

## **Mediating Role of Locus of Control in Achievement Goals and Self Handicapping Strategies Among University Students**

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The present study aimed at finding the mediating effect of locus of control in the relationship between achievement goals and self handicapping strategies among university students. The sample consisted of 300 university students (150 females and 150 males) from public and private educational institutes of Islamabad. The sample was selected through convenient sampling technique. Self Handicapping Scale (Jones & Rhodewalt, 1982), Multidimensional Multi-Attribution Causality Scale (Lefcourt, Baeyer, Ware, & Cox, 1979), and Academic Goal Questionnaire (Elliot & Murayama, 2008) were used to explore the study variables. Meditational analysis was done using process macro. Results revealed the partial mediating role of external locus of control in the relationship between performance achievement goals and self handicapping strategies; while, internal locus of control partially mediated the relationship between mastery achievement goals and self handicapping strategies.

*Keywords.* Locus of control, achievement goals, self handicapping strategies

Motivation plays a crucial role in determining the behavior of students at different educational settings. It is very important to understand the intention behind any educational experience or what motivates behavior in the school setting. Feelings of control, motivation and self-protective behavior influence learning outcomes in students. Students attribute their success or failure to different causes which leads to different motivational behaviors among them. These causes predict their future behaviors (Pintrich & Schunk, 1996). The policies and strategies adopted in classrooms of different school and colleges can induce effort, improvement, and intellectual

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development and competition among students. In Pakistan, teachers normally compare abilities and performances of students with each other, they create a competitive atmosphere and students focus more on outperforming their fellow students. Scoring high on papers and seeking good grades become their priority. Under such conditions, students are more concerned about how others perceive their abilities and start framing new tactics to appear adept or misguide others about their inabilities (Covington, 1992).

The present study has drawn its assumptions from the achievement goal theory and attribution theory. Development of goals in students is explained by achievement goal theory. Students are either motivated to develop or illustrate a skill. Those who are more interested in developing a skill have mastery orientation while students who are motivated by showing off their capabilities are under the influence of performance goals. Mastery oriented students are more interested in learning new things, exploring and understanding the material while the other group with performance orientation they focus on competing others and getting higher grades and numbers. They want to outperform others. Their competence is elaborated through comparing with their fellows while mastery oriented students do not believe in comparison or competition. Their competing is with their own self (Kaplan & Martin, 2007). When we adopt certain behaviors that create hurdles in our performance so that we can come up with certain anticipatory explanations for the probability of failing in an upcoming task is termed as self handicapping (Schneider, Coutts, & Gruman, 2013).

Self handicapping conduct can happen in essentially any circumstance that includes doing activities or any effort. Schools and classrooms are simply the places where self handicapping occur the most. In such educational settings, students are over and again faced with assignments and circumstances in which they dread failing in an upcoming exam or test. This dread debilitates their confidence. What is more, students' execution on these undertakings has consequences (e.g., their evaluations, future school and employment scenario). To protect self worth, self handicapping might be useful for time being but longitudinal studies have documented that many negative symptoms were associated with self handicapping. For example frequent use of self handicapping led to poor health and well being, decrease competence, no inner motivation, recurrent negative moods and symptoms and used of substance abuse (Zukerman & Tsai, 2005).

The reason students engage in self handicapping behavior is when they want themselves to appear competent and capable in front of others. Self handicapping is strategy that helps students to hide their

lack of skills and effort. Since self handicapping involves avoidance of an effort and performance, so it is more associated with performance goals than mastery goals. The effect of achievement goals can be influenced by locus of control, when students attribute their achievement or failure to factors which are under their control (internal factors like ability) or when they blame factors not under their control such as external factors like luck and fate (Hadsell, 2010).

### **Achievement Goals and Self Handicapping**

To protect self worth, fear of failing compels students to either not do worse than they have done before in past exams or to at least not perform worse than their class fellows (Elliot, 2006). Hence it is possible that fear of failure would lead students to adopt negative goals such as performance avoidance and mastery avoidance because this fear diverts students to take up pessimistic roles and unacceptable possibilities. It was further noticed that some students might have to put more effort in order to be successful and this entire struggle is just to avoid failure, so fear of failure might also induce positive outcomes through performance approach goals. Furthermore it was assumed that fear of failure is not related to mastery goals (Conroy & Elliot, 2004).

