

Personality traits and gender effect on athletes and non-athletes self-handicapping strategies over time

Nikola Prpa¹ ✉

© The Author(s) 2017. This article is published with open access.

Abstract

The aim of this research was to examine differences in the use of self-handicapping strategies in athletes and non-athletes, changes in self-handicapping strategies that can occur with the approach of an important event, and the relationships between these strategies and personality traits, gender, and some external criteria such as performance. The sample included 183 subjects (mean age 21.16 years) consisting of 102 non-athletes and 81 athletes. Three questionnaires were used: VP+2, for measuring personality dimensions of seven-factor model, SH-17, for the assessment of changes in the use of self-handicapping strategies through time and a general biographical questionnaire. A general linear model for repeated measures was used for data analysis. Significant correlation was found between self-handicapping strategies and the number of medals and awards won at international and domestic competitions. The results also showed a positive correlation between self-handicapping strategies and dimensions of Neuroticism and Extraversion and negative with Conscientiousness. Also, a statistically significant difference in the use of self-handicapping strategies was found between athletes and non-athletes, showing that non-athletes express more self-handicapping behaviour. The results indicate that the frequency of self-handicapping behaviour does not change through ti-

me. The effect of gender on self-handicapping is not significant, but there was a statistically significant interaction effect of gender and population on self-handicapping behaviour. It indicates that male non-athletes are more prone to self-handicapping 10 days before an important competition (exam or public speaking for general population, or “game of the season” for sporting population) compared to male athletes. These results, apart from the gender differences, are consistent with the results of previous studies. Limitations of this research and possible directions for future studies were also considered.

Keywords self-handicapping strategy • general linear model • seven-factor personality model •

Introduction

An athlete's identity is largely based on their sporting achievements. Professional athletes also regularly experience failure, often under the public eye. Professional athletes are subjected to constant public scrutiny and pressured to achieve success, which emphasizes the importance of behavioral strategies employed to maintain self-image and self-esteem. One of such strategies is self-handicapping (Berglas & Jones, 1978), which has been thoroughly examined both in athletes and non-athletes (e.g., Prapavessis, Grove, & Eklund, 2004; Urdan & Midgley, 2001). However, a modest number of studies have examined the differences in self-handicapping tendencies between athletes and non-athletes, or the effect of personality traits and gender on self-handicapping in the context of an approaching failure.

✉ nikolaprpa@yahoo.com

¹ University of Thessaly, Greece

Self-handicapping is a cognitive strategy that represents any action or choice that will protect one's self-esteem by exempting a person from personal responsibility for failure (Kolditz & Arkin, 1982). Thus, behaviors that may be considered as forms of self-handicapping are numerous. Such behaviors include alcohol or drug abuse (Arkin & Baumgardner, 1985), hypochondriacal complaints (Smith, Snyder, & Perkins, 1983), obesity (Baumeister, Kahn, & Tice, 2001), ill will, lack of sleep, inventing excuses (Higgins, Snyder, & Berglas, 1990), lack of effort (Snyder et al., 1981 by Nicin, 2010), too much effort when it can reduce the likelihood of success (Smith, Hardy, & Arkin, 2009), procrastination (Ferrari & Tice, 2000), etc. Although all these behaviors form two main categories of self-handicapping named behavioral and claimed self-handicapping (Leary & Sheppard, 1986), extant literature usually focused on single self-handicapping score that comprised indicators of both types.

The tendency to self-handicap occurs more frequently in situations where people estimate that their performance will be evaluated by others (Arkin & Baumgardner, 1985), hence sport setting would be a good place to examine self-handicapping. Indeed, one of the first experiments showed that swimmers who were more prone to self-handicapping actually swam better the next race after being misinformed about their previous results, because they were able to "explain" poor swimming in the first race (Seligman et al., 1990). Reduction of anxiety, self-esteem protection, maintenance of positive affect despite the experience of failure, and increase in intrinsic motivation, are among the positive effects of self-handicapping (Deppe & Harackiewicz, 1996; Drexler, Ahens & Haaga, 1995 by Bailis, 2001; Rhodewalt et al., 1991 by Bailis, 2001; Tice, 1991). What is more, results of one comprehensive "cost/benefit" analysis in college sports concluded that the use of self-handicapping strategies has more positive than negative effects (Bailis, 2001). For instance, even though self-handicapping strategies were associated with certain negative phenomena such as lack of exercise and less adequate nutrition of athletes, more pronounced tendency towards self-handicapping strategies was associated with better sports results. In addition, athletes who were more prone to self-handicapping strategies later reported better subjective experience of optimal performance regarding their sporting activities, both for important and less important events.

