



# How does Academic Self-Handicapping Relate to Achievement in Mathematic? A Small Scale Study among Indian School Chult

Sameer Babu M\* and Selvamari S

Department of Education, University of Kerala, Thiruvananthapuram, Kerala, India

\*Corresponding author: sameer@keralauniversity.ac.in

## ABSTRACT

Many research revealed that Self-Handicapping is associated with the students' personal motivations, academic achievement, global self-esteem and certainty of self-esteem. This study is designed to find out the relationship between Self-Handicapping, and Achievement in Mathematics of learners of chult age (adolescence). Using Multi-stage cluster sampling 204 secondary school students of Thiruvananthapuram educational sub district were selected for the study. Participants were directed to fill in the self-reported Self-Handicapping Scale; the Achievement score in Mathematics were taken from the school records. Data has been analyzed with SPSS-16<sup>th</sup> version. Students of chult age have a moderate level of Self-Handicapping and High level of Achievement in Mathematics but there is a negative low relationship between Self-Handicapping and Achievement in Mathematics. This study disclosed that self-Handicapping and achievement in Mathematics are correlated. Thus, a positive variation in Self-Handicapping will make a corresponding decrease in Achievement in Mathematics and vice-versa

**Keywords:** Self-Handicapping, Achievement in Mathematics, Secondary Schools, Chult age

While many people struggle to achieve success, the literature on Self-Handicapping shows that another group may only be motivated to give the appearance of wanting to achieve (Thomas & Gadbois, 2007), this process is called Self-Handicapping. The concept of Self-Handicapping was introduced by Edward, E. Jones and Steven Berglas (1978). Their basic observation was that people often create or at least claim obstacle to success in performance when people have worries about their capability to be successful and when disappointment confirms that the ability is lacking. Jones & Berglas (1978) argued that the Self handicapper is capitalizing on the attributional principles of discounting and augmentation

(Kelly, 1972). Self-Handicapping has been defined in a variety of ways by researchers, but most of them agree that it involves creating obstacles to successful performance on tasks that the individual considers important (Covington, 1992; Rhodewalt, 1994). (Kelley, 1971) argued the obstacles may interfere with performance but allow the person to discount responsibility for failure and augment credit for success. The purpose of Self-Handicapping is to deflect the attributions of others away from low ability causes and towards circumstantial or situational causes of failure; that is, to blur the link between ability and poor performance (Harris & Snyder, 1986; Urdan, Midgley, & Anderman, 1998).

Self-Handicapping takes many forms and may be behavioural or verbal (Leary & Shepperd, 1986), with behavioural strategies producing the greatest risk of failure (Hirt, Deppe, & Gordon, 1991). Self-Handicapping is marked by a conscious decision to engage in the behaviour or establish a justification for lower or no performance prior to or simultaneously with the task (Urden, 2004; Urden & Midgley, 2001), ultimately affecting performance capabilities and leading to failure (Berglas & Beaumeister, 1993). This can also be linked with procrastinated behavior. Self-Handicapping strategies occur in situations in which individuals see task performance as an image of themselves (Shepperd & Arkin, 1989). Covington (2000) argued that self-worth is at the root of self-protective mechanisms because 'in our society individuals are widely considered to be only as worthy as their ability to achieve' (p. 181).

Urden and Midgley (2001) state that students' 'ability and intelligence is on public display' in an academic surroundings, creating the conditions for the use of Self-Handicapping strategies. Really, Self-Handicapping has been shown to be related to academic indices (Eronen, Nurmi, & Salmela-Aro, 1998) and so may also be related to learning, task orientations, and self.

Studies crosswise a range of student ages has shown that academic Self-Handicapping tendencies are linked to perceived classroom goals and students' motivations in the learning context, coping strategies, attributions following performance, the amount of time spent studying and, ultimately, to academic achievements. These variables should also be related to how students' describe themselves as successful learners.

Urden and Midgley (2001) emphasized that academic Self-Handicapping is engaged in by students who 'still care about school but are low achievers and lack confidence in their abilities' (p. 130). As indicated above, research shows that Self-Handicapping is related to particular characteristics of learners, such as their general motivations for and attitudes about learning. These factors should also be related to how students describe themselves as learners.

