alpha = 0.74$ ), expediency ( $\alpha = 0.70$ ), and purposefulness ( $\alpha = 0.78$ ). In the present study, the alpha coefficients were 0.81, 0.85 and 0.87 for persistence, expediency and purposefulness, respectively.

### Data analysis

Descriptive statistics were obtained to estimate the responses of athletes on psychological constructs in sport settings. A hierarchical multiple regression was conducted in order to investigate the influence of volitional competencies and goal perspectives (predictors) in a sequential way, within a criterion (dimensions athletic identity). All analyses were completed using SPSS for windows version 22.0

## RESULTS

### Descriptive statistics

Table 1 provides means and standard deviations for all the investigated variables. Regarding the goal orientations, on average, participants exhibited higher scores in the task orientation and lower in ego orientation. They also exhibited high scores in volitional competence expedience, and low in competence persistence.

### Regression of Goal orientations and Volitional competencies on Athletic identity

Three multiple regression analyses with method enter (Table 2) were performed to test the ability of goal perspectives and volitional competencies of participants in the present study, to forecast the shaping of athletic identity dimensions in physical activity settings. In each regression analysis, the two goal perspectives (task and ego orientation) were first entered into the equation, followed by the three volitional competences (persistence, purposefulness, and expedience), in order their effect on the dimensions of athletic identity to be investigated.

First multiple regression: in the first step two predictors was entered: task and ego orientation. This model was statistically significant  $F(2, 132) = 14.54, p < 0.001$  and explained 18.3% of variance in social identity. After entry of volitional competencies (persistence, purposefulness and expedience) at Step 2 the total variance explained by the model as a whole was 35.5% ( $F(5, 132) = 14.01, p < 0.001$ ). The introduction of volitional competencies explained additional 17.3% variance in social identity, after controlling for volitional competences ( $R^2$  Change = 0.173,  $F(3, 127) = 11.32, p < 0.001$ ). Thus, based on were reported models two predictor variables are statistically significant for social identity with task orientation recording a higher Beta value ( $\beta = 0.43, p < 0.001$ ) than the purposefulness competence ( $\beta = 0.34, p < 0.05$ ).

Second multiple regression: in the second step two predictors was entered: task and ego orientation. This model was statistically significant  $F(2, 131) = 6.07, p < 0.01$  and explained 8.5% of variance in exclusivity identity. After entry of volitional competencies (persistence, purposefulness and expedience) at Step 2 the total variance explained by the model as a whole was 19.7% ( $F(5, 133) = 7.54, p < 0.001$ ). The introduction of volitional competencies explained additional 14.3% variance in exclusivity identity, after controlling for volitional competencies ( $R^2$  Change = 0.143,  $F(3, 128) = 7.87, p < 0.001$ ). Thus, based on were reported models two predictor variables are statistically significant for exclusivity identity with task orientation recording a higher Beta value ( $\beta = 0.31, p < 0.001$ ) than the purposefulness competence ( $\beta = 0.30, p < 0.05$ ).

Table 1. Descriptive Statistics, and Cronbach  $\alpha$  for all variables

Variables	M	SD	$\alpha$
Social identity	4.52	1.35	0.71
Exclusivity	4.35	1.62	0.82
Negative affectivity	4.96	1.47	0.60
Task	3.99	0.61	0.88
Ego	2.61	0.81	0.86
Persistence	5.01	1.24	0.81
Purposefulness	5.66	1.20	0.87
Expedience	5.70	1.00	0.85

Note: M=mean, SD=standard deviation,  $\alpha$ =Cronbach's alpha scores

Table 2. Hierarchical Multiple Regression

Variable	R	R <sup>2</sup>	R <sup>2</sup> Change	B	SE	$\beta$	t
<i>Social identity</i>							
<b>Step 1</b>	0.43	0.185***	0.185***				
Task				0.95	0.19	0.43***	5.11
Ego				-0.01	0.14	-0.01	0.98 <sup>ns</sup>
<b>Step 2</b>	0.60	0.355***	0.173***				
Task				-0.05	0.22	-0.01	-0.85 <sup>ns</sup>
Ego				0.04	0.14	0.03	0.85 <sup>ns</sup>
Persistence				0.22	0.15	0.20	1.45 <sup>ns</sup>
Purposefulness				0.38	0.17	0.34*	2.31
Expedience				0.15	0.22	0.11	0.67 <sup>ns</sup>
<i>Exclusivity</i>							
<b>Step 1</b>	0.29	0.09**	0.09**				
Task				0.82	0.24	0.31**	3.48
Ego				-0.22	0.18	-0.11	-0.12 <sup>ns</sup>
<b>Step 2</b>	0.48	0.227***	0.143***				
Task				-0.27	0.32	-0.10	-0.83 <sup>ns</sup>
Ego				-0.18	0.18	-0.09	-1.04 <sup>ns</sup>
Persistence				0.21	0.20	0.16	1.05 <sup>ns</sup>
Purposefulness				0.40	0.21	0.30*	1.91
Expedience				0.21	0.29	0.13	0.74 <sup>ns</sup>
<i>Negative affectivity</i>							
<b>Step 1</b>	0.41	0.17***	0.17***				
Task				0.93	0.20	0.38***	4.58
Ego				0.13	0.15	0.07	0.84 <sup>ns</sup>
<b>Step 2</b>	0.54	0.295***	0.125***				
Task				0.32	0.28	0.13	1.13 <sup>ns</sup>
Ego				0.01	0.15	0.01	0.05 <sup>ns</sup>
Persistence				0.59	0.17	0.49***	3.45
Purposefulness				-0.04	0.18	-0.03	-0.20 <sup>ns</sup>
Expedience				-0.03	0.05	-0.02	-0.13 <sup>ns</sup>

