

## SELF-CONTROL AND ACADEMIC ACHIEVEMENT: THE EXTENT OF RELATIONSHIP

Dr. Bashir Muhammad<sup>1</sup>, Dr. Muhammad Shakir Azeem<sup>2</sup>, Dr. Rahim Khan<sup>3</sup>

<sup>1</sup>Elementar and Secondary Education Department KP, Pakistan

<sup>2</sup>Elementary and Secondary Education Department KP, Pakistan

<sup>3</sup>(Associate Professor), Department of Education, Qurtuba University of Science and Technology Peshawar, KP, Pakistan

<sup>1</sup>[bashirmuhammad1686@gmail.com](mailto:bashirmuhammad1686@gmail.com), <sup>2</sup>[shakirusus@gmail.com](mailto:shakirusus@gmail.com)

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Corresponding Author: \*  
Dr. Bashir Muhammad

### Abstract

The purpose of this descriptive correlational study was to explore the relationship between students' self-control and academic achievement at government secondary schools using a quantitative research approach. This area had largely remained unexplored in a different socio-cultural and linguistic context of Pakistan which created the need for extension of the present knowledge. The population included students studying at the secondary level in public schools of Khyber Pakhtunkhwa, Pakistan. A sample of 798 students consisted of 398 girls and 400 boys' students in two districts Peshawar and Charsadda was selected by using a multi-stage random sampling technique. Students' self-control scores were collected utilizing "The Brief Self-Control Scale (BSCS)" and their achievement scores were obtained from the Secondary School Certificate (SSC) Annual Examination 2021 conducted by the BISE Peshawar. The study revealed a strong positive correlation between students' self-control and their academic achievement. Some gender differences were also revealed and girl students had a high level of Self-control than Boy students. Teachers need to provide students with the skills to delay gratification, manage distractions, and maintain attention on academic work so as to improve their self-control, which leads to better academic achievement.

### INTRODUCTION

This research paper was an attempt to explore the relationship between students' self-control and academic achievement in the context of Pakistan. Students' excellent performance has always remained a top priority for educators and policymakers. The government of Khyber Pakhtunkhwa (2020) through its education sector plan has laid down a futuristic agenda for enhancing the quality of education. It has focused on need-based teaching and learning materials, improving the quality of assessments, provision of a conducive learning environment,

provision of well-trained teachers, and enhancing the scope of teachers' induction and Continuous Professional.

Educationists are trying to explore the factors that contribute to students' achievement. According to Atchia and Chinapah (2019), 90.1% of students' achievement might be explained by socioeconomic factors, teacher, and school leadership variables. Similarly, Ullah and Almani (2022) identified insufficient teachers, a learning environment, untrained teachers, weak school management, a Lack

of teaching and reading materials, and inadequate classrooms in the school are important factors that influence students' performance. Academic achievement is complex scores that are affected by several factors including personality traits and other personal factors (Batool, 2019). Gottfried, Marcoulides, Gottfried, and Oliver (2009) have argued that exploring the factors affecting the academic achievement of secondary school students is important as it is the period of life in which students formulate their future courses. Although various research studies have been conducted on the importance of intelligence and cognitive ability on students' achievement. In recent years, psychology has given rise to various non-cognitive skills for understanding and helping people succeed in things they want to achieve (Khan, 2018). Self-control is one of these skills which have gained increased importance in recent years. Based on the review of prior studies, the researcher found that although various factors have been identified in relation to students' achievement, research on internal factors like self-control was sparse in the country. It is assumed that understanding the relation of self-control with academic growth and experiences can point out various ways by which teachers can fill the gap in achievement.

Self-control is the skill to change a person's responses to align her/him with values, standards, morals, and social expectations for goal attainment (Baumeister, Vohs, & Tice, 2007). According to Duckworth and Steinberg (2015), self-control gives importance to the self-imposed and self-directed actions of a person to pursue long-term goals. Non-cognitive skills like self-control, mindset, grit, social skills, learning strategies, and academic behaviors have gained increased importance in education due to their potential for a positive impact on students' achievement (Farrugia et al., 2016). The study of self-control is important as it is related to a student's academic success, and behavior in the classroom (Manandhar & Shrestha, 2019). According to Duckworth and Gross (2014), self-control is a substantial element of success and is the capability to control behavior, emotion, and attention while faced with temptations.