Although statistically significant, these results should be interpreted with caution because of the relatively modest sample size (29 participants), which included athletes from only two individual sports. Additionally, according to the author, it is not clear how university athletes perceive a failure in the competition, since sport performance does not affect their status as students in any case (Bailis, 2001). Speaking of which, not only that benefits of self-handicapping are often only short-term, but results of several other studies suggest that there is a negative correlation between behavioral strategies and sports performance (Hirt, Deppe, & Gordon, 1991; Leary & Shepperd, 1986; Coudeville, Martin Ginis, & Famose, 2008).

A possible explanation for these inconsistent results lies in distinguishing the effects of behavioral and claimed self-handicapping strategies on sports success. Behavioral strategies are "useful" for athletes because they are highly visible and leave desirable and strong impression on the viewers, but their drawback is that they can actually lead to failure and prevent the athlete from achieving goals. Therefore, it seems plausible they are negatively associated with sports success (Hirt, Deppe, & Gordon, 1991; Leary & Shepperd, 1986). On the other hand, claimed strategies may have beneficial effect on the performance by reducing the pressure for perfect performance (Ryska, Yin, & Cooley, 1998).

One study on self-efficacy and self-esteem as predictors of self-handicapping in basketball, suggests that claimed self-handicapping strategies are negatively correlated with self-esteem, while behavioral strategies are negatively correlated with self-efficacy (Coudeville, Martin Guinness, & Famose, 2008). The results were in line with expectations that athletes with lesser self-esteem cannot risk potential failure due to the use of behavioral strategies, but they still cope with possible failure by using claimed strategies (Martin & Brawley, 2002). Related to this, athletes with less pronounced self-efficacy can allow themselves to use behavioral strategies because they are "confident" that failure is surely coming (Pyszczynsky & Greenberg, 1983). However, these results should be considered with caution due to the sample size (31 participants).

The usage of self-handicapping strategies over time was the focus of one study in swimming (Rhodewalt, Saltzman, & Wittmer, 1984). The main result suggests that throughout a competitive season, athletes who are less prone to self-handicapping tend

to gradually increase training and preparation before important competition, while the athletes with a high propensity to self-handicapping continue to train with the same intensity (type of behavioral self-handicapping). Additionally, these two groups did not differ when it comes to reports about physiological problems (type of claimed self-handicapping). There are no other studies that investigated the usage of self-handicapping strategies over time.

Self-Handicapping and gender differences

In general, men tend to use self-handicapping strategies more than women (e.g., Colovic, Smederevac, & Mitrovic, 2009; McCrea, Hirt, Hendrix, Milner, & Steele, 2008; McCrea, Hirt, & Milner, 2008). More specifically, some results suggest that males are more prone to behavioral strategies (alcohol abuse, procrastination etc.), while gender differences in claimed self-handicapping were not found (Arkin & Baumgartner, 1985; McCrea et al., 2008; Leary & Shepperd, 1986).

Self-Handicapping and personality traits

Previously conducted studies suggest a significant relationship of self-handicapping strategies, procrastination and the five-factor model personality traits, in the way that there is a negative correlation between self-estimated procrastination and Conscientiousness, and positive correlation with Neuroticism (Johnson & Bloom, 1995; Schouwenburg & Lay, 1995). One study confirmed such results, and concluded that the construct of self-handicapping is the mediator of a negative relationship between Conscientiousness and Neuroticism from the revised NEO-PI-R personality inventory (Ross, Canada, & Rausch, 2002).

Similar results were obtained using other personality inventories, as well as in cross-cultural studies. Pulford et al. (2005) confirmed the positive correlation between Neuroticism and self-handicapping, and the negative correlation between self-handicapping and Conscientiousness with a sample consisting of British and Libyan students. In one Croatian study, Neuroticism from The Big Five model proved to be the most important predictor of self-handicapping usage, and Introversion is extracted as the second most significant predictor (Burusic, 2004 by Nicin, 2010). Next, Serbian authors found that Neuroticism (ZKPQ) is a strong predictor of both self-handicapping strategies in different settings. Impulsive sensation seeking (ZKPQ) proved to be a significant predictor of self-handicapping in

interpersonal relationships and in terms of achievement, whereas low score on Activity (ZKPQ) significantly predicted self-handicapping in the field of accomplishments (Colovic, Smederevac, & Mitrovic, 2009).

