



## Volition profile of people with physical disability

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### Abstract

*Introduction:* Volition is a determinant psychological factor in the improvement of the performance of the human behavior. The aim of the study was to analyze the volitional qualities; persistence, purposefulness and expediency based on personal characteristics and disability-related characteristics. *Material and methods:* The participants in this study were 140 people with physical disabilities (n=107 men, and n=33 women) while 10 people did not state their gender. Their age ranging from 14 to 67 years. The participants filled the questionnaire Measure Athletes' Volition-Short (MAV-S). In addition following factors were put into analysis: gender, age, family status, education, occupational status, disability [congenital versus acquired], type of disability [spinal cord injury, brain palsy, amputation, poliomyelitis, muscular dystrophy and other type], form of exercise [sport activities – competitive versus recreational – and any activity], type of sport [team versus individual sports], type of experience [resistance, strength and skills], and form of games [Paralympic, European, National and Sectional]). *Results:* show that the people with physical disabilities who mainly take part in, physical activities manifest a high level volitional qualities (persistence, purposefulness, and expediency). *Conclusions:* Personal characteristics like form of exercise, type of sport (team, individual) and athletic experience play a moderating role in the existence of individual differences in volitional qualities.

**Keywords:** persistence, purposefulness, expedience, physical disability, personal and disability characteristics

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## **INTRODUCTION**

Volition is a psychological trait of personality whose function in the human behavior is related to its performance [1,2]. Kelleman, Bussmann, Anders, and Schulte [3] support the usage of volitional skills, for example in fatigue overcoming, as well as in keeping the pace in situations of fatigue, aiming at the achievement of a high-performance level.

The function of volition is an issue that has been occupied intensively by psychologists in the past. Among the psychologists, two viewpoints essentially were dominated by the function of volition in human behavior in relation to performance. The first viewpoint supports that volition is a psychic phenomenon that directs goal-oriented behavior, particularly in adverse conditions [4]. According to Ryba, Stambulova, and Wrisberg [5] the assessment of volition as a psychic phenomenon enables better understanding in the structure of volitional manifestations of personality, with each manifestation comprising intellectual (cognitive), affective (motivational) and operational components (skills).

The second viewpoint which dominated among the psychologists supports that volition constitutes a part of a broader self-regulatory system that involves motivation as well as volition [2]. This concept of volition is related to willpower [6], self-control [7], and self-regulation [8]. Self-control comprises goal recollection, forgetfulness prevention, planning skill, impulse control, and initiating control. Self-regulation comprises attentional focusing, self-motivation, emotion regulation, self-activation, self-relaxation, decision regulation, and coping with failure. The role of volition in the mechanism of self-regulation is understood by examining the predecisional (cognitive activities involved in making decisions and setting goals) and prodecisional (activities engaged in after goal setting) process. More specifically, predecisional analyses involve decision making and motivation; while postdecisional analyses deal with implementing goals and are volitional [9]. This reveals that volition mediates the relation between goals and actions, helps learners accomplish their goals.

The importance of volition has been particularly emphasized in the fields of education and health [1,2]. Sports psychologists are also interested in the effects of volition on the improvement of athletic performance [10,11]. Volition especially is important for realising long and intense training loads during the course of an athletic career or for keeping up regular exercising. In addition to the achievement motivation, concentration and persistence [12], volition is seen as an essential component for athletic excellence. A positive development of these aspects of personality is important for all young competitive athletes. However, research interest is still rather limited. A possible reason for this is the failure to understand the volition theory, as it bridges several fields of psychological research, including cognitive-motivational, social cognitive, and personality psychology [1].