## **Self-Handicapping and Academic Performance**

Schools and classrooms provide excellent frames for examining Self-Handicapping behavior of learners as in such a landscape learners are being confronted, on regular basis, with tasks and situations in which information about their ability and intelligence is on a platform of discussion by everyone and it is a stage of setting them. This behavior of Self-Handicapping occurs in individuals in all domains of learning and cognition, but demands a significant attention because academic achievement reflects on

a value added characteristic. Self-Handicapping has been shown to be related to academic matters as reported by various psychologists (Eronen, Nurmi, & Salmela-Aro, 1998) and so may also be related to how students learn and interact. Self-Handicapping behavior occurs in any situation that involves an ability-diagnostic activity.

Midgley & Urdan (1995) found that feeling self-conscious in school, low self-worth and being oriented to extrinsic and adult approval achievement goals, perceiving the school emphasized performance goals and associating with friends with a negative bearing toward academics predicted the use of Self-Handicapping strategies. Individuals who have a history of low achievement will gradually have an expectation of lower accomplishment rates in prospect, especially if they believe the failure is caused by specific stable and uncontrollable causes, such as lack of ability; they may not be recovering later. Once individuals develop the belief that they may fail on an upcoming task, they become more likely to engage in Self-Handicapping behavior, leading to mismatches in academic plans and work-outs. This cycle of failure-Self-Handicapping-failure may result in the withdrawal of own efforts in school, leading to skipping of the task by choice (Urden & Midgley, 2003; Kieffer & Knee, 1998). When learners are much concerned about not performing worse than other students, and with not appearing academically unable, they have more tendencies to self-handicap (Kaplan, Middleton, Urden & Midgley, 2002; Urden 2004).

There is considerable amount of research literature that agrees Self-Handicapping has negative effects on significant educational processes and outcomes such as motivation and achievement (Urden, Midgley, & Anderman, 1998; Zuckerman, Kieffer, & Knee, 1998; Martin, Marsh, & Debus, 2001). This is because the Self-Handicapping behavior represents a reduction or withdrawal of effort towards a given task, and is not surprising that Self-Handicapping is associated with lower performance on these tasks.

## **The Problem**

The purpose of the present study is to find out the relationship between the Self-Handicapping and Achievement in Mathematics. The variables of the study are Self-Handicapping, and Achievement in Mathematics. The present study tests three hypotheses. First, Secondary school students have a low level of Self-Handicapping, second hypothesis was Secondary school students have an average level of Achievement in Mathematics. Finally, there is a significant relationship between Self-Handicapping and Achievement in Mathematics of secondary school students.

## **METHODS**

### **Participants**

204 ninth standard students from the selected seven government schools of Thiruvananthapuram south educational sub-district of Kerala (India) constitute the participants of the study. Sampling was done following multi stage cluster sampling. Among the selected 204 students 84 were boys and 120 were girls. Ages range from 13 years to 15 years.

## Measures

### *(a) Self-Handicapping Scale*

The authors developed and validated the scale- self-handicapping scale. After initial survey the item analysis has been carried out; the final version of the scale, in a pilot study, carried out on a sample of 130 secondary school students. The reliability has been obtained using cronbach’s alpha coefficient (0.81) and using split half Spearman Brown (0.84). Cross validity is 0.30 and concurrent validity obtained is 0.31 (correlated with Self-Handicapping Scale developed by Rhodewalt, F. 1990). Content validity was confirmed by the opinions of experts from both Psychology and Educational Psychology. The scale is of 20 statements designed in five point Likert scale format with end points Strongly Agree (5) and Strongly Disagree (1). The range of the score was 20 to 100. A high score on this scale indicates a higher Self-Handicapping, while a low score shows low Self-Handicapping.

### *(b) Achievement in Mathematics*

Authors have taken achievement scores from school records; later the scores were treated mathematically and were converted in to standard scores (Z-scores) for further analysis.

## Procedure

The investigators met the head of the schools and had discussion with them to get a formal approval. The investigators went to school and with the help of the principal/senior teacher found out the cluster class. Later a rapport has been maintained with students by introducing the aims of the study. Then the data was collected-personal data, and the Self-Handicapping scale was given to students. Each statement was explained by the researchers in simple language using appropriate examples and then the need of the study presented in their own language. The score of achievement in Mathematics was collected from the records of concern teachers.