Students having higher self-control might resist persuasions to accomplish a goal but might not have the long-term passion and perseverance to achieve a

single major goal. Self-control is connected with daily success while grit is linked with great achievement that might require years to achieve (Ryan, & Beamish, 2017). According to Costello (2019) knowledge about non-cognitive skills might be utilized to improve persistence and motivation. These skills may provide a solution for improving achievement. Self-control is associated with students learning because it enables them to regulate and manage and feelings. Temperance, or the ability to manage and regulate feelings, has a major role in emotional balance and has a positive impact to increase readiness to learn and reducing the level of stress during the study. The more the students have the ability to control or manage emotions; the better will be their level of understanding. Self-control, thus, has a relationship with understanding (Hafilah & Usman, 2019). It is argued that better self-control will allow students to achieve the better learning outcome. When students are able to control themselves then they will be able to learn and face problems more effectively as compared to students who are unable to properly control themselves.

### **Objectives of the Study**

The objectives of the study were:

- a. To find out the differences in students' self-control with regard to gender.
- b. To determine the relationship between students' self-control and their academic achievement.

### **Hypotheses of the Study**

The following were the hypotheses of the study.

**H<sub>01</sub>:** There is no significant difference in self-control of students with regard to gender.

**H<sub>02</sub>:** There is no significant relationship between students' self-control and their academic achievement.

### **Review of Literature**

This section provides an understanding of self-control and achievement. The review provides a background related to research on self-control and examines the potential relationship between the study variable and academic achievement.

### Concept of Self-control

Self-control is about short-term goals and reflects the ability to control behavior or attention to defy temptation for achieving a goal (Duckworth, & Gross, 2014). Self-control is a mental process that enables individuals to maintain attention, surmount urges, and manage competing tasks (Inzlicht, Legault, & Teper, 2014). It is the ability to control feelings. It leads to overcoming weakness and is the main characteristic of shunning distractions. Students with high self-control act differently about their academic activities as compared to their less disciplined peers (Manandhar, & Shrestha, 2019).

Self-control is a significant feature that leads to happiness and success. Individuals who regulate their responses, behavior, and desires achieve better than others (Muammar, 2015). In addition, Manandhar and Shrestha (2019) have presented that self-control is related to a student's academic success and behavior in the classroom. Self-discipline also promotes a positive school climate, self-worth, emotional well-being, and academic achievement.

Self-control enables people to organize their lives through coherence, clarity, and order and is "associated with a successful goal progress" (Stavrova, Pronka, & Kokkorish, 2018, p.202). Good self-control is central to success in school-to-work relationships (Carpenter, 2018). According to Duckworth et al. (2019), self-control pertains to the orientation of feelings, action, and thought with long-term cherished goals despite momentarily more appealing alternatives. Approximately all the students experience conflict between long-run academic goals and nonacademic goals that they find more gratifying in the short term.

### Self-control and Achievement

The findings about self-control and achievement are mixed with some reporting positive while others reporting negative or no relationship. Karim and Ghavam (2011) revealed a significant correlation among self-effectiveness, self-control, and performance with an inclination to cheat. A negative correlation was revealed between self-effectiveness, self-control, and achievement. Similarly, Kuhnle, Hofer, and Kilian (2011) showed self-control as a significant predictor of life balance and school grades, reporting that regret and motivational interference

were related to life balance. Self-control was related to positive outcomes in life. Additionally, Casillas et al. (2012) reported self-control as a significant predictor of achievement. Further, Duckworth, Quinn, and Tsukayama (2012) proposed that standardized achievement tests measure capabilities determined more by intelligence as compared to self-control, while school grades measure competencies determined more by self-control as compared to intelligence.

Govindaraj and Anusudha (2014) reported no significant relationship between students' self-control and academic achievement but found significant gender differences in 9th-grade students in their self-control and academic achievement. In contrast, Muammar (2015) reported that intelligence and self-control were significantly correlated with GPA. Intelligence and self-control caused 42% of the variance in students' scores, while gifted students' intelligence and self-control caused 59% of the variance in the score. Similarly, Stewart (2015) found a small but significant relationship between self-control and performance. Furthermore, boy and girl students showed slightly different results with respect to grit, self-control, and performance. Self-control predicted academic performance for boy students while for girl students' high school GPA and SAT scores predicted academic performance. No gender differences were found, and the best predictor of GPA of all students was self-control showing that GPA might be associated with self-control levels.