Examining, especially the area of health, is noticed as a complete lack of interest for the factor of volition, giving that: (a) in the disability exist an interaction among persons and environment (ecological model of disability), with the person to function autonomously and dynamically and to be impacts his or her environment, and in turn is constantly influenced by the environment, when situations occur outside individuals and elicit responses in them [13], and (b) the disability, a social construction according to social model of disability considered to be created by society itself with imposing hindrances to the full participation of the persons with different abilities to her [14,15,16]. Such hindrances include negative attitudes, physical impediments, and institutional, communication, and social barriers. In the social model, disability is differentiated from impairment by exclusionary societal practices that isolate and stigmatize individuals with a disability [17,14]. Yeo and Sawyer [18] claimed that disability, and mainly in childhood can negatively influence the quality of life because chronic illness causes are often unpredictable, and many children's symptoms result in social and physical restrictions.

The important of studying the volition lies in the fact that knowledge and function of volitional processes, which contain intentional behaviors as the involvement in physical activities [19], for example people with physical disabilities, it may contribute to the better understanding of the possibilities of intervention for the improvement of physical performance. The volition constitutes a psychological factor that can fill the gaps which are presented in the incentives and the emotions in the

improvement of performance [20]. We examined the most often volitional manifestations, that is called volitional qualities, we consider that it can contribute significant to expected knowledge.

Recently, Proios and Proios [21] based on volition theories developed a new instrument named Measurement Athletes' Volition - Short (MAV-S) to estimate the strength of the volitional qualities of the participants in athletic activities (competitive and recreational). This instrument estimates the volitional qualities of persistence, purposefulness, and expediency. "Persistence" is a personal skill describing the efforts undertaken by the individual to achieve a goal, for example in sports. The "persistence" contains the components of the "Effort continuous" and "Effort with difficulties". These components reveal an individual's relentless effort to overcome difficulties/ obstacles or not. "Purposefulness" is a construct suggesting that an individual's action serves a purpose or is intentional. Purposefulness action can be expressed through psychological constructs such as "Intention" and "Goal-setting". "Expediency" represents another personal skill and characterizes individuals who do not hesitate to make decisions and implement them [22]. This quality is expressed through two components the "Decision making" and "Persistence on effort". These components demonstrate the individual's ability to make decisions, as well as to show persistence in implementing a decision taken.

According to Vygotski [23] personality development takes place during one's entire life span. This assumption that exist in volition [8]. However, strong development of volitional skills is expected in the variables examined in this study. Williamson [24] stated, that people often manage developmental changes with the intention of minimizing their discomforts and activity restrictions and maintaining or improving abilities levels, senses of well-being, and volitions.

The purpose of the present study is the investigation of formation volitional qualities' as persistence, purposefulness, and expediency in people with physical disability. In addition, the study aims to assess hypothetical differences on volitional qualities (persistence, purposefulness, and expediency) in relation to gender, age, family status, education, occupational status, disability, type of disability, form of exercise, type of sport, experience, and form of games.

## MATERIALS AND METHODS

### *Participants*

The participants in this study were 140 people with physical disabilities (n=107 men 76.4%, and n=33 women 23.6%, while 10 people did not state their gender. Their age ranging from 14 to 67 years (M=35.31, SD=10.67), 10 people did not state their age, and were split into four different age groups (14-22, 23-34, 35-44, and 45-67 years). Family status their participants were married (n=41), and unmarried (n=99). The education of participants was: primary school (n=3), junior high school (n=18), senior high school (n=66), university (n=50), and postgraduate (n=3). The participants stated also their occupational status: private employee (n=20), civil servant (n=17), rentier (n=6), freelancer (n=21), student (n=15), unemployed (n=26), and other (n=35). The disability of participants was congenital (n=37), and acquired (n=97), while 6 people did not state their disability. Their type disability was spinal cord injury (n=48), brain palsy (n=21), amputation (n=15), poliomyelitis (n=6), muscular dystrophy (n=5), and other type (n=38). A number people (n=133) were involved in sport activities (117 competitive, and 16 recreational), and 6 people did not state involve in any activity. People with competitive activity were involved in the following sports: basketball (n=35, 31.8%), track and field (n=25, 22.7%), archery (n=5, 4.5%), weightlifting (n=13, 11.8%), fencing (n=3, 2.7%), cycling (n=1, 0.9%), swimming (n=15, 13.6%), shooting (n=4, 3.6%), boccia (n=1, 0.9%), football (n=1, 0.9%), skiing (n=2, 1.8%), table tennis (n=3, 2.7%), and volleyball (n=2, 1.8%). In this study the sports were classified into two types: (a) type of sport: team versus individual sports, and (b) type of exercise: resistance, strength and skill. The years of athletic experience ranged from 0 to 40 years (M=10.18, SD=9.22), and were grouped into four groups: 0y; 1-13y; 14-27y; 28-40y. Participants with competitive sport activity were involved at one of the following levels: Paralympic, European, National and Sectional.