## RESULTS

**Table 1:** The descriptive statistical scores such as Mean, standard error of mean, standard deviation, variance, skewness, and kurtosis

Variable	N	Mean	Std. Error of Mean	Std. Deviation	Variance	Skewness	Kurtosis
Self-Handicapping	204	54.9902	0.93552	13.36195	178.542	-0.218	-0.279

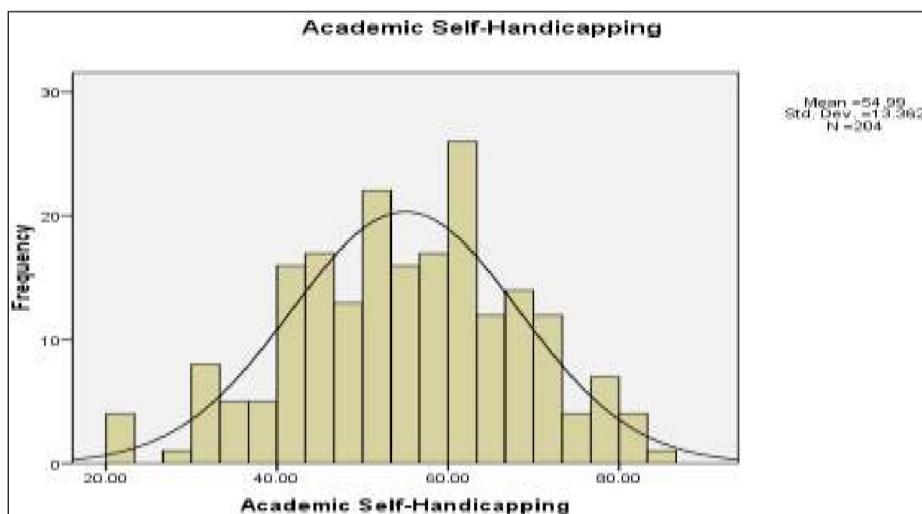
It is evident from the table 1, mean and standard deviation of Self-Handicapping of secondary school students are 54.99 and 13.36 respectively. It is thus interpreted that they have an average level of Self-Handicapping as per the qualitative norms of the scale.

**Table 2:** The number and percentage of students in different levels of Self-Handicapping

Sl. No.	Level of Slef-Handicapping	Number	Percent (%)
1	Severe Self-Handicapping	47	23.04
2	Moderate Self-Handicapping	137	67.16
3	Low Self-Handicapping	20	9.80
<b>Total</b>		<b>204</b>	<b>100%</b>

It is clear that 67.16% of the total respondents fall in moderate Self-Handicapping category while 9.8% of them are in low Self-Handicapping level.

The following figure shows that the histogram of the distribution:

**Fig. 1:** Histogram with Normal Probability Curve- Self-Handicapping**Table 3:** Descriptive statistical scores of Achievement in Mathematics

Variables	N	Mean	Std. Error of Mean	Std. Deviation	Variance	Skewness	Kurtosis
Achievement in Mathematics	206	49.9322	0.69666	9.99895	99.979	-0.23	-0.999

The mean and standard deviation of Achievement in Mathematics of secondary school students are 49.93 and 9.99 respectively. They are in average level of achievement as per the norms framed.

**Table 4:** The number and percentage of students in different levels of Achievement in Mathematics

Sl. No.	Level of Achievement	Number	Percent (%)
1	High	105	51.47
2	Average	44	21.57
3	Low	55	26.96
	<b>Total</b>	<b>204</b>	<b>100%</b>

It is clear from the table 4 that most of the students fall in 26.96% level of Achievement in Mathematics. At the same time 51.47 % of them fall in high achievement level.

**Table 5:** Correlation between the variable Self-Handicapping, and Achievement in Mathematics

Variables	Achievement in Mathematics
Self-Handicapping	-.291**

\*\**. Correlation is significant at the 0.01 level (2-tailed).*

The correlation coefficient between Self-Handicapping and Achievement in Mathematics ( $r = -0.29$ ) is a low and negative correlation, and is proven significant at 0.01 level. Thus, it is interpreted there is a significant negative low correlation between the variable Self-Handicapping and Achievement in Mathematics. That is, a positive variation in Self-Handicapping will make a corresponding decrease in Achievement in Mathematics and vice-versa.