Moreover, Job, Friese, and Bernecker (2016), while studying the effects of self-control on performance reported that students in self-control training conditions obtained higher GPAs and spent more time studying. The findings indicated that self-control has enduring effects on achievement and provides a mechanism for motivation. Judistira and Wijaya (2017) while examining the role of self-control and self-adjustment on achievement reported that these variables correlated with students' achievement. Furthermore, significant gender differences were found between boys and girls with respect to academic achievement, self-control, and self-adjustment.

Furthermore, Karim and Mastuti (2020) found that there was an influence of self-control on students' achievement at high school with a significance value of 0.822 and R of 0.963 meaning that the results of this study had a large percentage of influence. The

regression line equation confirmed a substantial impact of self-control on high school student’s academic achievement in Surabaya. Similarly, Hong, Chen, Wang, Zhu, and Wang (2021) indicated that learners who had high self-control scores and study engagement performed better. Students’ self-control and study engagement were vital predictors of their performances. Additionally, Hua (2022) indicated a favorable and significant link between students’ self-control and academic success.

**Research Methodology**

**Research Design**

It was a descriptive research study using the quantitative approach that aimed to find out the influence of students’ mindset, grit, and self-control on their academic achievement at the secondary school level. Descriptive correlational research was carried out to explain mindset, grit, and self-control skills and was used to describe the characteristics and/or behavior of the population, and to explore how these factors are related to each other and how they are related to academic achievement within the studied population.

**Population and Sample of the Study**

The population consisted of students studying at the secondary school level in Khyber Pakhtunkhwa. Two districts namely Peshawar and Charsadda were chosen as an accessible population for the study. These districts were selected because there were widespread lockdowns and travel restrictions due to the COVID-19 pandemic making it practically impossible to reach

other far-flung districts of the province while it was convenient to conduct the study in these districts. Furthermore, these districts were selected as they came under the jurisdiction of BISE Peshawar, which takes secondary school certificate (SSC) examinations in these districts. In these two districts, 62727 girl students and 94570 boy students were enrolled in 135 Government Girls’ and 199 Government Boys ‘secondary schools respectively. Multi-stage random sampling technique was used and a sample of 798 students consisted of 398 girls and 400 boys was selected for the study.

**Data Collection Instruments**

The researcher used The Brief Self-Control Scale (BSCS) developed by Tangney et al. (2004), It was consisted of 13 items and assessed self-control with a 5-point Likert scale ranging from "Not at all like me" to "Very much like me". Items No. 2,3,4,5,7,9,10,12 and 13 are negative statements that were reverse-coded to align them with other items. Low scores on the instrument depict low self-control, while higher scores on the instrument depict high self-control.

The scale was translated into Urdu which was given along with the English statements. Students’ achievement scores were obtained from the Secondary School Certificate (SSC) Annual Examination 2021 conducted by BISE Peshawar. The participants were informed that the data was to be kept confidential and used only for research purposes. Data were analyzed through computer programs like Microsoft Excel 2018 and IBM SPSS Statistics version 24.0 for windows.

**Results**

**Table 1.** Analysis of Independent Variable Showing Majority Responses and their Significance, N=780

	Level	f	%	M	SD	One sample t-test statistics			
						Mid-Point = 3.0	t	df	M. Diff.
Students’ self-control	Low	131	16.8	3.57	1.00	15.83	779	.57	.000
	Medium	177	22.7						
	High	472	60.5						
	<b>Total</b>	<b>780</b>	<b>100</b>						

Sig. < .05

Table 1 showed that the Mean value of self-control was 3.57, which was higher than 3.0 having a statistically

significant mean difference of 0.57 (t=15.83, Sig=.000). It pointed out that majority of the students

had a high level of self-control (f=472, %=60.5%). It revealed that the majority of the students had a high level of Self-control.