### Procedure

Prior to participation in the study, permission to participate in the study was requested and received from coaches of individuals that participated in competitive sports activities and parents of individuals that are under the age of 18 years. From rehabilitation centers managers of individuals who were non-participants in sports activities. Finally, the researchers informed the participants of the content of the questions, as well as of the purpose of the present study, before the participants fill in the questionnaire.

### Measurement

Volition: For the needs of the present study Measure Athletes' Volition-Short (MAV-S; [21]) was used. MAV-S consists of 15-item where the individuals describe how intensively they use certain functions to achieve a goal in sports and physical activities on a 7-point scale Likert-type, ranging from (1) strongly disagree to (7) strongly agree. MAV-S consists three subscales that estimate the qualities as persistence (5-items, e.g., I insist on exercising even though the conditions are not good), purposefulness (4-items, e.g., I exercise intensively because I feel fulfillment), and expediency (6-items, e.g., I feel capable of doing whatever I am asked to do). The MAV-S in the present study has demonstrated adequate internal consistency with satisfactory alpha coefficients for the three subscales (persistence  $\alpha=0.84$ , purposefulness  $\alpha=0.85$ , and expediency  $\alpha=0.88$ ).

### Data analysis

Descriptive statistics were obtained, and preliminary data analyses were conducted to estimate the responses of people' on volition qualities. Inferential statistics (ANOVA and MANOVA) were used to analyze the extent to which the perception of the people with physical disabilities in the volitional qualities varied with gender, age, family status, education, occupational status, disability, type of disability, form of exercise, type of sport, experience, and form of games.

## RESULTS

### Descriptive Statistics

Descriptive statistics (Table 1) revealed the total profile in volitional qualities people with physical disabilities that were used in the present study. Specifically, the descriptive statistics showed that people with physical disability scored higher on quality expediency ( $M=5.60$ ,  $SD=1.12$ ). In addition, descriptive statistics established that volitional qualities operate in a different way in a big proportion of the demographic characteristics (see Table 2).

More specifically, descriptive statistics as presented in Table 2 have shown that men exhibited higher levels of persistence and expediency ( $M=4.97$ ,  $SD=1.29$  and  $M=5.62$ ,  $SD=1.06$ , respectively) than the women that exhibited higher levels of purposefulness ( $M=5.59$ ,  $SD=1.36$ ). Regarding the age groups, people are perceived of exhibiting higher levels of persistence in ages 23-34 years ( $M=4.99$ ,  $SD=1.28$ ), purposefulness in 14-22 and 45-67 years ( $M=5.75$ ,  $SD=1.02$  and  $M=5.75$ ,  $SD=1.13$ , respectively), and expediency in 14-22 years ( $M=5.70$ ,  $SD=0.88$ ). Moreover, it turned out that the tendency of the scores in all three volitional qualities, does not have any specific trend.

