

SOCIO-ECONOMIC AND PSYCHOLOGICAL INFLUENCES ON ACADEMIC SUCCESS IN MANIPUR'S HIGHER SECONDARY EDUCATION

Kangjam Dijita Devi,

Assistant Professor, Department of Education, T S Paul Manipur Women College (India), dijita.kangjam@gmail.com

This study investigates the influence of socio-economic and psychological status on the academic performance of higher secondary school students in Manipur. A total of 360 students from 12 higher secondary schools in Imphal East District were selected through simple random sampling to participate in a survey conducted during the 2024-25 academic year. The study aims to: (1) examine the relationship between socio-economic status and academic performance, and (2) assess the impact of psychological factors, including motivation, self-esteem, and mental health, on academic performance. Data were collected using the Socio-economic Status Scale developed by Kuppaswamy (1981), the Academic Motivation Scale (AMS-HS 28) by Vallerand et al. (1989), Rosenberg's Self-Esteem Scale (RSE) developed by Rosenberg (1979), and Depression, Anxiety, and Stress Scale (DASS-21) developed by Lovibond and Lovibond (1995). The data collection and test administration occurred from January to May 2024, following ethical guidelines and obtaining written consent from participants and schools. Using Pearson Product-Moment Correlation and IBM SPSS Statistics Version 22 for data analysis, the findings indicate that higher socio-economic status scores are significantly associated with better academic performance. Additionally, higher levels of academic motivation, self-esteem, and mental health are all positively correlated with improved academic performance.

Key words: Socio-economic Status, Academic Performance, Motivation, Self-esteem, Mental Health status

Subject Area: Education

1. INTRODUCTION

Academic performance, defined as the measurable outcomes of students in educational contexts (Krys et al., 2020) or their achievement levels on educational tasks and assessments (Tomasik et al., 2019), is subject to a complex interplay of various factors, including socio-economic and psychological variables. Socio-economic status (SES), which includes indicators such as parental education levels, family income, occupation, and material and cultural resources, significantly impacts students' access to educational resources and opportunities. Investigating these factors is critical for the development of effective educational strategies and policies.

In Manipur, a state in north-eastern India characterized by a diverse socio-economic environment, it is particularly pertinent to examine how SES influences academic performance. Existing literature indicates that students from higher SES backgrounds generally exhibit superior academic performance, attributable to better access to educational resources, more supportive home environments, and increased parental involvement in education (Sirin, 2005; Jeynes, 2002; Duncan & Murnane, 2011; Bradley & Corwyn, 2002).

In addition to socio-economic factors, psychological variables such as motivation, self-esteem, and mental health are crucial determinants of academic success. Students exhibiting high motivation, robust self-esteem, and stable mental health are typically better performers academically. Conversely, those experiencing psychological difficulties such as stress, anxiety, or low self-esteem may face significant challenges in their academic pursuits.

Despite the acknowledged impact of socio-economic and psychological factors on academic performance, there is a paucity of research focusing specifically on these influences within the context of higher secondary schools in Manipur. Addressing this gap is essential for the formulation of targeted

educational interventions that support students from varying socio-economic backgrounds and address psychological issues that may impede academic achievement.

1.1 Literature Review

Academic Performance and Its Influencing Factors

Academic performance is a multifaceted concept that encompasses both cognitive and non-cognitive attributes, as well as socio-cultural contexts (Krys et al., 2020). It is often viewed as a measurable indicator of learning gain and is crucial for educational institutions. Moreover, academic performance is linked to long-term success; a significant increase in academic performance correlates positively with thriving outcomes in young adulthood (Tomasik et al., 2019). The integration of advanced technologies, such as feature-weighted support vector machines and artificial neural networks, has been proposed to enhance the prediction of student performance, underscoring the role of technology in educational research (Hagen & Solem, 2020).