Table 2. Comparison of Independent Variables across Gender, N=780

	Level	Descriptive statistics								Independent sample t-test statistics			
		Boy (f <sub>M</sub> =397)				Girl (f <sub>F</sub> =383)				t	df	M. Diff.	Sig.
		f	%	M	SD	f	%	M	SD				
Students' self-control	Low	67	16.9	3.49	1.03	64	16.7	3.65	0.97	-2.16	778	-0.16	.03
	Med.	120	30.2			57	14.9						
	High	210	52.9			262	68.4						
	Total	397	100			383	100						

Sig. < .05

In table 2, the mean difference (-0.16) between male students' responses (M=3.49) and female students' responses (M=3.65) for Self-control was statistically significant (t=-2.16, Sig. =.03). It indicated that self-control of boy students was different from girl students, and a relatively large number of girl students

had a high level of self-control (f=262, %=68.4%) than boy students (f=210, %=52.9%). It revealed that the self-control of boy students was significantly different from girl students and girl students had a higher level of self-control than boy students.

Table 3. The Linear Relationship between Students' Self-control and Students' Academic Score Using the Pearson Correlation Coefficient, N=780

Students' self-control	Students' academic score	Sig.
	.733	.000

Sig. <.05

Table 3 indicates that there was a strong positive and significant linear relationship between students' self-control and academic score (r=.733, Sig. =.000). This means that if the Students' Self-control increased by 1 unit, students' academic score would also increase by .733 unit.

Table 4. A Linear Relationship between Students' self-control and Students' Academic score using Linear Regression, N=780

Model	R Square	F	Beta	t	Sig.
1	.537	901.888	.733	30.031	.000

Sig. <.05

Table 4 shows that linear regression model 1 was statistically significant (F =901.888, Sig. =.000) and moderately fitted the observed data (R<sup>2</sup>=0.537).

Table 5 also shows shows that the students' self-control significantly and strongly predicted, and positively contributed to the academic Score (Beta=.733, t=30.031, Sig. =.000).

Therefore, on the basis of Pearson correlation and linear regression, the null hypothesis was rejected and it was accepted that students' self-control had a strong

connection between with their Academic achievement.

**Discussion**

The first hypothesis asserted that there is no discernable difference in self-control of students about gender but the study indicated that girl students had high self-control levels. The finding is in line regarding students' self-control with past research (Govindaraj & Anusudha, 2014; Judistira & Wijaya, 2017; Ryan

& Beamish, 2017; Ma & Li, 2023), who reported that girls showed greater self-control than boys with respect to academic achievement, self-control, and self-adjustment. It was noted Ma and Li (2023) conducted their studies in China, which is a more traditional society than the Western world, but the finding is in contrast with Stewart (2015), who showed no gender differences. A reason behind girls showing higher self-control than boys might also be the cultural differences in which the girl students are brought up in society, particularly in Peshawar and Charsadda majority of whom are Pashtuns. They are studying in separate girls' schools and have strong social and moral norms regarding the social values of Parda/hijab. The view is supported by Govindaraj and Anusudha (2014) who found that those girls who were studying in girls' schools had more self-control than boys. Further, this notion is also supported by Liu (2021), whose study tended to support the argument that culture affects students' mindsets, goal orientation, motivation, and achievement. The researcher argues that this might be one of the reasons behind greater self-control in girl students but this notion requires further anthropological/ sociological exploration.

The second hypothesis declared that there was no relationship between students' self-control and their academic achievement. However, the study discovered a high correlation between them, with students' self-control being a strong predictor and contributor to their academic success. The findings are in line with past studies (e.g., Honken et al., 2016; Job et al., 2016; Judistira & Wijaya, 2017; Karim & Mastuti, 2020), which showed a connection between students' self-control and their academic success. Additionally, the outcome supports the viewpoint that individuals having high self-control levels show strong academic performance (Tangney et al., 2004). The finding is in contrast with past studies (eg. Govindaraj & Anusudha, 2014; Stewart, 2015), which reported no significant connection between self-control and academic success. A possible explanation for these findings might be different educational environments or administrative structures.

### **Implications**

This study makes some theoretical and empirical contributions to the present literature on self-control

in relation to student achievement. The social cognitive theory, as presented by Bandura (1986), served as the basis for the study. The study implies that the theories are suitable for explaining and understanding self-control in the target population. The study also implies that understanding these non-cognitive skills may increase the chances of learners' success.