Regarding the family status, descriptive statistics showed an excellence in the scores of unmarried on all the qualities persistence ( $M=4.95$ ,  $SD=1.32$ ), purposefulness ( $M=5.65$ ,  $SD=1.23$ ), and expediency ( $M=5.66$ ,  $SD=1.03$ ). In education descriptive statistics also revealed that the quality persistence and purposefulness ( $M=5.21$ ,  $SD=1.72$ , and  $M=5.97$ ,  $SD=1.21$ , respectively) scored the highest in the junior high school level in relation to any other education level. While, the quality expediency ( $M=5.83$ ,  $SD=1.61$ ) presented higher scores at the primary school level in relation to any other education levels. Also, descriptive statistics did not show a clear trends for the volitional qualities scores.

For occupational status descriptive statistics indicated an excellence in the scores of rentiers on all the persistence ( $M=5.50$ ,  $SD=1.59$ ), purposefulness ( $M=6.50$ ,  $SD=0.52$ ), and expediency ( $M=6.14$ ,  $SD=0.99$ ) qualities. Similar descriptive results statistics was shown for the congenital versus acquired disability (persistence  $M=5.09$ ,  $SD=1.27$ , purposefulness  $M=5.76$ ,  $SD=1.17$ , and expediency  $M=5.76$ ,

SD=0.97). By examining the scores per type of disability, descriptive statistics revealed that the persistence and expediency qualities (M=5.55, SD=1.07, and M=5.99, SD=0.99, respectively) scored the highest value on the type amputation in relation to other types of disability. While, the purposefulness quality (M=5.96, SD=1.01) presented higher scores on the type of poliomyelitis in relation to other types of disability.

The results of descriptive statistics also revealed that in the type of exercise, the competitive scored highest on all the qualities (persistence M=5.09, SD=1.23, purposefulness M=5.69, SD=1.22, and expediency M=5.75, SD=1.00). Regarding the type of sport (team and individual) descriptive statistics showed an excellence in the scores of team sports on the persistence quality (M=4.95, SD=1.32), while on the purposefulness (M=5.90, SD=1.04), and expediency (M=5.81, SD=0.85) qualities in the individual sports. While for the type of sport (resistance, strength, and skill) descriptive statistics indicated an excellence in the scores of strength type on all the persistence (M=5.29, SD=1.33), purposefulness (M=6.12, SD=1.05), and expediency (M=6.07, SD=0.85) qualities. Regarding experience groups the people with experience 28-40 years presented higher scores on the persistence (M=5.54, SD=0.99) and expediency (M=6.02, SD=0.66), and with 14-27 years on the purposefulness (M=6.00, SD=0.70) qualities.

Finally, descriptive statistics also revealed that the quality persistence and expediency (M=5.44, SD=0.89, and M=6.19, SD=0.67, respectively) scored the highest in European in relation to any other level of competition. While, the purposefulness quality (M=6.04, SD=0.90) presented higher scores on the Paralympic in relation to any other level of competition.

#### *Differences between Personal and Disability-related Characteristics*

Separate analyses of variances (MANOVA) were conducted to compare the mean values on volition qualities across to gender, age, family status, education, occupational status, disability, type of disability, type of exercise, type of sport, athletic experience, and level of competition.

Initially, a one-way multivariate analysis of variance was performed with the use of three volitional qualities (persistence, purposefulness, and expediency) as dependent variables and the Gender as independent variable. The multivariate tests did not reveal a significant main effect of gender (Wilks' lambda=0.989,  $F_{(3,136)}=0.52$ ,  $p>0.05$ ). Similar results were found and in other groups of variables, age Wilks' lambda=0.963,  $F_{(3,128)}=0.54$ ,  $p>0.05$ , family status, Wilks' lambda=0.974,  $F_{(3,136)}=1.21$ ,  $p>0.05$ , education level Wilks' lambda=0.960,  $F_{(3,133)}=0.45$ ,  $p>0.05$ , occupational status, Wilks' lambda=0.864,  $F_{(3,131)}=0.52$ ,  $p>0.05$ , disability Wilks' lambda=0.997,  $F_{(3,130)}=0.12$ ,  $p>0.05$ , type disability Wilks' lambda=0.883,  $F_{(3,125)}=1.07$ ,  $p>0.05$ , type of sport [resistance, strength, skill] Wilks' lambda=0.911,  $F_{(3,105)}=1.66$ ,  $p>0.05$ , and form games Wilks' lambda=0.925,  $F_{(3,101)}=0.89$ ,  $p>0.05$ ) the same procedure was followed for the checking the differences in means relation with the above variables.