### **Achievement Goals and Locus of Control**

Prior studies indicated that both the approach and avoidance dimensions of mastery goals positively linked with internal locus of control (Cetinkalp, 2010). In addition, Akin (2011) found that external academic locus of control positively affected performance while academic internal locus of control showed positive correlation with mastery goals and negative correlation with performance goal. College boys who obtained higher grade point average were identified as internals and in another study it was found that people with internal locus of control exhibited considerably lower procrastination, less anxiety related to test and showed more successful academic achievement than those who were externals (Carden, Bryant, & Moss, 2004).

### **Locus of Control and Self Handicapping**

Self handicapping students blame the conditions and external factors for their lack of concentration. The excuses are made by the people who have external locus of control. So in case of academic failure, instead of blaming their own self handicapping behavior as the

main cause of failure, external factors were held responsible. Furthermore locus of control and academic procrastination showed a significant relation with self handicapping strategies. Whenever there is possibility of failure self handicapping people exhibit maladaptive behavior like delaying study or reducing study hours, or making less effort. Such attributions are made to put the blame of failure on these behaviors rather than on their abilities and skills. It is more satisfying if failure is blamed on laziness rather than on their lack of mental abilities (Akca, 2012). Mediating role of self efficacy on the relationship of external locus of control and perfectionism was studied using path model. External locus of control was found to be positively linked with self handicapping strategies (Stewart & Walker, 2014).

### **Locus of Control as Mediator**

Ravin (2008) studied the mediating role of locus of control on perfectionism and test anxiety. Firstly locus of control as moderator was analyzed; moderation analysis did not show any moderating effect of locus of control on perfectionism and anxiety. When the same relationship was studied with locus of control as a mediator, significant results were observed. It was found that due to external locus of control, perfectionism would lead to test anxiety. Locus of control also mediated the effect of other predictors with test anxiety like GPA, test anxiety, fear of negative evaluation, academic self efficacy. In another study the mediating role of locus of control and social support on the relationship between stress and depressive symptoms were examined. Psychosocial factor, that is, social support and external locus of control will yield greater depressive symptoms when combined with post traumatic stress. Results showed that external locus of control partially mediated the relationship (Seixas et al., 2015).

The present study aims to find the mediating effect of external locus of control on the relationship between performance achievement goals and self handicapping strategies. The Mediating effect of mastery achievement goals on self handicapping strategies via internal locus of control will also be explored. Many studies demonstrated that classroom goals structure, that is, mastery goals or performance goals may significantly influence students' goals (Meece, Eric, & Lynley, 2006). In another study, Karabenick (2004) concluded that students are more likely to seek help in a mastery oriented class structure while less likely to ask for help when classroom structure is performance oriented. A lot of work has been done in the West on the self handicapping variable, but in Pakistani society very little work has been done on this variable. Our education system and teaching

practices in homes as well as in schools often promotes competition among students and peers. Teachers compare students with others and make the work of intelligent and bright students as a role model for others. Parents compare their children with their cousins and friends. This environment puts pressure on students and their main focus of study is to appear able in front of their family and teachers. They develop performance goals and blame external sources for their failure. The main objective of the study was to explore the mediating role of external locus of control on performance achievement goals and self handicapping strategies. Moreover the mediating role of internal locus of control on mastery achievement goals and self handicapping strategies was also investigated.

### **Hypotheses**

The following hypotheses have been phrased in accordance to the major objectives of the study.

1. Performance achievement goals are positively related to self handicapping strategies.
2. Mastery achievement goals are negatively related to self handicapping strategies.
3. Performance achievement goals are positively related to external locus of control.
4. Mastery achievement goals are positively related to internal locus of control in university students.
5. There is positive relationship between external locus of control and self handicapping strategies.
6. There is negative relationship between internal locus of control and self handicapping strategies.
7. External locus of control mediates the relationship between performance goals and self-handicapping strategies among university students.
8. Internal locus of control mediates the relationship between mastery goals and self-handicapping strategies among university students.

## **Method**

### **Participants**

Sample of study included 300 university students including male students ( $n = 150$ , 50%) and female students ( $n = 150$ , 50%). Eight universities and colleges in Islamabad and Rawalpindi were

approached for data collection; of which four were government institutes and four were private universities. Students were included in the study through convenient sampling technique.

### **Instruments**

The following measures were used to assess the study variables.