## RESULTS AND DISCUSSION

In one way or the other, the successful completion of the tasks undertaken is important to everyone, especially in learning. Sometimes one's own actions can turn out to be barriers in the path fulfill these tasks. Self-Handicapping strategies are employed to manipulate the impressions of others (Midgley, Arunkumar, & Urdan, 1996). These proactive strategies increase the opportunity to externalize failure and internalize success (Berglas & Jones, 1978) so that the evaluations are clouded, masking Self-Handicappers' actual abilities (Berglas & Baumeister, 1993). In the present study, it is found that secondary school students have a moderate level of Self-Handicapping.

Studies found that students having high Self-Handicapping behaviors are unsuccessful at school (McCrea & Hirrt, 2001; Rhodewalt, 1994; Urdan, 2004; Zuckerman *et al.* 1998; Zuckerman & Tsai, 2005). It is found that the relationship between Self-Handicapping and Achievement in Mathematics is negative (Leondari & Gonida, 2007). Students with lower grades in mathematics would report using Self-Handicapping (Midgley *et al.* 1996; Midgley & Urdan, 1995, 2001; Urdan *et al.* 1998). Hence, it is concluded that the results strongly support with the findings obtained in the earliest studies on the relationship between Self-Handicapping and Achievement in Mathematics of secondary school students. The results of the study in general have a wide range of implication- for parents it would be helpful as an insight in understanding their wards, and for teachers in focusing on tips for better learning and making learning meaningful and participatory.

## REFERENCES

- Adam L. Alter, & Joseph P. Forgas. (2007). On being happy but Fearing Failure: The Effect of Mood on Self-Handicapping Strategies, *Journal of Experimental Social Psychology*, pp. 947-954.
- Ahmet Uysal, and Raymond Knee, C. 2012. Low Trait Self control predicts Self-Handicapping, *Journal of Personality* 80:1, February 2012, wiley periodicals. Inc, DOI:10.1111/j.1467-6444.2011.00715X.
- Andrew, J. Martin, Herbert. W. Marsh and Raymond. L. Debus 2001. Self-Handicapping and Defensive Pessimism: Exploring a model of Predictors and Outcomes from a Self-Protection Perspective, *Journal of Educational Psychology*, **93**(1): 87-102.
- Angeliki Leondari & Eleftheria 2007. Predicting academic Self-Handicapping in different age groups: The role of personal achievement goals and social goals, *British Journal of Educational Psychology*, **77**: 595-611.
- Asha Kumari, B. 2015. Academic Self-Handicapping in Adolescents: Predictors and Implications *International Journal of Education and Psychological Research (IJEPR)*, **4**(4).
- Beck, B.L., Koons, S.R. and Milgrim, D.L. 2000. Correlates and consequences of behavioral procrastination: The effects of academic procrastination, self-consciousness, self-esteem and Self-Handicapping. *Journal of Social Behavior and Personality*, **15**(5): 3–13.
- Berglas, S. and Baumeister, R.F. 1993. Your own worst enemy: Understanding the paradox of self-defeating behavior. New York: Basic Books.
- Biggs, J. 1991. Student learning in the context of school. In J.B. Biggs (Ed.), *Teaching for learning: The view from cognitive psychology*, Victoria: The Australian Council for Educational Research.
- Biggs, J., Kember, D. and Leung, D. 2001. The revised two factor study process questionnaire: R-SPQ-2F. *British Journal of Educational Psychology*, **71**: 133–149.
- Carol Midgley, & Tim Urdan 2001. Academic Self-Handicapping and achievement Goals: a further research, *Contemporary Educational Psychology*, **26**: 61-75.
- Cathy R. Thomas, & Shannon A. Gadbois 2007. Academic Self-Handicapping: The role of self-concept clarity and students' learning strategies, *British Psychology of Educational Research*, **77**: 101-119.
- Cinar Kaya, Erol UGUR, Ali Hyder SAR, Mustafa ERCENGIZ. 2017. Self-Handicapping and Irrational beliefs about approval in a sample of Teacher Candidate, Online available at <https://www.researchgate.net/publication/318281368>.
- Covington, M. 2000. Goal theory, motivation, and school achievement: An integrative review. *Annual Review of Psychology*, **51**: 171–200.
- Danielle Ganda & Evely Boruchovitch, 2015. Self-Handicapping Strategies for Learning of Pre service Teachers. *SciELO*, <http://dx.doi.org/10.1590/0103166x2015000300007>.
- Eronen, S., Nurmi, J. and Salmela-Aro, K. 1998. Optimistic, defensive-pessimistic, impulsive and Self-Handicapping strategies in university environments. *Learning and Instruction*, **8**(2): 159–177.
- Evans, C., Kirby, J. and Fabrigar, L. 2003. Approaches to learning, need for cognition, and strategic flexibility among university students. *British Journal of Educational Psychology*, **73**: 507–528.
- Feick, D. and Rhodewalt, F. 1997. The double-edged sword of Self-Handicapping: Discounting, augmentation, and the protection and enhancement of self-esteem. *Motivation and Emotion*, **21**(2): 147–163.

