

Motives vs. age, training experience, and sporting level in sumo wrestlers

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Abstract

Background and Study Aim:

Motives are dynamic in character and prone to constant variation with the changing age, training experience, and sporting level of individuals practicing amateur sumo. The aim of this research was to identify dominant motives and the way they are being shaped by these influences.

Material/Methods:

Researched were 72 individuals practicing amateur sumo, half of whom were world champions, European champions and Poland's champions. The method applied was diagnostic survey with questionnaires. The results were processed statistically by means of the χ^2 independence test and a multiply correspondence analysis.

Results:

Improving one's physical fitness as a motive for practicing sumo is more important to individuals with the longest training experience and a high sporting level ($p=0.0061$ for χ^2 test). Body weight loss is of importance chiefly to those who have practiced sumo for less than 4 years ($p=0.0046$ for χ^2 test), and some subjects who have attained a high sporting level ($p=0.0087$ for χ^2 test). Individuals who practice daily or 3–4 times a day see sumo as their lifestyle ($p=0.0074$ for χ^2 test), much like those who represent the highest sporting level ($p=0.0096$ for χ^2 test).

Conclusions:

The dominant motives in amateur sumo wrestlers are the possibility of improvement and perfection of physical fitness and health. Identification of dominant motives can help trigger desirable changes in the behavior of an athlete and the orientation of his sporting efforts.

Key words:

motive • amateur sumo • sporting level • training experience • age category

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BACKGROUND

Motive: a desire driven by internal states or external situations and expressed by active endeavors to perform an action in order to reach a goal.

When researching **motives** that induce man to practice sports it seems adequate to adopt the notion of motive as an incentive to act in an intentional and conscious manner. If so defined, the concept entails the setting of a goal, freedom to embark on a course of action, and making physical effort connected with training and competition [1,2]. Motive is a desire driven by inner states or outer situations which is externalized by active endeavors to perform an action in order to reach a goal [3]. That condition of the body and mind stimulating a

person to act is to satisfy a need [4]. It is believed that one of the paradigms of contemporary sport is participation in physical culture of individuals who exhibit relevant somatic and motor predispositions and agonistic and perfectionist aspirations, the aim of which is to satisfy a need of self-accomplishment through competition in attaining best possible physical fitness results [5].

Practicing a sport is aimed at reaching a high level of sporting excellence. This objective can be attained through many ways: regular hard work that gradually develops one's physical fitness, or, one of the easier

Amateur sumo: a sport for men and women in which athletes compete in a variety of age and weight categories in line with regulations, statutes, and rules of a local sumo association and international sports organizations.

ones, such as application of prohibited doping methods. Assuming that the aim of practicing **amateur sumo** is achieving very good sports results through continuous improvement of one's physical fitness and sporting skills, this writer set out to investigate the motives that stimulate people to participate in sumo training programs.

Research has shown that martial arts and combat sports are regarded as a form of activity which mainly serves the development of physical fitness. In the opinion of 75% of the people surveyed (638 practicing and 1237 non-practicing, aged 10 to 37), the practice sessions are available to the whole public, regardless of one's age or level of physical fitness [6].

Amateur sumo is a sport often practiced by overweight people. Given relatively little tolerance towards overweight and obese individuals from other members of the general public and their reluctance to engage in sports [7], physical education teachers and coaches should make particularly strenuous efforts to motivate children and teenagers to take up a variety of physical activities [8,9] that can be conducive to improving their health and physical fitness. Research findings confirm a positive relationship between a high level of physical activity and body weight loss [10,11], and a negative one between little physical activity and obesity [12,13], although socio-demographic factors play a certain part there, too [14].

The present study constitutes a fragment of research into lifestyles, values and pro-health attitudes [15], as well as motives for practicing amateur sumo.

It is important to find an answer to the question which motives are dominant and how they are influenced by the age, **training experience**, and **sporting level** of the wrestlers.

Training experience: number of years of practicing amateur sumo.

Sporting level: winning championship titles or point-scoring position in world competition, European competition, or national competition, which is a prerequisite for obtaining a sporting class under the current regulations of the Polish Sumo Association.

The following two hypotheses were adopted:

1. Wrestlers on a high sporting level are motivated to train sumo by the possibility of improving their physical fitness, achieving a state of well-being, enjoyment of the sport, and a lifestyle that sumo has to offer.
2. Wrestlers on a lower sporting level are motivated by the possibility of improving their health, losing body weight, and developing their physique.