**Self-Handicapping Scale.** It was developed by Jones and Rhodewalt (1982) and it consisted of 25 items. The original English version of Self-Handicapping Scale was used which is responded on 6-point Likert scale. Items responses on the scale ranged from 1 (strongly disagree) to 6 (strongly agree); while, eight items were negatively scored and the potential score range was from 25 to 150, and higher scores indicate higher self handicapping strategies. Cronbach alpha reliability for the Self Handicapping Scale has been found as .79; while, construct and predictive validity was verified by various researches (Rhodewalt, 1990; Strube, 1986).

**Multidimensional Multi-attribution Causality Scale.** This self report measure was developed by Lefcourt et al. (1979) comprising of 48 items. It was divided into two sections and each section consisted of 24 items. Sections measures achievement scale (locus of control) and the affiliation goals. In the present study only one section (achievement goals) was utilized. Cronbach's alpha reliability for the achievement internality (ability, effort) ranged from .50 to .77, whereas achievement externality (context, luck) ranged from .66 and .88 (Lefcourt et al., 1979). Effort and ability items (*The most important ingredient in getting good grades is my academic ability*) represent internality; while, context and luck items (*Sometimes my success on exams depends on some luck*) represent externality.

**Achievement Goal Questionnaire.** To measure achievement goals, the Achievement Goal Questionnaire was utilized which was developed by Elliot and Murayama (2008). It contains two subscales that is, Performance Goals and Mastery Goals. This is a 12 statement questionnaire of which six items measures performance goals (e.g., *I am striving to do well compared to others*); while, remaining six items measures mastery goals (e.g., *My goal is to learn as much as possible*). Performance and mastery are further divided on approach and avoidance. Performance approach and performance avoidance is measured by 3 items each while mastery approach and mastery avoidance is also measured by 3 items each. Responses are acquired on a 5-point scale ranging from *strongly disagree* (1) to *strongly agree*

(5) with the possible range of scores 12 to 60 and higher score represent more utilization of achievement or mastery goals. Cronbach's alpha reliability for mastery approach goals, mastery avoidance goals, performance approach goals, and performance-avoidance goals range is .84, .88, .92, and .94, respectively.

**Procedure**

Permission from the chairpersons of all the universities was taken to collect data. The classroom teacher was requested to spare time from his class. Students were briefed about the purpose of the research before distributing the questionnaires. Students who were not present at the time of questionnaire distribution were not included in the sample.

**Results**

Table 1  
*Correlations Matrix for All Study Variables (N = 300)*

Variables	1	2	3	4	5	6	7
1. Internal Locus of Control	-	.25*	.75**	.28*	.32**	.35**	.44**
2. External Locus of Control		-	.80**	.27**	.22**	.22*	.29**
3. Achievement Subscale			-	.29**	.35**	.37**	.47**
4. Mastery Goals				-	.48**	.83**	.41**
5. Performance Goals					-	.88**	.40**
6. Achievement Goals						-	.47**
7. Self Handicapping							-

\* $p < .01$ . \*\* $p < .00$ .

Table 1 shows correlation matrix between study variables. Result shows that all study variables and their subscales showed positive and significant correlation with each other. Achievement goal is significantly positively related to achievement dimension of multidimensional multi-attribution causality.

Mastery goals correlated positively with internal locus of control; while performance goals are correlated positively with external locus of control. Achievement scale showed significant positive relation with self handicapping. Internal locus of control scale showed significant positive relation with self handicapping and external locus of control also exhibited the significant positive relation with self handicapping. Both mastery goals and performance goals showed significant positive correlation with self handicapping.

Table 2

*Mediation Analysis Predicting Self Handicapping Strategies From Performance Achievement Goals via External Locus of Control*

Predictors	Criterion							
	M (External Locus of Control)			Y (Self Handicapping Strategies)				
		$\beta$	SE	p		$\beta$	SE	p
X (PAG)	a	.37	.09	.00	c'	1.07	.16	.00
M (Ext Loc)		-	-	-	b	.37	.09	.00
Constant	i <sub>1</sub>	20.41	2.18	.00	i <sub>2</sub>	70.13	4.01	.00
		$R^2 = .05$				$R^2 = .20$		
		$F(298, 1) = 14.81^*$				$F(297, 2) = 37.71^*$		

Note. PAG = Performance Achievement Goals; Ext. Loc. = External Locus of Control  
\*  $p < .00$ .

Results presented in Table 2 indicated that performance goals are significant predictor of external locus of control, and that external locus of control is a major predictor of self handicapping strategies. The significance of performance goals as predictor of self handicapping strategies after controlling for the mediator, external locus of control, is consistent with partial mediation. About 20% of the discrepancy in self handicapping strategies is attributed by the performance goals and external locus of control. By using a bootstrap estimation approach (5000 samples), the indirect effect is tested (Shrout & Bogler, 2002).