Some studies also related self-handicapping to many other personality constructs that can be somewhat part of the central traits. For example, there is a positive correlation between expectations of failure (which are commonly attributed to Neuroticism) and self-handicapping (Nurmi, 1993 by Ross, Canada, & Rausch, 2002; Weary & Williams, 1990), and positive correlation between self-handicapping and negative affect (Zuckerman, Kieffer, & Knee, 1998). Also, some authors suggest that self-handicapping can be viewed as personality trait, such as Perfectionism. Perfectionists pay great attention to every detail as they prepare for the task and the inefficiency in the completion of the task they interpret as their need to achieve perfect performance (Hobden & Pliner, 1995).

There are no published studies that have sought to compare the use of self-handicapping strategies in athletes and non-athletes. The contradictory findings of earlier studies on the benefits of self-handicapping in professional sport point to the importance of this issue (e.g., Bailis, 2001; Coudeville, Martin Ginis, & Famose, 2008). Another important aspect of self-handicapping to be explored is the change in self-handicapping use over time, as important competition approaches. On top of that, there is a room for clarification and additional research on relationships between personality traits, athletic success, gender, and self-handicapping strategies. Therefore, the main aim of this research is to examine the differences in self-handicapping strategies between athletes and non-athletes within the context of an approaching important event. The relationship between self-handicapping and personality traits, gender, and sport success will also be examined.

Method

The sample included 183 subjects (44.26% professional athletes), of which 102 participants were females (55.7%) and 81 (44.3%) males. Specifically, 62 participants were female non-athletes, 40 male non-athletes, 40 female athletes and 41 male athletes. Sample members of general population comprised first-year students, and the sports population consisted of athletes who compete at the highest or

second highest possible ranking competitions of the Republic of Serbia. Athletes practicing individual sports (41 athletes) and team sports (40 athletes) are equally represented in the sample. Sports included in the study were shooting, volleyball, soccer, swimming, basketball, athletics and judo.

Ages ranged from 15 to 49 years ($M = 21.16$, $SD = 4.42$). The mean age for non-athletes was 20.69 and for athletes 21.75 years. Male athletes were older than female athletes (22.83 to 20.65 years), same as in the general population (21.97 to 19.85).

Measures

Big Five Plus Two questionnaire - short version (BF+2; Colovic, Smederevac, & Mitrovic, 2014). The BF+2 is a self-report measure of the seven major dimensions of personality and contains a total of 70 items (10 items for each dimension) rated on a 5-point scale from "strongly disagree" to "strongly agree". The psychometric properties of the scales proved to be very good. Sampling adequacy was very good or excellent (normalized Kaiser-Meyer-Olkin's coefficient ranged from 0.83 to 0.91), as well as reliability (Cronbach's Alpha ranged from .78 to .91).

General biographical information questionnaire (Prpa, 2013). The questionnaire contains several general questions about the participant: gender, age, sport participated in and for how long (if applicable), and two questions on the number of medals and awards in national and international competitions.

Self-handicapping questionnaire (SH-17; Prpa, Smederevac & Colovic, 2013). The idea and the need for development of this questionnaire has come on the basis of criticism of original Self-Handicapping Scale (Jones & Rhodewalt, 1982), in which some authors claim that the existing scale is not applicable to the assessment of self-handicapping in areas other than academic achievement (Martin & Brawley, 1999). Besides, our aim was to examine the changes in the use of self-handicapping strategies with potential failure approaching. The questionnaire contains 17 items, describing behaviors which were shown to be self-handicapping strategies in both athletes and non-athletes (Finez & Sherman, 2012; Coudeville, Gernigon, & Martin Ginis, 2011; Coudeville, Martin Ginis, & Famose 2008; Kuczka & Treasure, 2005, Martin & Brawley, 2002). The first nine items and the last item describe behavioral strategies (e.g., "Sometimes I skip practices ahead of important competition"), while the remaining six items measure claimed strategies (e.g., "Sometimes I feel sick or exhausted in front of important competition"). The

response format is a five point Likert-type scale. The use of self-handicapping strategies is assessed at three stages: 10 days before an important event, 1 day before and a few hours before an important event. Therefore, the participants "retrospectively" assessed the frequency of these behaviors ten days before an important event, the day before an important event and a few hours before an important event. Additionally, the questionnaire contains three questions about the experience of success and failure with ten point Likert-type scales, but those items were not used in this study. The questionnaire was created in two forms with instructions and questions adjusted for athletes or students (a.k.a. members of general population). The main difference is in the description of an important event, which is a "game of the season" for the athletes, and an important exam at the university or public performance for non-athletes. Internal consistency of the scales was satisfactory (Cronbach's Alphas ranged from 0.75 to 0.76).