Another one-way MANOVA was conducted with the same dependent variables and the Type of Exercise (resistance, strength and skills) as independent variable. The multivariate test revealed a significant main effect of type of exercise (Wilks' lambda=0.794,  $F_{(3,134)}=5.45$ ,  $p<0.01$ ,  $n^2=0.109$ ). According to Cohen [25], guidelines for interpreting an eta-square value ( $\eta^2$ ) is that 0.01 indicates a small effect, 0.09 indicates a moderate effect, and 0.25 indicates a large effect. Therefore, our finding  $\eta^2 = 0.109$ , indicates that 10.9% of the total variance in variables of volition is accounted for by type of exercise differences and as such it can be classified as a moderate effect. The univariate results showed significantly different effects and the three competences, persistence ( $F_{(1,138)}=19.84$ ,  $p<0.01$ ,  $n^2=0.158$ ), purposefulness ( $F_{(1,138)}=11.09$ ,  $p<0.01$ ,  $n^2=0.140$ ), and expediency ( $F_{(1,138)}=16.81$ ,  $p<0.01$ ,  $n^2=0.198$ ).

Table 1. Descriptive Statistics and Coefficient  $\alpha$  Cronbach'

| Variables |                | MO          | TA   | $\alpha$ |
|-----------|----------------|-------------|------|----------|
| Volition  | Persistence    | 4.94        | 1.35 | 0.84     |
|           | Purposefulness | 5.56        | 1.32 | 0.85     |
|           | Expedience     | <b>5.60</b> | 1.12 | 0.88     |

Table 2. Descriptive Statistics per Demographic Characteristic and Differences Significance