Grit and Its Role in Academic Success

Grit, defined as the personality trait characterized by passion and perseverance for long-term goals, has been identified as a predictor of academic success. This trait involves consistency of interests and perseverance of effort, with research indicating that grit contributes to increased performance, retention, and overall well-being (Schimschal et al., 2023; Okafor et al., 2022; Morell et al., 2021). Grit buffers against stress and improves health outcomes, reflecting the complexity of factors influencing academic performance (Liem, 2019).

Impact of Socio-Economic Status (SES) on Academic Performance

Socio-economic status (SES) is a significant determinant of students' academic performance. Lower SES is associated with greater emotional distress before exams, which can negatively affect well-being and academic outcomes (Rahal et al., 2022). Research highlights the interaction between SES, working memory (WM), and academic self-concept (ASC), with lower SES, WM, and ASC correlating with poorer academic performance (Chevalère et al., 2023). Family SES influences children's primary school performance and persists across generations, emphasizing the importance of equity in educational outcomes (Stumm et al., 2022). In India, class stratification and social status beyond economic factors also impact academic achievement (John et al., 2020). Furthermore, low-SES students often exhibit lower engagement levels, which mediate the relationship between SES and academic achievement, making engagement a critical focus for improving educational outcomes (Tomaszewski et al., 2020).

Psychological Factors Influencing Academic Achievement

Psychological factors such as motivation, self-esteem, and mental health significantly affect academic achievement. Intrinsic motivation and self-esteem are key predictors of academic success and are mediated by cognitive abilities like verbal fluency and reasoning (Mammadov & Tozoglu, 2022). Autonomy support from teachers and parents along with personality traits like conscientiousness and openness impacted academic performance through their influence on autonomous motivation (Min et al., 2022). Psychological well-being serves as a mediator between self-efficacy, affective commitment, and academic achievement (Agnafors et al., 2021). Additionally, early intervention for mental health issues is crucial as these issues have been linked to poor academic performance in childhood and adolescence, highlighting the need for awareness and treatment to ensure equitable educational opportunities (Jeno et al., 2021).

1.2 Research Objectives

1. Investigate the relationship between socio-economic status and academic performance among students in higher secondary schools in Manipur.
2. Examine the impact of psychological factors, including motivation, self-esteem, and mental health, on academic performance.

1.3 Research hypotheses

1. There will be a positive correlation between socio-economic status and academic performance, with higher SES being associated with better academic outcomes.
2. Higher levels of motivation will be positively correlated with higher academic performance among students.
3. Students with higher self-esteem will demonstrate better academic performance compared to students with lower self-esteem.
4. Better mental health (lower levels of depression, anxiety, and stress) will be associated with higher academic performance among students.

2. MATERIALS AND METHODS

2.1 Participants

A total of 360 students from 12 higher secondary schools located within Imphal East District of Manipur participated in this study. The participants were selected through a simple random sampling technique from a total population of 3,500 students. The sample size was determined using Yamane’s Formula (Yamane, 1967). Students who were unable to read and write in English were excluded from the study. The participants' ages ranged from 16 to 18 years.

2.2 Tools

- **Socio-Economic Status (SES):** SES was measured using the Socio-Economic Status Scale developed by Kuppuswamy (1981).
- **Academic Motivation:** The Academic Motivation Scale (AMS-HS 28) by Vallerand et al. (1989), consisting of 28 items, was used to assess students' motivation levels.
- **Self-Esteem:** Rosenberg’s Self-Esteem Scale (RSE), a 10-item scale developed by Rosenberg (1979), was employed to measure students' self-esteem.
- **Mental Health:** Students' mental health was assessed using the 21-item Depression, Anxiety, and Stress Scale (DASS) developed by Lovibond and Lovibond (1995).
- **Academic Performance:** Academic performance was measured based on the percentages of marks obtained by the students in the High School Leaving Certificate Examination (HSLCE) conducted by the Board of Secondary Education Manipur (BOSEM) in 2023.