The strong positive link between students' self-control with academic achievement implies the importance of self-control in secondary schools. Educationists should emphasize goal commitment, help students to set long-term goals, and provide them with a supportive environment to reach the goals that promote students' engagement and achievement. Turner, Piquero, and Pratt (2005) have suggested that teacher support is related to high self-control levels in learners. Barbarin and Aikens (2015) have advised teachers to give special attention to learners who have lower self-control and convey high expectations from them through a better teacher-student relationship.

### **Conclusions and Recommendations**

According to the study's findings, most students had high self-control levels. There were gender differences in students' self-control, and girl students had a high self-control level than boy students. As a result, personalized strategies and interventions must be created to meet the particular needs of both male and female learners. Regardless of gender, efforts ought to be made to empower all students. Further, Students' self-control showed a significant and strong positive connection with academic achievement. Self-control also strongly predicted and positively contributed toward students' achievement. These findings support the need for teachers to provide students with the skills to delay gratification, manage distractions, and maintain attention on academic work so as to improve their self-control, which leads to better academic achievement. Future research can examine how academic achievement and self-control is shaped by family, schools, and society throwing light on how these affect students' achievement. A comprehensive intervention approach may be required by using a mixed-method approach to further explore these research findings.

## REFERENCES

- Atchia, S. M. C., & Chinapah, V. (2019). Factors affecting academic achievement of secondary school students in Mauritius. *Journal of Education and Research*, 9(1), 70-90. doi.org/10.3126/jer.v9i1.28825
- Barbarin, O. A., & Aikens, N. (2015). Overcoming the Educational Disadvantages of Poor Children: How Much Do Teacher Preparation, Workload, and Expectations Matter. *American Journal of Orthopsychiatry*, 85(2), 101-205. Doi:10.1037/ort0000060
- Batool, S.S. (2020) Academic achievement: Interplay of positive parenting, self-esteem, and academic procrastination, *Australian Journal of Psychology*, 72(2), 174-187. doi: 10.1111/ajpy.12280
- Baumeister, R. F., Vohs, K. D., & Tice, D. M. (2007). The strength model of self-control. *Current Directions in Psychological Science*, 16(6), 351-355. Retrieved from [https://www.researchgate.net/publication/228079571\\_The\\_Strength\\_Model\\_of\\_Self](https://www.researchgate.net/publication/228079571_The_Strength_Model_of_Self)
- Carpenter, L., (2018). Feedback and Growth Mindset: Nurturing a Growth Mindset Through Feedback with Middle School Students (Master Thesis, Department of Education, Dordt College, Sioux Center, Iowa, US). Retrieved from [https://digitalcollections.dordt.edu/cgi/viewcontent.cgi?article=1122&context=med\\_theses](https://digitalcollections.dordt.edu/cgi/viewcontent.cgi?article=1122&context=med_theses)
- Casillas, A., Robbins, S., Allen, J., Kuo, Y. L., Hanson, M. A., & Schmeiser, C. (2012). Predicting Early Academic Failure in High School from Prior Academic Achievement, Psychosocial Characteristics, and Behavior. *Journal of Educational Psychology*, 104(2), 407-420. Doi.org/10.1037/a0027180
- Costello, J. (2019). Relationship between Non-Cognitive Skills and Mathematics Achievement. (Ph.D. dissertation, College of Education, Walden University, Minnesota, US). Retrieved from <https://scholarworks.waldenu.edu/dissertations/6781/>
- Duckworth, A. L., & Steinberg, L. (2015). Unpacking Self-control. *Child Development Perspectives*, 9(1), 32-37. Retrieved from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4372146/>
- Duckworth, A. L., Quinn, P. D., & Tsukayama, E. (2012). What No Child Left Behind Leaves Behind: The Roles of IQ and Self-Control in Predicting Standardized Achievement Test Scores and Report Card Grades. *Journal of Educational Psychology Advance online publication*, 104(2), 439-451. Doi: 10.1037/a0026280
- Duckworth, A. L., Taxer, J. L., Winkler, L. E., Galla, B. M., & Gross, J. J. (2019). Self-Control and Academic Achievement. *Annual Review of Psychology*, 70, 373-399. doi: 10.1146/annurev-psych-010418-103230
- Duckworth, A., & Gross, J.J. (2014). Self-Control and Grit: Related but Separable Determinants of Success. *Current Directions in Psychological Science*, 23(5), 319-325. Retrieved from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4737958/>
- Einck, C. (2017). Growth Mindset Affects Elementary Students (Master Thesis, Northwestern College, Orange City, Iowa, US). Retrieved from [http://nwcommons.nwciowa.edu/education\\_masters/39/](http://nwcommons.nwciowa.edu/education_masters/39/)
- Farrugia, S., Han, C., Watson, L., Moss, T. & Bottoms, B. (2016). Non-cognitive Factors and College Student Success. *Journal of College Student Retention: Research, Theory & Practice*, 20(3), 308-327. Retrieved from [https://www.researchgate.net/publication/308667414\\_Noncognitive\\_Factors\\_and\\_College\\_Student\\_Success](https://www.researchgate.net/publication/308667414_Noncognitive_Factors_and_College_Student_Success)
- Gottfried, A. E., Marcoulides, G. A., Gottfried, A. W., & Oliver, P. H. (2009). A latent curve model of parental motivational practices and developmental decline in math and science academic intrinsic motivation. *Journal of educational psychology*, 101(3), 729. doi: 10.1037/a0015084