The survey was conducted during March and April 2013. in Novi Sad, Serbia. Questionnaires were administered anonymously to groups of participants. Participants were not tested before an important competition. It took approximately 30 minutes to set instructions and complete the questionnaires.

A General Linear Model for Repeated Measures was applied, with grouping variables named Population (with the categories: individual sport, team sport or non-athlete) and Gender (Male/Female). Continuous predictors (covariates) were scores on seven personality traits (summed scores of respondents' answers to items of VP+2 questionnaire), as well as two predictors of sport success: the number of medals in national and international competitions. Dependent variables were the three dependent measures of self-assessment of self-handicapping throughout time (summed scores of responses to the items related to the 10 days before, 1 day before and a few hours before competition). Given that the instruction was to evaluate the use of self-handicapping strategies in three chronologically arranged times, it is possible to say that the answers to these three variables represent three levels of classic repeated measurements. All data processing was performed in the statistical software SPSS and Statistica for Windows.

Results

In order to examine relations between self-handicapping strategies, personality traits, gender, and sport success, a general linear model for repeated measures was applied. The results show that the number of international awards/medals had a significant multivariate effect on self-handicapping ($F(1, 826)=5.68, p=0.02$; Wilks' $\Lambda=0.983$), while the multivariate effect of the number of medals in national competitions was not significant. Three personality dimensions had significant multivariate effects: Neuroticism ($F(1, 4178)=28.75, p<0.001$; Wilks' $\Lambda=0.982$), Conscientiousness ($F(1, 867)=5.96, p=0.02$; Wilks' $\Lambda=0.984$) and Extraversion ($F(1, 828)=5.69, p=0.02$; Wilks' $\Lambda=0.999$). Effect of belonging to the sporting or non-sporting population in relation to self-handicapping strategies over time is significant also ($F(1, 1503)=10.34, p=0.002$; Wilks' $\Lambda=0.968$). Gender differences were not statistically significant ($F(1, 17)=0.11, p=0.74$; Wilks' $\Lambda=0.980$).

Additionally, isolated effect of the measurement (change of self-handicapping throughout time) was not statistically significant, too ($F(2, 6)=0.16, p=0.86$; Wilks' $\Lambda=0.998$). In other words, there was no statistically significant difference in the propensity to self-handicapping in the situation 10 days before the competition, one day before and a few hours before an important competition.

Multivariate interaction effect of gender and population (sporting/non-sporting) was not statistically significant, but the examination of univariate effects showed statistically significant joint effect of gender and population at 10 days before an important competition. While male non-athletes are more prone to self-handicapping than females, female athletes tend to be more prone to self-handicapping than males. The effect of this interaction is clearly depicted in Figure 1.

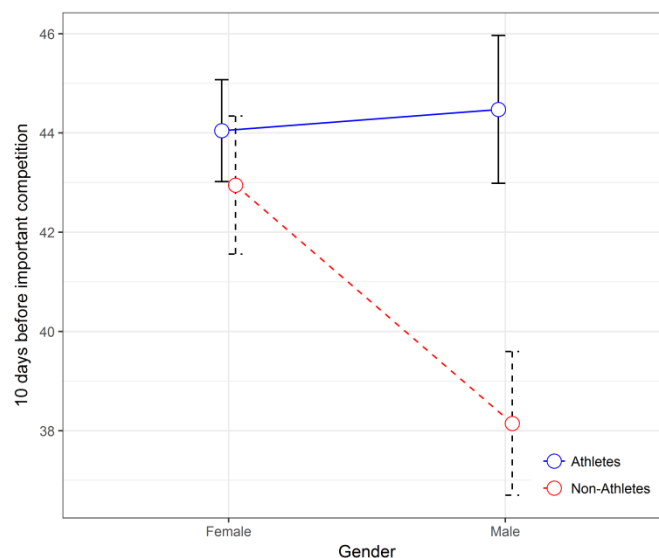


Figure1. Interaction Effect of Gender and Population in the usage of SH 10 days before competition.