These results indicated the indirect coefficient is significant at 95% CI = .05, .27. Performance goals are associated with approximately .14 points higher self handicapping scores as mediated by external locus of control. Sobel test showed significant indirect effect and associated z-score ( $z = 3.50$ ), which further proves the mediating role of external locus of control in the relationship of performance goals and self handicapping strategies.

Results shown in Table 3 indicated that mastery goals are significant predictor of internal locus of control. Internal locus of control is a significant positive predictor of self handicapping strategies. The significance of mastery goals as a predictor of self handicapping strategies after controlling for the mediator, internal locus of control is consistent with partial mediation. Approximately 29% of the variance in self handicapping strategies is accounted for by the mastery goals and internal locus of control. In order to test the indirect effect, a bootstrap approach using 5000 samples is used. It is found that the indirect coefficient is significant at 95% CI = .05.

Mastery goals are associated with approximately .35 points higher self handicapping scores as mediated by internal locus of control.

Table 3  
*Mediation Analysis Predicting Self Handicapping Strategies From Mastery Achievement Goals via Internal Locus of Control*

Predictors	Criterion							
	M (Internal Locus of Control)			Y (Self Handicapping Strategies)				
		$\beta$	SE	p		$\beta$	SE	p
X (AGM)	a	.53	.10	.00	c'	1.10	.16	.00
M (Int. Loc)		-	-	-	b	.67	.10	.00
Constant	i <sub>1</sub>	24.22	2.54	<.00	i <sub>2</sub>	56.1	4.6	.00
$R^2 = .08$				$R^2 = .29$				
$F(298, 1) = 23.2^*$				$F(297, 2) = 54.4^*$				

Note. AGM = Mastery Achievement Goals; Int. Loc. = Internal Locus of Control. \*p < .00.

Sobel test showed significant indirect effect and associated z-score (z = 3.87), which proves that internal locus of control partially mediated the relationship between performance goals and self handicapping strategies.

### Discussion

The present study was aimed at finding the relationship among achievement goals, self handicapping strategies and locus of control among university students. The main objective of this study was to investigate the mediating effect of locus of control on the relationship of achievement goals and self handicapping strategies. In Pakistan, educational systems and home environment induces competition among students. In our society it is expected from a child to do well among his peers and fellows. To fulfill this standard students develop the skills to outdo others rather than understanding or developing interest in their studies. Students put more stress upon appearing competent. When students fail to do well they attribute those causes to factors not under their control and start making excuses to cover the failures.

In current study, the results shown in Table 1 provided empirical evidence to our proposed mediation model. These findings indicated that performance achievement goals are positively related to self handicapping strategies, proving our first hypothesis that performance

achievement goals will be positively related to self handicapping strategies. Performance achievement goals has shown a consistent positive relationship with self handicapping strategies, in some studies with moderate to large positive correlation (Akin, 2014; De Castella & Byrne, 2015).

The second hypothesis that mastery goals would be negatively related to self handicapping strategies is based on the goal theory literature. Previous researches showed mixed findings on this relationship. Present results showed a positive relationship with the self handicapping strategies which is in contradiction to the proposed hypothesis. Most of the previous findings indicated either a negative (Boon, 2007; Midgley & Urdan, 2001) or no relationship between mastery goals and self handicapping strategies (Leondari & Gonida, 2007). On the contrary Chen, Wu, Kee, Lin, and Shui (2009) proposed that when there is a fear of failure on tasks, self handicapping will be increased by those who hold mastery oriented goals as well as by those who hold performance oriented goals.

In third and fourth hypotheses, relationship between achievement goals and locus of control is postulated. Results showed positive correlation between performance goals and external locus of control; while, mastery goals showed positive correlation with internal locus of control. This relationship is in line with the prior studies that mastery goals (approach and avoidance) positively predicted internal locus of control (Centinkalp, 2010). Also Akin (2011) found that performance goals correlated positively with external academic locus of control and negatively with internal academic locus of control; while, mastery goals found to be positively correlated with internal academic locus of control.