2.3 Data Collection and Analysis Protocols

Data collection and test administration began in early January 2024 and concluded in the last week of May 2024. The process took place during regular school hours, following the written consent of both the participants and the involved schools. All ethical guidelines were strictly followed. The data were analyzed using IBM SPSS Statistics Version 22, and Pearson Product-Moment Correlation was employed to evaluate the relationships among the variables.

3. RESULTS AND DISCUSSIONS

The impact of Socio-Economic Status on the academic performance

Table 1: The relationship between SESS Score and academic performance

Variables	Mean	Std. Dev.	N	r	Sig.
SESS Scores	15.84	8.06	360	0.85*	.038
Academic performance	73.61	10.96	360		

Note: *. Correlation is significant at the 0.05 level (2-tailed).

The analysis of the relationship between socio-economic status (SES) scores and academic performance among the 360 higher secondary students in Imphal East District of Manipur yielded a statistically significant correlation ($r = 0.85$, $p = .038$). This indicates a strong positive relationship, suggesting that as SES scores increase, academic performance, measured by students' marks, tends to improve as well. The mean SES score was 15.84 ($SD = 8.06$), while the mean academic performance score was 73.61 ($SD = 10.96$). The significance level of .038 suggests that the observed correlation is statistically significant at the 0.05 level.

The findings of this study align with existing literature that emphasizes the influence of socio-economic status on academic achievement. Higher SES is often associated with access to better educational resources, parental support, and a conducive learning environment, all of which contribute to improved academic performance (Sirin, 2005). The strong correlation ($r = 0.85$) in this study suggests that socio-economic factors are a substantial predictor of academic outcomes among students.

However, while the correlation is significant, it is essential to consider other variables that may mediate or moderate this relationship. Factors such as motivation, self-esteem, mental health, and school environment have also been shown to play critical roles in academic success (Voyer & Voyer, 2014). Therefore, while SES is an important factor, it should be viewed in conjunction with these other influences to gain a comprehensive understanding of academic performance.

Furthermore, the study's context in Imphal East District, where socio-economic conditions may be relatively homogeneous, could contribute to the strength of this relationship. In regions with diverse socio-economic backgrounds, the relationship might manifest differently, indicating the need for further research in varied settings to explore the complexity of these dynamics.

Overall, this study underscores the importance of addressing socio-economic disparities in educational policy and practice to promote equitable academic outcomes for all students.

The impact of motivation on academic performance of students

Table 2: The impact of motivation on academic performance

Variables	Mean	Std. Dev.	N	r	Sig.
Academic Motivation Scores	169.72	9.06	360	0.69*	.000
Academic performance	73.61	10.96	360		

Note: *. Correlation is significant at the 0.05 level (2-tailed).

Source: Computed from the field survey data

The analysis of the relationship between academic motivation and academic performance among 360 higher secondary students revealed a moderate positive correlation ($r = 0.69$, $p < .001$). This suggests that higher levels of academic motivation are associated with better academic performance. The mean academic motivation score was 169.72 ($SD = 9.06$), while the mean academic performance score was 73.61 ($SD = 10.96$). The correlation is statistically significant at the 0.05 level, with a p-value of .000, indicating that the observed relationship is highly unlikely to be due to chance.

The moderate correlation ($r = 0.69$) between academic motivation and academic performance underscores the important role that motivation plays in students' academic success. This finding aligns with existing research that highlights motivation as a key factor in educational achievement (Deci & Ryan, 2000; Robbins et al., 2004). Motivated students are more likely to engage actively with their coursework, employ effective study strategies, and persist through academic challenges, all of which contribute to higher academic performance.

The strength of the correlation ($r = 0.69$) indicates that while motivation significantly impacts academic performance, other factors also play a role. These may include cognitive abilities, the quality of instruction, and socio-economic factors (Pintrich & De Groot, 1990; Wigfield & Eccles, 2000). The

significant p-value ($< .001$) further supports the robustness of the relationship, suggesting that motivation is a reliable predictor of academic success in this sample.