Looking at the obtained univariate effects, another statistically significant effect is that of medals/awards won in national competitions. This effect was only

statistically significant at the level of the first measurement, 10 days before an important event.

Table 1. Multiple correlation coefficients

Dependent variables	Multiple R	Multiple R ²	Adjusted R ²	F	p
10 days before	0.595	0.354	0.296	6.115	0.000
1 day before	0.608	0.370	0.314	6.559	0.000
Few hours before	0.621	0.385	0.330	7.005	0.000

Table 1 shows correlations between the criteria (self-handicapping measured in 3 occasions) and predictor set, which included 7 personality dimensions, number of awards in international/domestic competition and gender. Multiple correlation coefficients are statistically significant for all 3 levels of the dependent variable ($p < 0.001$).

The following tables show the estimates of partial contributions of predictors (VP+2 scales, objective measures of success, the independent variables (gender and population), the interaction between gender and population) at the levels of the repeated measurements. Only significant effects are shown. It is evident that as time to an important competition goes by, number of predictors is getting smaller.

Table 2. Parameter estimates for 10 days before competition

Variables	β	t	p
Number of medals in national competitions	0.188	2.000	0.047
Number of medals in international competitions	-0.246	-2.623	0.010
Neuroticism	0.353	3.928	0.000
Conscientiousness	-0.226	-2.613	0.010
Population (level: non-athletes)	0.171	2.049	0.042
Gender * Population	-0.155	-2.126	0.035

Table 3. Parameter estimates for 1 day before

Variables	β	t	p
Number of international awards	-0.209	-2.260	0.025
Extraversion	0.222	2.251	0.026
Neuroticism	0.436	4.906	0.000
Conscientiousness	-0.200	-2.345	0.020
Population (level: non-athletes)	0.225	2.736	0.007

Table 4. Parameter estimates for few hours before an important event

Variables	β	t	p
Extraversion	0.219	2.245	0.026
Neuroticism	0.478	5.448	0.000
Population (level: non-athletes)	0.307	3.781	0.000

Discussion

The aim of this research was to examine differences in the use of self-handicapping strategies in athletes and non-athletes, changes in self-handicapping

strategies that can occur with the approach of an important event, as well as the relationships between these strategies and personality traits, gender, and some external criteria such as performance. The obtained results show that the frequency of self-handicapping behaviour does not change through time. Next, the results indicate that there is a

statistically significant relationship between personality traits Neuroticism, Conscientiousness and Extraversion, and the self-handicapping strategies. Also, there is a significant relationship between the use of self-handicapping strategies and athletic success, whether sporting performance is operationalized by the number of medals / prizes won in domestic competitions or in international competitions. Finally, a statistically significant multivariate effect of population affiliation (sports / general) on self-handicapping was obtained, i.e., there is significant difference in the use of self-handicapping strategies between professional athletes and non-athletes. Gender differences were not statistically significant.

The results suggest that the proneness to self-handicapping does not change as the important event approaches. This result points to the conclusion that the circumstances do not play a crucial role in the employment of self-handicapping strategies. Therefore, this tendency is probably a stable construct. However, although the overall proneness to self-handicapping does not change, it appears that a number of self-handicapping predictors tends to decrease over time. Ten days before the competition the use of self-handicapping strategies is affected by 6 statistically significant predictors (medals in national/international competitions, Neuroticism, Conscientiousness, belonging to the population and the effect of the interaction of Gender and Population), at 1 day prior to the competition that number drops to 5, while at the level of a few hours before an important competition the number of predictors is 3. Therefore, although self-handicapping appears to be unaffected by the proximity of an important event, several predictors obviously influence the tendency to employ self-handicapping strategies. This is a novel finding that requests additional empirical support, since there are no previous studies conducted with this research question in scope.

Neuroticism impacts the use of self-handicapping strategies in all three stages of measurement. This result is consistent with previous studies in the general population (e.g., Ross, Canada, & Rausch, 2002; Colovic, Smederevac & Mitrovic, 2009). Influence of Neuroticism on the use of self-handicapping can be observed even in a small period of time before the competition. Persons who score high on Neuroticism tend to perceive greater number of stimuli as threatening, so it probably affects the perception of information related to the contest. High

Neuroticism implies proneness towards negative emotions, which may influence the expectation of failure in the competition, and therefore may trigger the need for protection from the negative feedback by self-handicapping.