| Demographic characteristics |                    | N   | Persistence        | Purposefulness     | Expediency         | Differences (Sig.) |
|-----------------------------|--------------------|-----|--------------------|--------------------|--------------------|--------------------|
|                             |                    |     | M(SD)              | M(SD)              | M(SD)              |                    |
| Gender                      | Men                | 107 | <b>4.97</b> (1.29) | 5.55(1.32)         | <b>5.62</b> (1.06) | $p>0.05$           |
|                             | Women              | 33  | 4.84(1.54)         | <b>5.59</b> (1.36) | 5.53(1.31)         |                    |
| Group Age                   | 14-22              | 15  | 4.87(1.52)         | <b>5.75</b> (1.02) | <b>5.70</b> (.88)  | $p>0.05$           |
|                             | 23-34              | 52  | <b>4.99</b> (1.28) | 5.56(1.43)         | 5.65(1.19)         |                    |
|                             | 35-44              | 44  | 4.95(1.45)         | 5.43(1.41)         | 5.54(1.16)         |                    |
|                             | 45-67              | 23  | 4.94(1.35)         | <b>5.75</b> (1.13) | 5.62(1.01)         |                    |
| Family Status               | Married            | 41  | 4.90(1.43)         | 5.34(1.51)         | 5.46(1.31)         | $p>0.05$           |
|                             | Unmarried          | 99  | <b>4.95</b> (1.32) | <b>5.65</b> (1.23) | <b>5.66</b> (1.03) |                    |
| Level Education             | Primary school     | 3   | 4.73(2.37)         | 5.75(1.73)         | <b>5.83</b> (1.61) | $p>0.05$           |
|                             | Junior high school | 18  | <b>5.21</b> (1.72) | <b>5.97</b> (1.21) | 5.79(1.14)         |                    |
|                             | Senior high school | 66  | 4.89(1.28)         | 5.49(1.42)         | 5.54(1.21)         |                    |
|                             | University         | 50  | 4.94(1.29)         | 5.50(1.24)         | 5.60(.98)          |                    |
|                             | Postgraduate       | 3   | 4.53(1.42)         | 5.42(1.01)         | 5.61(1.18)         |                    |
| Occupational Status         | Private employee   | 20  | 4.62(1.41)         | 5.09(1.51)         | 5.20(1.37)         | $p>0.05$           |
|                             | Civil servant      | 17  | 5.13(1.02)         | 5.46(.99)          | 5.58(.85)          |                    |
|                             | Rentier            | 6   | <b>5.50</b> (1.59) | <b>6.50</b> (.52)  | <b>6.14</b> (.99)  |                    |
|                             | Freelancer         | 21  | 4.60(1.58)         | 5.17(1.69)         | 5.21(1.36)         |                    |
|                             | Student            | 15  | 5.41(.69)          | 6.22(.47)          | 6.02(.59)          |                    |
|                             | Unemployed         | 26  | 4.80(1.49)         | 5.41(1.41)         | 5.57(1.14)         |                    |
|                             | Other              | 35  | 5.03(1.35)         | 5.78(1.21)         | 5.82(.99)          |                    |
| Disability                  | Congenital         | 37  | <b>5.09</b> (1.27) | <b>5.76</b> (1.17) | <b>5.76</b> (.97)  | $p>0.05$           |
|                             | Acquired           | 97  | 5.00(1.27)         | 5.61(1.21)         | 5.66(.99)          |                    |
| Type Disability             | Spinal cord injury | 48  | 5.00(1.09)         | 5.69(1.14)         | 5.78(.89)          | $p>0.05$           |
|                             | Brain palsy        | 21  | 5.12(1.19)         | 5.58(1.17)         | 5.81(.85)          |                    |
|                             | Amputation         | 15  | <b>5.55</b> (1.07) | 5.88(1.09)         | <b>5.99</b> (.97)  |                    |
|                             | Poliomyelitis      | 6   | 5.23(1.29)         | <b>5.96</b> (1.01) | 5.67(1.06)         |                    |
|                             | Muscular dystroph  | 5   | 5.44(.96)          | 5.57(1.35)         | 5.57(.81)          |                    |
|                             | Other              | 38  | 4.76(1.51)         | 5.68(1.17)         | 5.46(1.17)         |                    |
| Form Exercise               | Competitive        | 117 | <b>5.09</b> (1.23) | <b>5.69</b> (1.22) | <b>5.75</b> (1.00) | $p<0.01$           |
|                             | Recreational       | 16  | 4.67(1.33)         | 5.34(1.02)         | 5.26(.89)          |                    |
|                             | Non                | 6   | 2.50(1.42)         | 3.29(1.87)         | 3.39(1.32)         |                    |
| Type Sport (a)              | Team               | 38  | <b>5.09</b> (1.33) | 5.37(1.45)         | 5.64(1.26)         | $p<0.01$           |
|                             | Individual         | 72  | 5.07(1.21)         | <b>5.90</b> (1.04) | <b>5.81</b> (.85)  |                    |
| Type Sport (b)              | Resistance         | 58  | 5.01(1.23)         | 5.52(1.23)         | 5.58(1.10)         | $p>0.05$           |
|                             | Strength           | 38  | <b>5.29</b> (1.33) | <b>6.12</b> (1.05) | <b>6.07</b> (.85)  |                    |
|                             | Skill              | 13  | 4.78(1.05)         | 6.07(.85)          | 5.59(.82)          |                    |
| Group Experience            | 0 years            | 6   | 2.50(1.42)         | 3.29(1.87)         | 3.39(1.32)         | $p<0.01$           |
|                             | 1-13 years         | 73  | 4.93(1.24)         | 5.53(1.40)         | 5.65(1.11)         |                    |
|                             | 14-27 years        | 25  | 5.41(.98)          | <b>6.00</b> (.70)  | 5.93(.73)          |                    |
|                             | 28-40 years        | 7   | <b>5.54</b> (.99)  | 5.79(.78)          | <b>6.02</b> (.66)  |                    |
| Type Games                  | Paralympic         |     | 5.42(1.05)         | <b>6.04</b> (.90)  | 6.00(.70)          | $p>0.05$           |
|                             | European           |     | <b>5.44</b> (.89)  | 5.98(.78)          | <b>6.19</b> (.67)  |                    |
|                             | National           |     | 4.99(1.32)         | 5.57(1.44)         | 5.62(1.19)         |                    |
|                             | Sectional          |     | 4.86(1.36)         | 5.29(1.35)         | 5.53(1.00)         |                    |