- Govindaraj, S., & Anusudha, K. (2014). Parental Involvement, Self-Control and Academic Achievement among 9th Standard Students. *Shanlax International Journal of Education*, 3(1), 88-95. Retrieved from [http://www.shanlaxjournals.in/pdf/EDN/V3/N1/EDN\\_V3\\_N1\\_011.pdf](http://www.shanlaxjournals.in/pdf/EDN/V3/N1/EDN_V3_N1_011.pdf)
- Gutman, L. M., & Schoon, I. (2013). The Impact of Non-Cognitive Skills on Outcomes for Young People (UCL DISCOVERY Report). Retrieved from UCL DISCOVERY: <https://discovery.ucl.ac.uk/id/eprint/101257/63/>
- Hafilah, E. N., & Usman, O. (2019). The Effect of Self-Control, Motivation, Learning and Behavior on the Level of Understanding in Accounting, Accounting Students Faculty of Economic State University of Jakarta. *SSRN Electronic Journal*. Doi.10.2139/ssrn.3415078
- Hong, Q., Chen, L., Wang, K., Zhu, J., & Wang, S. (2021). The role of self-control and study engagement in improving oral expression and written statement ability of freshmen. *International Conference on Education, Humanities, Management and Information Technology (EHMIT)*, Wuhan University, Wuhan, Hubei, China. Retrieved from [https://webofproceedings.org/proceedings\\_series/ESSP/EHMIT%202021/L006.pdf](https://webofproceedings.org/proceedings_series/ESSP/EHMIT%202021/L006.pdf)
- Honken, N., Ralston, P. A., & Tretter, T. R. (2016). Self-control and Academic Performance in Engineering. *American Journal of Engineering Education*, 7(2), 47-58. Retrieved from <https://files.eric.ed.gov/fulltext/EJ1122982.pdf>
- Inzlicht, M., Legault, L., & Teper, R., (2014). Exploring the Mechanisms of Self-Control Improvement. *Current Directions in Psychological Science*, 23(4), 302-307. Retrieved from [https://www.researchgate.net/publication/272021426\\_Exploring\\_the\\_Mechanisms\\_of\\_Self-Control\\_Improvement](https://www.researchgate.net/publication/272021426_Exploring_the_Mechanisms_of_Self-Control_Improvement)
- Job, V., Friese, M., & Bernecker, K. (2016). Effects of Practicing Self-Control on Academic Performance. *Motivation Science*, 1(4), 219-232. <https://doi.org/10.1037/mot0000024>
- Judistira, A. A., & Wijaya, H. E. (2017). The Role of Self-control and Self-adjustment on Academic Achievement among Junior High School Students. *Advances in Social Science, Education and Humanities Research*, 128, 122-125. Retrieved from <https://doi.org/10.2991/icet-17.2017.19>
- Karim, M. A. A., & Mastuti, E. (2020). Self-Control on the Effect of Online Games for Students' Academic Achievement. *Palarch's Journal of Archaeology of Egypt/Egyptology*, 17(4), 2642-2647. Retrieved from <https://archives.palarch.nl/index.php/jae/article/view/3816>
- Karim, S., & Ghavam, E. (2011). The Relationship between Self-control, Self-effectiveness, Academic Performance and Tendency towards Academic Cheating: A Case Report of a University Survey in Iran. *Malaysian Journal of Distance Education*, 13(2), 1-8. Retrieved from [http://mjde.usm.my/vol13\\_2\\_2011/mjde13\\_2\\_1.pdf](http://mjde.usm.my/vol13_2_2011/mjde13_2_1.pdf)
- Khan, N. (2018). The Impact of Mindset and Grit on Academic Success in Math and Science (Ph.D. Dissertation, Hofstra University, Hempstead, New York). Retrieved from <https://www.proquest.com/openview/67de07ef267aefbc33f2e1d1d98291d6/1?pq-origsite=gscholar&cbl=18750>
- Kothari, C. R. (2004). *Research Methodology: Methods and Techniques* (2<sup>nd</sup> Edition). New Delhi: New Age International (P) Limited.
- Kuhnle, C., Hofer, M., & Kilian, B. (2011). The Relationship of Self-control, Procrastination, Motivational Interference and Regret with School Grades and Life Balance. *Journal of Childhood and Adolescence Research*, 6(1), 31-44. Retrieved from <https://nbn-resolving.org/urn:nbn:de:0168-ssoa-385735>
- Liu, W. C. (2021) Implicit Theories of Intelligence and Achievement Goals: A Look at Students' Intrinsic Motivation and Achievement in Mathematics. *Frontiers in Psychology*, 12, 1-12. Doi:10.3389/fpsyg.2021.593715