The relationship between locus of control (internal and external) with self handicapping strategies is found. Results showed that there is significant positive relationship between the mediator (i.e. internal locus of control and external locus of control) with the dependent variable which is self handicapping strategies. Results are in line with the previous research findings (Akin, 2011; Akca, 2012). People with internal locus of control think they can control the external factors so they put extreme effort into their work. On their success they feel proud; while, failures make them feel ashamed of themselves. So in order to cover up their failure or incompetence people indulge in self handicapping behaviors (Chen et al., 2009). On the other hand people with external locus of control does not fear any such emotions (Hans, 2000; Mearns, 2006).

Results indicated that external locus of control partially mediated the relationship of performance achievement goals and self handicapping strategies. The learning environment either encourages or discourages students from handicapping. In our educational systems, teachers highlight those students who are doing well in class, display the work of high achievers as a model for others, and make differences among students. Students in these situations are more likely to handicap (Midgley & Urdan, 2001). Using path analysis, external locus of control is found to be positively predicting self handicapping strategies (Stewart & Walker, 2014).

In addition, the mediation model is also tested in which it is proposed that internal locus of control would partially mediate the relationship between mastery achievement goal and self handicapping strategies. Results showed significant positive correlation between all the predictors and outcome variables. Mediation analysis showed that internal locus of control partially mediated the relationship between mastery goals orientation and self handicapping strategies. It has been found that both direct effect and total effect is significant but total effect is greater than direct effect which indicated partial mediation. Although the results are not according to the proposed hypothesis; however, previous findings showed that both internal locus of control and mastery goals are positively related to self handicapping strategies (Akin, 2011; Centinkalp, 2010).

### **Limitations and Recommendations**

Current research has certain limitations. Due to time constraint, small sample size was taken which limits the generalizability of the result. Secondly sample was taken from the government and private institutes of Islamabad only so there was limited representation of the results to all the institutes of Pakistan. Moreover social desirability is the tendency of individuals to present them as socially acceptable on self report questionnaires. This biasness must be controlled as it could influence the validity of research findings. It has also been observed that mediation studies produce many valid results when done through longitudinal research method so to find the cause and effect relationships, future research should adopt longitudinal method in order get accurate and precise results.

### **Implications**

Self handicapping is a phenomenon which is more commonly done by students in educational settings. This study explains the major

predictors and causes of self handicapping behavior. This variable although much prevalent and common in our society, is not extensively studied within our culture. Teachers and parents must familiarize themselves with this term because if students keep indulging in such maladaptive behaviors it will not only affect their studies but will also affect mental health in long term. Self handicapping has not been only associated with low academic achievement but with other negative outcomes such as anxiety and depression (Zuckerman & Tsai 2005). Findings from our research will provide help for practitioners and researchers to reduce students' maladaptive behaviors and provide support to them to prevent these behaviors affecting their academic potential.

### **Conclusion**

The present study explored the mediating role of internal and external locus of control on achievement goals and self handicapping strategies. Strong significant relationships were found among achievement goals i.e. performance achievement goals and mastery achievement goal, self handicapping and locus of control. Results showed that external locus of control partially mediated the effect of performance goals on self handicapping strategies. This indicates that students who are more concerned about out-doing others and who focus on being looked able in front of others will have self handicapping tendencies. Students with external locus of control will further increase self handicapping behavior. Locus of control (external) and Performance goals will increase self handicapping behavior in students. It was also explored that internal locus of control will partially mediate the relationship between mastery goals and self handicapping strategies. The correlation results were not as proposed in our hypothesis.

### **References**

- Akça, F. (2012). An investigation into the self-handicapping behaviors of undergraduates in terms of academic procrastination, the locus of control and academic success. *Journal of Education and Learning*, 1(2), 288-297.
- Akın, A. (2011). Academic locus of control and self-handicapping. *Social and Behavioral Sciences*, 30(7), 812-816.
- Boon, H. J. (2007). Low-and high-achieving Australian secondary school students: Their parenting, motivations and academic achievement. *Australian Psychologist*, 42(2), 212-225.