Extraversion and Conscientiousness are significant predictors on the two of 3 different levels of measurement, and this result might be explained in the context of “the structured situation thesis” and with knowledge of these dimensions. Extraversion becomes a significant predictor on the level 1 day before and has a stable effect until the start of the competition. Conscientiousness is a good predictor of the usage of self-handicapping over a period of 10 days before up to 1 day before an important competition. Given that a sports competition is a structured situation with clearly stated rules which all competitors have to comply with, it is likely that Conscientiousness will not have a significant effect on such a uniform pattern of behavior. However, the situation which occurs few hours before the competition may provoke extroverted persons to seek stimulation in other people, chat with them or make friendships, which actually is one of the self-handicapping strategies. Extroverted participants make active efforts to connect to other people and do not react to loneliness well, which may further affect the appearance of self-handicapping behavior in situations just before the competition. Consequently, Extroverts can engage themselves in sensation-seeking as a form of compensation for potential failure in the competition, while the participants with low scores on Conscientiousness may provide the “alibi” with irresponsibility and unreliable behaviors, but only at the level of few days before an important competition. The negative correlation between Conscientiousness and Self-handicapping is in accordance with previous findings (e.g., Pulford et al., 2005).

An important finding of this study is that on the all stages of measurement, non-athletes are more prone to use self-handicapping strategies than the athletes. There are no studies that clearly speak in favor of either group, but the expectation based on previous studies was that athletes would be more prone to self-handicapping. A possible explanation of such a result is that the level of professionalism of today's athletes excludes self-handicapping behavior. Besides, athletes are more often exposed to situations of competition in relation to the general population, so it is very likely that athletes are accustomed to these

situations and do not tend to see them as threatening to self-esteem.

There's a somewhat contradictory result when it comes to success. Participants with a larger number of medals in domestic competitions are more prone to the use of self-handicapping 10 days before an important competition in relation to participants with less success in that competitions, while the relationship is reversed for success in international competitions. This result may be related to the degree of professionalism of contestants. National competitions, at least in Serbia, usually gather young and inexperienced athletes, contrary to international competitions. Similar results were found in several studies which were conducted on samples of student-athletes who competed on a national level, and where positive correlations between success and self-handicapping were found (e.g., Bailis, 2001). It is likely that participation in international competitions requires a higher degree of professionalism, and therefore less opportunity and / or need to use self-handicapping strategies. Such a conclusion is supported by the stable negative effect of a number of medals in international competitions over time on the use of self-handicapping strategies. However, the effect of measures of success disappears at the level of a few hours before competition, most likely because there is clear effect of situation proximity where previous successes do not play an important role in the preparation for the competition.

Gender differences in the use of self-handicapping strategies are not statistically significant. Gender differences didn't prove to be statistically significant in the sub-samples of athletes and non-athletes as well. This result is not fully consistent with previous studies. Generally, findings in the field of sports psychology suggest that professional sportsmen and sportswomen are more homogeneous with regard to many psychological variables than it is the case in the general population. Among others, Williams confirmed that for assertiveness, dominance, independence, aggressiveness and aloofness (Williams, 1980 by Cox, Peranovic, & Skevin, 2005). With that in mind, almost half of our sample is made of athletes, so it is appropriate to assume that this is a potential cause of failure to obtain a statistically significant difference. Here, we should point out a finding that there is a significant interaction effect of gender and population. Male non-athletes achieve higher scores on a scale of self-handicapping at all three levels of measurement than female non-athletes, while in the sports population the case is reversed:

female athletes got higher scores than male athletes. Although the differences are stable (the same direction in all three measurements), statistically significant difference is only in male athletes and non-athletes at the level of 10 days prior to the competition, where, as already mentioned, male non-athletes used more self-handicapping strategies than male athletes.

The most important limitation of this study is that dependent measures were not derived from real repeated measurements. A study design is not a typical design with repeated measurements, but it certainly implied dependent samples, because changes in self-handicapping were measured within subjects. It would be convenient to repeat the study using classical repeated measures design. Although the number of athletes in this study was well above the number shown in previous studies (even the professionalism of athletes, since majority of previous studies were conducted on collegiate level or youth sport athletes), a sample of 180 respondents was relatively modest for the statistical analysis used in this study, so all the results, even statistically significant should be taken with prudence.

According to Rhodewalt et al. (1984) self-handicapping strategies, particularly behavioral ones, should be more evident in individual sports compared to team sports, because teammates will influence one another to stop it. They also state that the players themselves will stop, due to not wanting to leave their teammates "in a lurch". It would be appropriate to examine this claim in a future study, because individual sport players are also competing for a club and have a contractual and moral obligations to the club. Hence, the directions for future studies would be to distinguish between the athletes who train individually and team sports, as well as to distinguish between behavioral and claimed strategies.