In additional one-way MANOVA was conducted with the same dependent variables and the Type of Sport (team versus individual) as independent variable. The multivariate test revealed a significant main effect of type of exercise (Wilks' lambda=0.883,  $F_{(3,106)}=4.97$ ,  $p<0.01$ ,  $n^2=0.117$ ). The finding  $\eta^2=0.117$ , indicates that 11.7% of the total variance in variables of volition is accounted for by type of sport (team, individual) differences and as such it can be classified as a moderate effect. The univariate results showed significantly different effect only for the competency purposefulness ( $F_{(1,109)}=7.10$ ,  $p<0.01$ ,  $n^2=0.044$ ), while the others two competencies persistence ( $F_{(1,109)}=0.01$ ,  $p>0.05$ ), and expediency ( $F_{(1,109)}=0.74$ ,  $p>0.05$ ) did not revealed significant effects.

Finally, one more one-way MANOVA was conducted with the same dependent variables and the Athletic Experience as independent variable. The multivariate test revealed a significant main effect of athletic experience (Wilks' lambda=0.733,  $F_{(3,105)}=3.86$ ,  $p<0.01$ ,  $n^2=0.098$ ). The finding  $\eta^2=0.098$ , indicates that 9.8% of the total variance in variables of volition accounted for athletic experiences differences and as such it can be classified as a moderate effect. The univariate results showed significantly different effects and the three competencies, persistence ( $F_{(1,110)}=14.58$ ,  $p<0.01$ ,  $n^2=0.225$ ), purposefulness ( $F_{(1,110)}=12.01$ ,  $p<0.01$ ,  $n^2=0.171$ ), and expediency ( $F_{(1,110)}=10.61$ ,  $p<0.01$ ,  $n^2=0.229$ ).

## DISCUSSION

Volition is an important psychological factor that help in understanding the human behavior better. This study analyzes personal characteristics that determine the behavior of people with physical disabilities by analyzing three volitional qualities: persistence, purposefulness, and expediency.

The findings of the present study have shown that people with physical disability revealed a high level of volitional manifestations. Specifically, the findings indicated an excellence of volitional quality expediency. This finding shows that the behavior of the people in the present study, possibly, is distinguished to a large extent of expediency. Snyder [26] argues that people with physical disabilities may do more than they seem to be capable of based on their situation, with an improved result of the expediency for pursuing personal goals. Components of expediency are "decision making" and "persistence on effort", which characterized one independent function given to people in the present study, the majority that participated in physical activities (competitive or recreational) where involved in decision making, an event contributing to the improvement of their cognitive level, it is possible for the behavior function to have an autonomy character. According to Self-Determination Theory [27], autonomy is defined as volitional.

The autonomy function due to the rationality strengthening of the decision information in order to generate and evaluate alternate pathways to a goal. Furthermore, it is also due to the belief that participation in decision-making contributes to the individuals' personal growth by enhancing their feelings of self-worth and self-confidence and by facilitating the development of their problem-solving skills [28].

The existence of the autonomy implies acknowledgement of the other's perceptions, acceptance of the other's feelings, and facilitation of self-initiated expression and action [29]. Moreover, the independence is considered as basic part of the participation in rehabilitation, which is the ultimate aim [30].