Educational interventions aimed at enhancing students' intrinsic and extrinsic motivation, such as setting achievable goals, providing meaningful feedback, and fostering a supportive learning environment, could be effective strategies for improving academic outcomes (Ryan & Deci, 2000). Given the moderate correlation, it is essential to consider a holistic approach that also addresses other influencing factors to optimize student performance..

The impact of self-esteem on academic performance of the students

Table 3: The impact of self-esteem on academic performance

Variables	Mean	Std. Dev.	N	r	Sig.
Self-esteemed Score	35.93	3.16	360	0.78*	.000
Academic performance	73.61	10.96	360		

Note: *. Correlation is significant at the 0.05 level (2-tailed).

Source: Computed from the field survey data

The analysis of the relationship between self-esteem and academic performance among 360 higher secondary students indicated a strong positive correlation ($r = 0.78$, $p < .001$). This suggests that students with higher self-esteem tend to achieve better academic performance. The mean self-esteem score was 35.93 (SD = 3.16), while the mean academic performance score was 73.61 (SD = 10.96). The correlation is statistically significant at the 0.05 level, with a p-value of .000, meaning the likelihood of this result occurring by chance is extremely low.

The strong correlation ($r = 0.78$) between self-esteem and academic performance highlights the crucial role that self-esteem plays in students' educational outcomes. Self-esteem, which reflects an individual's overall sense of self-worth and personal value, has been widely recognized as a key predictor of academic success (Baumeister et al., 2003; Marsh & Craven, 2006). Students with high self-esteem are more likely to set and pursue challenging academic goals, exhibit resilience in the face of difficulties, and engage more deeply in learning activities, leading to higher academic achievement.

The significant positive relationship found in this study supports the notion that fostering self-esteem in students can have a beneficial impact on their academic performance. Educational practices that build students' confidence, provide positive reinforcement, and create a supportive learning environment can enhance self-esteem and, consequently, improve academic outcomes (Hattie, 2012).

However, while the correlation is strong, it is important to recognize that self-esteem is just one of many factors influencing academic performance. Other factors, such as motivation, cognitive abilities, and socio-economic status, also contribute to students' academic success (Pintrich & De Groot, 1990). Therefore, interventions aimed at improving academic performance should take a holistic approach that addresses multiple aspects of students' development.

3.4 The impact of mental health on academic performance of the students

Table 4: The impact of mental health on academic performance

Variables	Mean	Std. Dev.	N	r	Sig.
Depression Score	8.41	3.85	360	0.68*	.000
Anxiety Score	6.52	3.27	360	0.65*	.000
Stress Score	13.20	5.20	360	0.61*	.000
Overall Mental Health Score	28.13	4.11	360	0.65*	.000
Academic performance	73.61	10.96	360		

Note: *. Correlation is significant at the 0.05 level (2-tailed).

Source: Computed from the field survey data

The analysis of the relationship between various aspects of mental health and academic performance among 360 higher secondary students revealed significant negative correlations. Specifically:

- Depression scores were moderately correlated with academic performance ($r = 0.68$, $p < .001$), suggesting that higher levels of depression are associated with poorer academic performance.
- Anxiety scores also showed a moderate correlation with academic performance ($r = 0.65$, $p < .001$), indicating that increased anxiety levels correspond to lower academic achievement.
- Stress scores were moderately correlated with academic performance ($r = 0.61$, $p < .001$), implying that higher stress levels are linked to lower academic performance.
- The overall mental health score, which combines depression, anxiety, and stress, was moderately correlated with academic performance ($r = 0.65$, $p < .001$). This indicates that poorer mental health is associated with reduced academic success.

The mean scores for depression, anxiety, stress, and overall mental health were 8.41 (SD = 3.85), 6.52 (SD = 3.27), 13.20 (SD = 5.20), and 28.13 (SD = 4.11), respectively, with a mean academic performance score of 73.61 (SD = 10.96). The significant correlations suggest that mental health issues negatively impact students' academic performance.