If we had a clear picture of what the usage of self-handicapping looks like with the approach of potential failure, we could predict the behavior of individuals in a large period of time when preparing for the competition, which would certainly have an impact on the outcome of the competition. These results may be important for sports psychologists working on reducing the use of self-handicapping strategies.

References

- Arkin, R.M., & Baumgardner, A.H. (1985). Self-handicapping. In J.H. Harvey & Weary (Eds.), *Attribution: Basic issues and applications* (pp. 169-202). Orlando, FL: Academic Press.
- Bailis, D. S. (2001). Benefits of self-handicapping in sport: A field study of university athletes. *Canadian Journal of Behavioural Science/Revue canadienne des sciences du comportement*, 33, 213–223. doi:10.1037/h0087143
- Baumeister, R. F., Kahn, J., & Tice, D. M. (1990). Obesity as a self-handicapping strategy: Personality, selective attribution of problems, and weight loss. *The Journal of social psychology*, 130, 121–123.
- Berglas, S., & Jones, E. E. (1978). Drug choice as a self-handicapping strategy in response to noncontingent success. *Journal of Personality and Social Psychology*, 36, 405–417. doi:10.1037/0022-3514.36.4.405
- Čolović, P., Smederevac, S., & Mitrović, D. (2009). Osobine ličnosti, starost i pol kao prediktori sklonosti ka samohendikepiranju. *Psihologija*, 42, 549-566.
- Čolović, P., Smederevac, S., & Mitrović, D. (2014). Velikih pet plus dva: validacija skraćene verzije. *Primenjena psihologija*, 7(3-1), 227-254.
- Cox, R., Peranović, M., & Škevin, V. (2005). *Psihologija sporta: Sports Psychology: concepti i primjene*.
- Coudevylle, G. R., Gernigon, C., & Martin Ginis, K. A. (2011). Self-esteem, self-confidence, anxiety and claimed self-handicapping: A mediational analysis. *Psychology of Sport and Exercise*, 12, 670–675.
- Coudevylle, G. R., Ginis, K. M., & Famose, J.-P. (2008). Determinants of Self-Handicapping Strategies in Sport and Their Effects on Athletic Performance. *Social Behavior & Personality: An International Journal*, 36, 391–398.
- Deppe, R. K., & Harackiewicz, J. M. (1996). Self-handicapping and intrinsic motivation: Buffering intrinsic motivation from the threat of failure. *Journal of Personality and Social Psychology*, 70, 868.
- Ferrari, J. R., & Tice, D. M. (2000). Procrastination as a self-handicap for men and women: A task-avoidance strategy in a laboratory setting. *Journal of Research in personality*, 34(1), 73-83.
- Finez, L., & Sherman, D. K. (2012). Train in vain: The role of the self in claimed self-handicapping strategies. *Journal of Sport and Exercise Psychology*, 34(5), 600-620.
- Higgins, R. L., Snyder, C. R., & Berglas, S. (1990). *Self-Handicapping: The Paradox That Isn't*. Plenum, New York.
- Hirt, E. R., Deppe, R.K., & Gordon, L.J. (1991). Self-Reported Versus Behavioral Self-Handicapping: Empirical Evidence for a Theoretical Distinction. *Journal of Personality & Social Psychology*, 61, 981.
- Hobden, K., & Pliner, P. (1995). Self-handicapping and dimensions of perfectionism: Self-presentation vs self-protection. *Journal of Research in Personality*, 29(4), 461-474.
- Johnson, J. L., & Bloom, A. M. (1995). An analysis of the contribution of the five factors of personality to variance in academic procrastination. *Personality and Individual Differences*, 18(1), 127-133.
- Jones, E. E., & Rhodewalt, F. (1982). *The Self-Handicapping Scale*. Princeton: Department of Psychology, Princeton University.
- Kolditz, T. A., & Arkin, R. M. (1982). An impression management interpretation of the self-handicapping strategy. *Journal of Personality and Social Psychology*, 43, 492–502. doi:10.1037/0022-3514.43.3.492
- Kuczka, K. K., & Treasure, D. C. (2005). Self-handicapping in competitive sport: Influence of the motivational climate, self-efficacy, and perceived importance. *Psychology of Sport and Exercise*, 6, 539–550.
- Leary, M. R., & Shepperd, J. A. (1986). Behavioral self-handicaps versus self-reported handicaps: A conceptual note. *Journal of Personality and Social Psychology*, 51, 1265–1268. doi:10.1037/0022-3514.51.6.1265
- Martin, K. A., & Brawley, L. R. (1999). Is the Self-Handicapping Scale reliable in non-academic achievement domains? *Personality and Individual Differences*, 27, 901–911. doi:10.1016/S0191-8869(99)00039-2
- Martin, K. A., & Brawley, L. R. (2002). Self-handicapping in physical achievement settings: The contributions of self-esteem and self-efficacy. *Self and Identity*, 1, 337–351.
- McCrea, S. M., Hirt, E. R., Hendrix, K. L., Milner, B. J., & Steele, N. L. (2008). The worker scale: Developing a measure to explain gender differences in behavioral self-handicapping. *Journal of Research in Personality*, 42, 949–970.
- McCrea, S. M., Hirt, E. R., & Milner, B. J. (2008). She works hard for the money: Valuing effort underlies gender differences in behavioral self-handicapping. *Journal of Experimental Social Psychology*, 44, 292–311.
- Nićin, M. (2010). Relacije koncepta emocionalne inteligencije i samohendikepirajućih strategija. Diplomski rad, Novi Sad: Filozofski fakultet.
- Prapavessis, H., Grove, J. R., & Eklund, R. C. (2004). Self-presentational issues in competition and sport. *Journal of Applied Sport Psychology*, 16, 19-40.
- Prpa, N. (2013). *Upitnik sa opštim biografskim podacima*. Nепублиkovan materijal, Novi Sad: Filozofski fakultet.
- Prpa, N., Smederevac, S. i Čolović, P. (2013). Upitnik SH-17 za procenu korišćenja strategija samohendikepiranja kroz vreme. Nепублиkovan materijal, Novi Sad: Filozofski fakultet.
- Pulford, B. D., Johnson, A., & Awaida, M. (2005). A cross-cultural study of predictors of self-handicapping in university students. *Personality and Individual Differences*, 39, 727–737.