Note: \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ , ns=no significant

Third multiple regression: in the third step two predictors was entered: task and ego orientation. This model was statistically significant  $F(2, 131) = 13.40$ ,  $p < 0.001$  and explained 15.7% of variance in negative affectivity. After entry of volitional competencies (persistence, purposefulness and expedience) at Step 2 the total variance explained by the model as a whole was 26.7% ( $F(5, 133) = 10.69$ ,  $p < 0.001$ ). The introduction of volitional competencies explained additional 12.5% variance in negative affectivity, after controlling for volitional competencies ( $R^2$  Change = 0.125,  $F(3, 128) = 7.55$ ,  $p < 0.001$ ). Thus, based on were reported models two predictor variables are statistically significant

for negative affectivity identity with persistence competence recording a higher Beta value ( $\beta = 0.49, p < 0.001$ ) than the task orientation ( $\beta = 0.38, p < 0.001$ ).

## DISCUSSION

According to Stets and Biga [7] identity is a set of meanings attached to the behavior. It is also claimed that identity is associated with self-concept [36]. Markus and Nurius [37] suggested that the notions of identity can be related to many psychological constructs, including that of self-concept. In athletic social structures, the self-concept one person's relatively with the strength of athletic identity can to vary depending on athletic experiences the self-concept one person's relatively with the strength of athletic identity can to vary depending on athletic experiences [38]. This study examined the influence of dispositional goal orientations and volitional competencies on athletic identity in physical activity contexts.

The results in this study supported the initial hypothesis that the dispositional factors achievement goals and volitional competencies predict the athletic identity dimensions. This finding can be explained from the reasoned-action model of reasoned action theory [39,40], which suggests that the proximal cause of behavior by influencing one's intentions. This is because the motivations refer to dispositions that are made evident through the guidelines for achievement goals orientations that express an individual's intent in achievement goals in achievement contexts [9].

Results of the multiple regression analyses, also, revealed that the influence of two goal perspectives and three volitional competences on athletic identity dimensions is different. Concretely, the current finding indicate that only task orientation predicts the three athletic identity dimensions. Thus, taking into account the beliefs about the causes of success that link to task orientation as learning new skills, doing one's best, solving problems, understanding something more fully and improving, it may be considered that these are probably important strength factors of strength athletic identity people with physical activity involved in physical activities. The contribution of task orientation to the prediction of athletic identity dimensions is agreement with a number of theories that refers to the individual's beliefs in his or her capabilities successfully carry out a course of action as are achievement goal theory, self-efficacy, and self-determination [41,42,9,10].

Moreover, to the multiple regression analyses, a number of relationships among volitional competencies and athletic identity dimensions were documented. In particular the significant relationship of social identity and exclusivity with purposefulness competence was revealed. This finding indicates the degree to which people with physical disability are identified with the athletic role, through identities social and exclusivity, are affected by actions that are distinct from purpose and intent. The recent result can be explained with reference to tenets of planned behavior theory [43]. According to this theory, intentions reveal the individual's behavioral performance.

Furthermore, a significant relationship of negative affective identity with persistence competence was revealed. This finding can be considered as expected in view of the claim that persistence is endurance, or the refusal to give up, especially when faced with opposition [44]. Bandura and colleagues suggested that persistence is a skill related with expectations of self-efficacy [45,46,47]. This finding indicates that persistence competence, as a person's skill to overcome difficulties as those experienced by people with physical disability, probably, is a factor that helps to overcome difficulties arising from negative emotions due to unwanted sporting outcoming or from the obvious physical disability problems.

### *Limitations*

This study is not without limitations. First, it should be noted that the assessment of strength of the athletic identity, achievement goals, and volitional competences were based on self-reports. The sample of this study cannot be considered as representative to allow generalization of the results. Furthermore, a limitation of this study is the homogeneity of the participants, that is the existence small number participants on recreational activities. A systematic future research is necessary.

## CONCLUSIONS

In conclusion, the present study demonstrated that goal orientations and volitional competencies can be predictors athletic identity dimensions people with disabilities participating in physical activities. In addition, the findings suggest that task orientation predicts social and exclusivity identities, while persistence competence predicts negative affectivity identity in the people with physical disability participating in physical activities.

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