- Figen Akca. 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). Published by Canadian Center of Science and Education.
- Hafsa M. Mwita, 2014. Academic Self-Handicapping Behavior and Student Engagement Among the Students of the International Islamic University Malaysia, Doctor of Philosophy Thesis, Institute of Education, International Islamic University, Malaysia, available online at [www.google.com](http://www.google.com).
- Hannah Geis, 2015. Perfectionism, Self-Handicapping and Boredom: Honors vs Non Honors students, poster presentation, University of Wisconsin, Eau Claire.
- Harris, R. and Snyder, C. 1986. The role of uncertain self-esteem in Self-Handicapping. *Journal of Personality and Social Psychology*, **51**(2): 451–458.
- Higgins, R. and Harris, R. 1988. Strategic alcohol use: Drinking to Self-handicap. *Journal of Social and Clinical Psychology*, **6**: 191–202.
- Hirt, E., Deppe, R. and Gordon, L. 1991. Self-reported versus behavioral Self-Handicapping: Empirical evidence for a theoretical distinction. *Journal of Personality and Social Psychology*, **61**(6): 981–991.
- Indako Eun – Joo Clarke 2018. Self-Handicapping Mediates the relationship between Achievement Goal Orientation and Academic Achievement: An meta-analysis, Meta analytic path model and empirical extension with two elements of Self-Handicapping. P. hD Thesis, University of Sydney.
- Jared. M. Bartels. 2015. Nature of Failure, Self-Handicapping and Negative Emotions in Response to Failure, Poster presented at the 23<sup>rd</sup> Annual Convention of the Association for Psychological Science *Journal of Educational Psychology*, 2015.
- Jeffrey P. Dorman, Adams E. Joan, Janet M. Ferguson, 2001. The Relationship between High School Mathematics Classroom Environment and Student Self-Handicapping, paper presented at the annual meeting of the American Educational Research Association, Seattle, April 2011, Original copy available at ERIC.ED452075.
- Jones, E.E. and Berlas, S. 1978. Control of attributions about the Self-through Self-Handicapping Strategies: The appeal of Alcohol and the role of Under Achievement.
- Joseph R. Ferrari, and Dianne M. Tice. 2000. Procrastination as a Self-handicap for Men and Women: A task Avoidance Strategy in a Laboratory setting, *Journal of Research in Personality*, **34**: 73-83.
- Kelley, H. 1971. Attribution and social interaction. Morristown, NJ: General Learning Press.
- Kelley, H.H. 1978. Causal Schemes and Attribution process, Morristown, NJ,: General Learning press.
- Kolditz, T.A. and Arkin, R.M. 1982. An Impression Management interpretation of the Self-Handicapping Strategy. *Journal of Personality and Social Psychology*, **43**: 492-502.
- Leary, M. and Shepperd, J. 1986. Behavioral self-handicaps versus self-reported handicaps: A conceptual note. *Journal of Personality and Social Psychology*, **51**(6): 1265–1268.
- Marria Delmar Ferradas, Carlos Freiere, Antonio Valle & Jose Calos Nunez. 2016. Academic Goals and Self handicapping strategies in University Students. *The Spanish Journal of Psychology*, **19**.
- Martin, A., Marsh, H. and Debus, R. 2001. Self-Handicapping and defensive pessimism: Exploring a model of predictors and outcomes from a self-protection perspective. *Journal of Educational Psychology*, **93**(1): 87–102.