The findings, also, revealed that people with physical activities in this study perceive that in the context of volitional manifestations, the volition quality of purposefulness is at a high level in the application physical activities. Given that purposefulness contains psychological concepts like intention and goal-setting, we can consider that the people of the present study, possibly, manifest behaviors of intention to perform an action, making obvious individual's behavioral performance through his/her effort to put a physical activity under volitional control [31], but also the commitment of the individual to a goal [32]. The goals as a cognitive condition have the power of a motive because they affect not only the direction of behavior but also the intensity of effort made. Goal setting has been advocated as "a highly consistent and a robust performance enhancement strategy" [33]. Gould

[34] has suggested that goal setting is particularly effective in enhancing performance and positively affecting behavior when focusing on a combination of outcome, performance, and process goals.

Except for the revealing a perception of intense manifestation volitional qualities as expediency and purposefulness, the findings of this study showed a relatively high-level manifestation of volitional quality persistence. This finding reveals that people with physical disability of the present study, possibly show behaviors of relentless effort to overcome difficulties or obstacles. According to Bandura [35] persistence is endurance, or the refusal to give up, especially when faced with opposition. Bandura and colleagues maintained that persistence is a skill affected by expectations of self-efficacy [36]. When an individual possesses strong self-efficacy beliefs he/she is expected to exhibit the element of persistence in demanding activities [37]. Self-efficacy refers to the belief that an individual can behave in the manner required in order to achieve specific goals [36].

In the present study it was hypothesized that the perception people with physical disabilities for their volitional manifestations is potentially affected by several moderators. The results of this study confirmed, in part, the above assumption. Specifically, the findings revealed a moderate level of effects of variables form of exercise, type of sport (team, individual), and form of games on the volitional qualities persistence, purposefulness and expediency, except the type sport on the quality expediency. Regarding the other demographic characteristics and disabilities-related characteristics, individual differences were not found in volitional qualities. Here it must be noted that the interest of researchers is limited to the theoretical perspectives in examining demographic characteristics and disabilities-related characteristics [38]. Demographic characteristics are used, mainly, for descriptive purposes in clinical studies. This has as a result the inability of comparison of the findings of this study with the findings of other studies.

Given that volition constitutes a personality characteristic, we will try to discuss the findings of this study with the findings of other studies for the existence of changes in personality traits development using typical population. The finding for the absence of the individual differences on volitional qualities is strengthened partly by the claim that the related-behavior personality traits do not change with age [39], because there are other studies that reported mean-level changes in traits at various ages across the life course [40]. Roberts et al. [39] report that the development of personality across the human life course is a complex and multilayered affair. Regarding the finding related to the gender of this study is not fully supported even though that findings of other study suggest that gender differences in personality traits are small relative to individual variation within genders [41], because gender differences in personality traits have been documented in many empirical studies [42]. Specific life experiences are considered to constitute the cause of the existence of individual differences in personality traits [43]. Part of these experiences can be considered to constitute the experiences which are gained via the involvement in sports. This claim strengthens the finding this study that athletic experiences affect the strength of the manifestation of volitional qualities in people with physical qualities.

#### *Limitations and future implications*

This study is not without limitations. First, it should be noted that the assessment of volitional qualities was based on self-reports. Also, the sample of this study cannot be considered as representative so as to allow the generalization of the results. A systematic future research is necessary to explore similar individual differences in volitional qualities using the same number of people in three forms exercise. It should also explore the association between the volitional qualities with other psychological constructs.

## **CONCLUSIONS**

In conclusion, the present study is considered to offer new knowledge on the volitional manifestations of people with physical disabilities. From the findings of present study, it is initially concluded that the people with physical disabilities, mainly involved with physical activities, manifest high level of volitional qualities as persistence, purposefulness, and expediency. Another conclusion based on the findings of the present study, is the effect of personal characteristics as a type of exercise

(competitive, recreation, no exercise), type of sport (team, individual), and athletic experiences in the existence individual differences in volitional qualities.

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