- Pyszczynski, T., & Greenberg, J. (1983). Determinants of reduction of intended effort as a strategy for coping with anticipated failure. *Journal of Research in Personality*, 17, 412-422.
- Rhodewalt, F., Saltzman, A. T., & Wittmer, J. (1984). Self-handicapping among competitive athletes: The role of practice in self-esteem protection. *Basic and Applied Social Psychology*, 5, 197-209.
- Ryska, T. A., Yin, Z., & Cooley, D. (1998). Effects of trait and situational self-handicapping on competitive anxiety among athletes. *Current Psychology*, 17, 48-56.
- Schouwenburg, H. C., & Lay, C. H. (1995). Trait procrastination and the big-five factors of personality. *Personality and Individual Differences*, 18(4), 481-490.
- Seligman, M. E. P., Nolen-Hoeksema, S., Thornton, N., & Thornton, K. M. (1990). *Explanatory Style as a Mechanism of Disappointing Athletic Performance*. *Psychological Science* (Wiley-Blackwell), 1, 143-146.
- Smith, J. L., Hardy, T., & Arkin, R. (2009). When practice doesn't make perfect: Effort expenditure as an active behavioral self-handicapping strategy. *Journal of Research in Personality*, 43(1), 95-98.
- Smith, T. W., Snyder, C. R., & Perkins, S. C. (1983). The self-serving function of hypochondriacal complaints: Physical symptoms as self-handicapping strategies. *Journal of Personality and Social Psychology*, 44, 787-797. doi:10.1037/0022-3514.44.4.787
- Tice, D. M. (1991). Esteem protection or enhancement? Self-handicapping motives and attributions differ by trait self-esteem. *Journal of Personality and Social Psychology*, 60, 711.
- Urdu, T., & Midgley, C. (2001). Academic self-handicapping: What we know, what more there is to learn. *Educational Psychology Review*, 13, 115-138.
- Weary, G., & Williams, J. P. (1990). Depressive self-presentation: beyond self-handicapping. *Journal of Personality and Social Psychology*, 58, 892-898.
- Zuckerman, M., Kieffer, S. C., & Knee, C. R. (1998). Consequences of self-handicapping: Effects on coping, academic performance, and adjustment. *Journal of Personality and Social Psychology*, 74(6), 1619.