MATERIAL AND METHODS

The study embraced the same 72 sumo wrestlers whose health-oriented attitudes had been presented in the previous survey [15]. Subjects were cadets (n=25) and juniors (n=18) competing in Poland's championships (in Svidvin and in Warsaw), and pre-seniors (n=11) and seniors (n=18) who entered for the Polish Sumo Cup

2009 in Gorzow Wielkopolski, a total of 46 males and 26 females, aged between 15 and 16 (cadets), 17 and 18 (juniors), 19–21 (pre-seniors), and 22 and older (seniors). Age differences were the largest among the seniors, 50% of whom were in the 22–23 bracket, the other half fell into the 26–33 band. 71.4% of the subjects were city residents. Cadets, juniors, and pre-seniors had secondary school education or lower (75% were students); 35% of seniors had university education. 60% of the subjects had jobs, 30% were still at school.

Half of the studied wrestlers were world champions (13.5%), European champions (14.9%), and Poland's champions (21.6%), i.e. athletes who have attained a high sporting level. The other half was made up of individuals on a lower sporting level. From the training experience standpoint, three distinct groups were identified: below 4 years (37.9%), between 4 and 10 years (40.9%), and above 10 years (21.2%). 23.9% of the subjects practiced sumo daily, 56.3% trained between 3 and 4 times a week, the remaining 19.7% between 1 and 2 times a week.

In this study the diagnostic survey method was applied with a questionnaire on health-oriented lifestyle, which was put through several verification stages during pilot tests [16]. In order to statistically process the results of the study, the trait frequency and χ^2 independence test were used, and, after application of the χ^2 statistics and ascertaining trait independence, the multiply correspondence analysis (or 'the MCA') was applied in order to show selected relations in a graphic and combined manner. Variables in all their categories were presented. Comparison of data from the drawing with those from the table containing coordinates of two dimensions, combined with the χ^2 independence test, allows reaching more general conclusions about the interrelations of all variables and their categories [17].

RESULTS

The most frequent choices were maintaining and developing physical fitness and maintaining and improving good health (Table 1). Enjoyment of practicing a sport and betterment of the psychophysical well-being were slightly more important to pre-seniors and seniors, but the difference was not substantial. Lifestyle was a motive often chosen by pre-seniors. Body weight loss and improvement of the physique were less important to seniors (the two motives were combined because sumo wrestlers who set out to lose weight also intended to improve their figure). Amateur sumo offers overweight and obese individuals ways to attain self-achievement, and entails a physically active, sport-oriented lifestyle. These were motives most often seen among pre-seniors. Amateur sumo as a pastime was slightly less appreciated

Table 1. Motives for practicing sumo depending on age category (in%).

Motives	Age categories				Total		Place
	Cadets	Juniors	Pre-seniors	Seniors	n	%	
Improvement and development of physical fitness	76.0	66.7	81.8	85.0	57	77.0	1
Maintaining and strengthening good health	72.0	77.8	81.8	60.0	53	71.6	2
Enjoyment	48.0	33.3	72.7	60.0	38	51.4	3
Improvement of psychophysical well-being	36.0	44.4	63.6	60.0	36	48.7	4
Lifestyle	44.0	38.9	81.8	40.0	35	47.3	5
Losing excessive body weight and figure improvement	48.0	33.3	45.5	15.0	25	33.8	6
Relaxation	28.0	11.1	27.3	25.0	17	22.3	7
Contacts with other people*	8.0	33.3	27.3	30.0	17	22.3	7
Self-achievement	8.0	22.2	36.4	30.0	16	21.6	9
Desire to become more attractive to the partner	8.0	5.6	18.2	15.0	8	10.8	10
Insufficient amount of physical exercise	4.0	0.0	0.0	25.0	6	8.1	11
Delaying the aging process	0.0	0.0	0.0	15.0	3	4.0	12
Fashion	4.0	0.0	0.0	5.0	2	2.7	13

* $p=0.0421$ for χ^2 test.

Table 2. Relationship between motives and training experience, training frequency, and sporting level in sumo wrestlers (independence test χ^2).

Motives	Training experience	Training frequency	Sporting level
Improvement and development of physical fitness	0.0246		0.0061
Losing excessive body weight and figure improvement	0.0046		0.0087
Lifestyle		0.0074	0.0096

by juniors. Opportunity to bond within the community was least important to cadets ($p=0.0421$ for χ^2 test). Desire to heighten one's appeal to a partner and insufficient physical activity were of little significance, much like delaying the aging process and fashion, all of which were selected by very few subjects.