- Carden, R., Bryant, C., & Moss, R. (2004). Locus of control, test anxiety, academic procrastination, and achievement among college students. *Psychological Reports, 95*(2), 581-592.
- Çetinkalp, Z. K. (2010). The relationship between academic locus of control and achievement goals among physical education teaching program students. *World Applied Sciences Journal, 10*(11), 1387-1391.
- Chen, L. H., Wu, C., Kee, Y. H., Lin, M., & Shui, S. (2009). Fear of failure, 2x2 achievement goal, and self-handicapping: An examination of the hierarchical model of achievement motivation in physical education. *Contemporary Educational Psychology, 34*(1), 298-305.
- Conroy, D. E., & Elliot, A. J. (2004). Fear of failure and achievement goals in sport: Addressing the issue of the chicken and the egg. *Anxiety, Stress, and Coping: An International Journal, 17*(1), 271-285.
- Covington, M. (1992). *Making the grade: A self-worth perspective on motivation and school reform*. New York: Cambridge University Press.
- De Castella, K., & Byrne, D. (2015). My intelligence may be more malleable than yours: The revised implicit theories of intelligence. *European Journal of Psychology of Education, 30*(2), 245-267.
- Elliot, A. J. (2006). The hierarchical model of approach-avoidance motivation. *Motivation and Emotion, 30*(1), 111-116.
- Elliot, A. J., & Murayama, K. (2008). On the measurement of achievement goals: Critique, illustration, and application. *Journal of Educational Psychology, 100*(3), 613-628.
- Hadsell, L. (2010). Achievement goals, locus of control, and academic success in economics. *American Economic Association, 100*(2), 272-276.
- Hans, T. (2000). A meta-analysis of the effects of adventure programming on locus of control. *Journal of Contemporary Psychotherapy, 30*(1), 33-60.
- Jones, E. E., & Rhodewalt, F. (1982). *The Self-Handicapping Scale*. Princeton, NJ: Princeton University.
- Kaplan, A., & Martin, L. M. (2007). The contributions and prospects of goal orientation theory. *Educational Psychology Review, 19*(2), 141-184.
- Karabenick, S. A. (2004). Perceived achievement goal structure and college student help seeking. *Journal of Education Psychology, 96*(3), 569-581.
- Lefcourt, H. M. (1976). *Locus of control: Current trends in theory and research*. New Jersey: Lawrence Erlbaum Associates.
- Lefcourt, H. M., Baeyer, C. L., Ware, E. E., & Cox, D. J. (1979). The Multidimensional Multi-attribitional Causality Scale: The development of a goal specific locus of control scale. *Canadian Journal of Behavioural Science, 11*(2), 286-304.
- Leondari, A., & Gonida, E. (2007). Predicting academic self-handicapping in different age groups: The role of personal achievement goals and social goals. *British Journal of Educational Psychology, 77*(5), 595-611. doi:10.1348/000709906X128396

- Mearns, J. (2006). The social learning theory of Julian Rotter. In D. P. Crowne (Ed.), *Personality theory*. New York: Oxford University Press.
- Meece, J. L., Eric M. A., & Lynley H. A. (2006). Classroom goal structure, student motivation, and academic achievement. *Annual Review of Psychology*, 57(1), 487-503.
- Midgley, C., & Urdan, T. (2001). Academic self-handicapping and achievement goals: A further examination. *Contemporary Educational Psychology*, 26(1), 61-75.
- Pintrich, P., & Schunk, D. (1996). *Motivation in education: Theory, research, and applications*. Englewood Cliffs, NJ: Prentice Hall.
- Rhodewalt, F. (1990). Self-handicappers: Individual differences in the preference for anticipatory, self-protective acts. In R. Higgins, C. R. Snyder, & S. Berglas (Eds.) *Self-handicapping: The paradox that isn't* (pp. 69-106). New York, NY: Plenum.
- Schneider, F. W., Coutts, L. M., & Gruman, J. A. (2013). *Applied social psychology, understanding and addressing social and practical problems*. New York: Sage Publications, Inc.
- Seixas, A. A., James, C., Louis, G. J., Butler, M., Zizi, F., & Gardner, A. (2015). The mediating effects of social support and locus of control on the relationship between post-traumatic stress and depressive symptoms in a Jamaican university sample. *Journal of Depression and Anxiety*, 4(3), 212-222.
- Shrout, P. E., & Bolger, N. (2002). Mediation in experimental and non-experimental studies: New procedures and recommendations. *Psychological Methods*, 7(4), 422-445.
- Stewart, M. A., & De-George-Walker, L. (2014). Self-handicapping, perfectionism, locus of control, and self-efficacy: A path model. *Personality and Individual Differences*, 66(1), 160-164.
- Strube, M. J. (1986). An analysis of the self-handicapping scale. *Basic & Applied Social Psychology*, 7(3), 211-224.
- Zuckerman, M., & Tsai, F. F. (2005). Costs of self-handicapping. *Journal of Personality*, 73(2), 411-442.

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