- Midgley, C., Arunkumar, R. and Urdan, T.C. 1996. "If I don't do well tomorrow, there's a reason": Predictors of adolescents' use of academic Self-Handicapping strategies, *Journal of Educational Psychology*, **88**(3): 423–434.
- Pyszczynski, T. and Greenberg, J. 1983. Determinants of reduction in intended effort as a strategy for coping with anticipated failure. *Journal of Research in Personality*, **17**: 412–422.
- Rhodewalt, F. 1990. Self-Handicappers: Individual differences in the preference for anticipatory self-protective acts. In R.L. Higgins, C.R. Snyder, & S. Berglas (Eds.), *Self-Handicapping: The paradox that isn't*. New York: Plenum Press.
- Rhodewalt, F. and Davison, J. 1986. Self-Handicapping and subsequent performance: Role of outcome valance and attributional certainty. *Basic and Applied Social Psychology*, **7**: 307–323.
- Rhodewalt, F., Saltzman, A. and Wittmer, J. 1984. Self-Handicapping among competitive athletes: The role of practice in self-esteem protection. *Basic and Applied Social Psychology*, **5**: 197–209.
- Shannon A. Godbois and Ryan. D. Sturgeon, 2011. Academic Self-Handicapping: Relationships with learning specific and general self-perceptions and academic performance over time.
- Smith, T.W., Snyder, C.R. and 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.
- Snyder, C.R. and Smith, T.W. 1982. Symptoms as Self-Handicapping strategies: The virtues of old wine in a new bottle. In G. Weary & H.L. Mirels (Eds.), *Integrations of Clinical and Social Psychology*, pp. 104–127. New York: Oxford University Press.
- Sonia H Greeven, Darcy, A. Santor, Richard Thompson, and David C. Zuroff, 2000. Adolescent Self-handicapping, Depressive Affect, and Maternal Parenting Styles. *Journal of Youth and Adolescence*, **29**.
- Sujata Gautam 2009. To Study the Interactive Effect of Levels of Self-Handicapping and Self-Esteem on Coping Academic Performance and Adjustment of School Students. PhD Thesis, Department of Psychology, Himachal Pradesh.
- Sun W. Park, and Christina M. Brown. 2014. Different perceptions of Self-Handicapping across College and Work Contexts. *Journal of Applied Social Psychology*, **44**: 124–132.
- Ted Thompson & Anna Richardson, 2001. Self-Handicapping status, claimed self-handicaps and reduced Practice effort, *British Journal of Educational Psychology*, **71**: 151-170. *Printed in the Great Britain*.
- Tucker, J., Vuchinich, R. and Sobell, M. 1981. Alcohol consumption as a Self-Handicapping strategy. *Journal of Abnormal Psychology*, **90**: 220–230.
- Urdan, T. 2004. Predictors of academic Self-Handicapping and achievement: Examining achievement goals, classroom goal structures, and culture. *Journal of Educational Psychology*, **96**(2): 251–264.
- Urdan, T. and Midgley, C. 2001. Academic Self-Handicapping: What we know, what more there is to learn. *Educational Psychology Review*, **13**(2): 115–138.
- Wolters, C. 2003. Understanding procrastination from a self-regulated learning perspective. *Journal of Educational Psychology*, **95**(1), 179–187.
- Yasemin Yavuzer 2015. Investigating the Relationship between Self-Handicapping Tendencies, Self-Esteem and Cognitive Distortions, *Educational Sciences: Theory & Practice*, **15**(4): 879-890.
- Zuckerman, M., Kieffer, S. and Knee, C. 1998. Consequences of Self-Handicapping: Effects on coping, academic performance, and adjustment. *Journal of Personality and Social Psychology*, **74**(6).
- Zuckerman, M. and Tsai, F.F. 2005. Cost of Self-Handicapping. *Journal of Personality*, **73**(2): 411-442.