Improvement of physical fitness was the primary motive to wrestlers with the longest training experience ($p=0.0246$ for χ^2 test), and on the highest sporting level ($p=0.0061$ for χ^2 test) – it was indicated by all athletes who practiced sumo over 10 years (100%), and almost 90% of the champion title holders (Table 2).

Those who practiced less than 4 years were mainly focused on body weight loss and figure improvement (64%) ($p=0.0046$ for χ^2 test), which was also important to wrestlers on the highest sporting level (48%) ($p=0.0087$ for χ^2 test).

Subjects who practiced daily or 3–4 times a week treated sumo as their lifestyle ($p=0.0074$ for χ^2 test) (64.7% and 55%, respectively). 61.5% of athletes on the high-

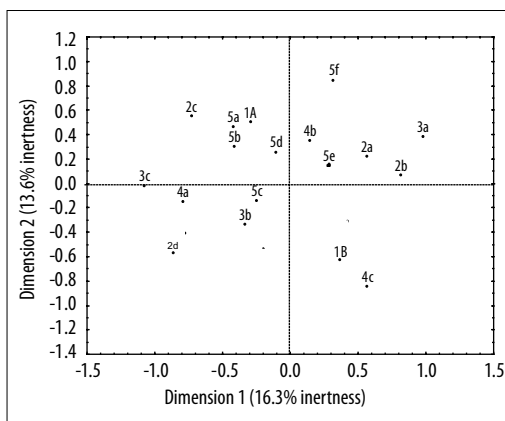


Figure 1. Relationship between motives for practicing sumo, sporting level, training experience, training frequency, and age category.

est sporting level claimed sumo was their lifestyle, too ($p=0.0096$ for χ^2 test).

It was found that (Figure 1, Table 3):

- most cadets (2a) and juniors (2b) practiced sumo for less than 4 years (3a), 1–2 times a week (4c);

Age category: an age bracket based on dates of birth of individuals involved in sport competition.

Table 3. Relationship between motives for practicing sumo, sporting level, training experience, training frequency, and age category.

Arrangement of coordinates of columns and lines based on (n =68)							
Dimension 1				Dimension 2			
Symbol	Explanation	Dimension 1	Dimension 2	Symbol	Explanation	Dimension 1	Dimension 2
3c	Training 10 years and more	-1.077	-0.015	4c	Training 1–2 times a week	0.567	-0.845
2d	Seniors	-0.864	-0.569	1b	Wrestlers on lower sporting level	0.365	-0.624
4a	Training daily	-0.793	-0.144	2d	Seniors	-0.864	-0.569
2c	Pre-seniors	-0.729	0.550	3b	Training between 4 and 10 years	-0.332	-0.337
5a	Indicated motive: lifestyle	-0.418	0.469	4a	Training daily	-0.793	-0.144
5b	Indicated motive: well-being	-0.419	0.300	5c	Indicated motive: enjoyment	-0.248	-0.139
3b	Training between 4 and 10 years	-0.332	-0.337	3c	Training 10 years and more	-1.077	-0.015
1a	Wrestlers on a high sporting level	-0.296	0.506	2b	Juniors	0.815	0.067
5c	Indicated motive: enjoyment	-0.248	-0.139	5e	Indicated motive: health	0.285	0.148
5d	Indicated motive: physical fitness	-0.108	0.256	2a	Cadets	0.561	0.221
4b	Training 3–4 times a week	0.139	0.350	5d	Indicated motive: physical fitness	-0.108	0.256
5e	Indicated motive: health	0.285	0.148	5b	Indicated motive: well-being	-0.410	0.300
5f	Indicated motive: losing excessive weight	0.315	0.848	4b	Training 3–4 times a week	0.139	0.350
1b	Wrestlers on lower sporting level	0.365	-0.624	3a	Training below 4 years	0.975	0.386
2a	Cadets	0.561	0.221	5a	Indicated motive: lifestyle	-0.418	0.469
4c	Training 1–2 times a week	0.567	-0.845	1a	Wrestlers on a high sporting level	-0.296	0.506
G2	Juniors	0.815	0.067	2c	Pre-seniors	-0.729	0.550
3a	Training below 4 years	0.975	0.386	5f	Indicated motive: losing excessive weight	0.315	0.848