- Ma, S., & Li, Y. (2023). The impact between self-control on academic performance among Chinese adolescents. *Journal of Education, Humanities and Social Sciences*, 8,1497-1501. doi.org/10.54097/ehss.v8i.4510
- Manandhar, T., & Shrestha, P. (2019). A Study on Relationship between Self-Discipline and Study Habits among Nursing Students at Bhaktapur, Nepal. *International Journal of Health Sciences and Research*, 9(5), 242-248. Retrieved from [https://www.ijhsr.org/IJHSR\\_Vol.9\\_Issue.5\\_May2019/36.pdf](https://www.ijhsr.org/IJHSR_Vol.9_Issue.5_May2019/36.pdf)
- Muammar, O. M. (2015). Intelligence and Self-control Predict Academic Performance of Gifted and Non-Gifted Students. *Turkish Journal of Giftedness and Education*, 5(1), 67-81. Retrieved from [https://www.researchgate.net/publication/280621969\\_Intelligence\\_and\\_Self-Control\\_Predict\\_Academic\\_Performance\\_of\\_Gifted\\_and\\_Non-gifted\\_Students](https://www.researchgate.net/publication/280621969_Intelligence_and_Self-Control_Predict_Academic_Performance_of_Gifted_and_Non-gifted_Students)
- Ryan, A., & Beamish, P. (2017). Mindset, Perseverance and Learning. *TEACH Journal of Christian Education*, 12(2), 43-50. Retrieved from <https://research.avondale.edu.au/teach/vol12/iss2/8/>
- Stavrova, O., Pronka, T., & Kokkorisb, M. D. (2018). Finding Meaning in Self-Control: The Effect of Self-Control on the Perception of Meaning in Life. *Self and Identity*, 19(2), 201-218. DOI: [10.1080/15298868.2018.1558107](https://doi.org/10.1080/15298868.2018.1558107)
- Stewart, S. B. (2015). Grit and Self-Control as Predictors of First-Year Student Success (Ph.D. Dissertation, the University of Southern Maine, US). Retrieved from <https://digitalcommons.usm.maine.edu/cgi/viewcontent.cgi?article=1172&context=etd>
- Turner, M. G., Piquero, A. R., & Pratt, T. C. (2005). The School Context as a Source of Self-Control. *Journal of Criminal Justice*, 33(4), 327-339. [Doi:10.1016/j.jcrimjus.2005.04.003](https://doi.org/10.1016/j.jcrimjus.2005.04.003)
- Ullah, N., & Almani, A. S. (2022). Factors affecting students' academic performance: A case study of secondary schools of Makran Division Balochistan, Pakistan. *Webology*, 19, 2749-2764. Retrieved from <http://www.webology.org>