- wrestlers on a lower sporting level (1B) practicing 3–4 times a week (4b) found body weight loss/figure improvement (6f) and improvement and development of good health (5e) to be the primary motives;
- wrestlers on a high sporting level (1A), practicing between 4 and 10 years (3b), found physical fitness improvement (5d), betterment of well-being (5b), lifestyle (5a), and enjoyment of exercising (5c) to be their main motives;
- most pre-seniors (2c) and seniors (2d) practiced daily (4a) and had over 10 years of training experience (3c);
- seniors (2d) practicing daily (4a) for between 4 and 10 years (3b) often cited enjoyment (5c);
- cadets (2a), juniors (2b), and pre-seniors (2c) practicing less than 4 years (3a) were motivated by health improvement (5e), physical fitness improvement (5d), well-being (5d), and lifestyle (5a);
- distributed peripherally were wrestlers on lower sporting levels (1B), who practiced sumo 1–2 times a week (4c).

DISCUSSION

Practicing a sport is inextricably linked with an athlete attempting to reach a high level of sporting excellence. However, the best results are for a few to attain, with all others training hard but usually having to content themselves with a hope to succeed, or persevering for another reason. Representative empirical research findings show that the factors inspiring people to take up martial arts and combat sports are: development of

physical fitness (40.4%), special physical fitness (obtaining combat skills) (35.7%), and fascination with Eastern philosophy and culture (14.3%). In the common opinion of non-training people, practicing martial arts or combat sports is mainly associated with the desire to gain combat skills (53.8%) [6].

Taking into account the variability of motives, this research focused on participation in sumo training programs. Apart from the dominant fitness- and health-related motives, all other ones proved to be of quite different importance to the subjects depending on their age, training experience, training load, and sporting level. Improvement and further development of physical fitness and improvement and further development of good health were certainly two top motives [18,19].

Connected with them was betterment of well-being. The notion of 'psychophysical well-being' is synonymous with 'health' in the popular understanding of the word. These motives were separated because health is generally defined in medical terms (often as negative health, if no health is present), while well-being is often associated with positive health (the possibility of creating it in the physical, mental, and social sense) [20]. Seniors cited medical-related motives less frequently, unlike the younger wrestlers, but the differences were negligible. This confirmed an observation that practicing amateur sports is driven by a desire to improve one's health [21].

These results do not confirm all of the previous research findings. Athletes who have begun combat sport training did not value health betterment very highly (barely 3 out of 60 subjects chose health) [22]. A rather high position of health [23] also in my own research, probably results from sumo being quite a unique sport and the subjects' health awareness inculcated in them by their coaches.

The hedonistic and relaxing aspects of sumo indicated by the subjects in the younger age categories were additionally reinforced among pre-seniors and seniors, i.e. athletes with the longest training experience and highest training frequency. Enjoyment of systematic sumo practice is one of the motives which, in the course of the need being gradually satisfied, does not decline but intensifies (it can fulfill, for example, the need of increased physical exercise, psychophysical activity, changing the environment, recreation, relaxation, play, pleasant ex-

periences, and self-achievement) [24]. A high place of this motive is typical of amateur athletes [21] who take up recreational physical activity [4,16].

Lifestyle as a motive for practicing sumo is connected with the awareness of one's own body and the realization that sumo offers an opportunity of not only tangible betterment of one's fitness, health, and psychophysical well-being, but also losing body weight and developing the figure [9,19]. Adopting sumo as a lifestyle allows individuals with large body weight to practice a sport and attain much needed self-achievement, a prerequisite of which is a clear vision of one's self [4,25,26]. Developing a habit of active lifestyle in obese and overweight people can be a challenging task, often bordering on impossible [7]. This is because in order to recognize one's lifestyle as sports-oriented, one must spend years in systematic training [16]. A lifestyle in which sumo is a constituent element was therefore cited by wrestlers with the longest training experience and on the highest sporting level. Man reaches the highest level of involvement when practicing a sport becomes a value in itself.

CONCLUSIONS

1. Motives for participating in sumo trainings change with the age, training experience, frequency of training, and the sporting level of wrestlers. Dominant, however, were the following two: possibility of improving and developing physical fitness and health.
2. Wrestlers who have attained a highest level of sporting excellence chose physical fitness, enjoyment, and well-being more often than other motives.
3. Lifestyle as a motive for practicing sumo was more important to wrestlers on a high sporting level and those who practiced it frequently.
4. Subjects with over 10 years of training experience appreciated improved physical fitness; those who had less than 4 years of training cited body weight loss and figure improvement.
5. Proper recognition of motives is of particular significance in the process of training individualization. Identification of dominant motives can help trigger desirable changes in the behavior of an athlete and the orientation of his sporting efforts.

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