The results demonstrate that mental health is a crucial factor influencing academic performance among higher secondary students. The moderate negative correlations between depression, anxiety, stress, and academic performance are consistent with existing literature, which highlights the detrimental effects of mental health issues on students' educational outcomes (Eisenberg et al., 2009; Suldo et al., 2011).

Depression, characterized by persistent feelings of sadness and loss of interest, can severely impair students' ability to concentrate, complete assignments, and engage in classroom activities, leading to lower academic achievement (Hammen, 2005). Similarly, anxiety, which often manifests as excessive worry and fear, can disrupt students' cognitive processes and hinder their performance in exams and other academic tasks (Beilock, 2008). Stress, which can result from academic pressures, personal issues, and other life challenges, further exacerbates these negative effects by overwhelming students' coping mechanisms (Lazarus & Folkman, 1984).

The overall mental health score's moderate correlation with academic performance underscores the cumulative impact of these mental health issues. Addressing students' mental health through early intervention, counselling, and supportive educational environments is essential for enhancing their academic success. Schools and educators should prioritize mental health initiatives, such as mindfulness programs, stress management workshops, and access to mental health professionals, to help students manage their mental well-being and achieve better academic outcomes (Durlak et al., 2011).

4. CONCLUSION

In this study, we examined the interplay between socio-economic status, academic motivation, self-esteem, mental health, and academic performance among higher secondary students in Imphal East District, Manipur. The results highlight that academic motivation and self-esteem are strongly associated with better academic achievement, while poorer mental health, including higher levels of depression, anxiety, and stress, correlates with lower academic performance. These findings suggest that addressing both psychological well-being and socio-economic factors is essential for improving academic outcomes.

However, there are some limitations to consider. The cross-sectional nature of the study means we cannot determine causal relationships between the variables. The sample was restricted to a specific region, which may limit the applicability of the results to other areas or populations. Self-report measures for psychological variables may also introduce biases, and the exclusion of students who cannot read or write English might have impacted the findings. Furthermore, the study focused on a limited range of psychological and socio-economic factors, potentially overlooking other important influences like cognitive abilities, school environment, and family support.

Future research could address these limitations by exploring these relationships over a longer period to better understand causation. Expanding the study to include diverse populations from different regions and educational settings could enhance the generalizability of the findings. Incorporating both qualitative and quantitative methods may provide a more comprehensive view of the factors affecting academic performance. Additionally, examining other variables, such as cognitive abilities and parental involvement, could offer further insights. Finally, developing and evaluating intervention programs designed to improve students' psychological well-being and socio-economic conditions could help assess their impact on academic performance. These approaches could contribute to a more thorough understanding of the factors influencing academic success and inform effective educational policies and practices.

References

- Agnafor, S., Barmark, M. M., & Sydsjö, G. (2021). Mental health and academic performance: a study on selection and causation effects from childhood to early adulthood. *Social Psychiatry and Psychiatric Epidemiol* , 56(5), 857-866. <https://doi.org/10.1007/s00127-020-01934-5>.
- Baumeister, R. F., Campbell, J. D., Krueger, J. I., & Vohs, K. D. (2003). Does high self-esteem cause better performance, interpersonal success, happiness, or healthier lifestyles? *Psychological Science in the Public Interest*, 4(1), 1-44. <https://doi.org/10.1111/1529-1006.01431>
- Beilock, S. L. (2008). Math performance in stressful situations. *Current Directions in Psychological Science*, 17(5), 339-343. <https://doi.org/10.1111/j.1467-8721.2008.00602.x>
- Bradley, R. H., & Corwyn, R. F. (2002). Socioeconomic status and child development. *Annual Review of Psychology* , 53, 371-399. doi:10.1146/annurev.psych.53.100901.135233.
- Chevalère, J., Cazenave, L., Wollast, R., Berthon, M., Martinez, R., Mazenod, V., et al. (2023). The influence of socioeconomic status, working memory and academic self-concept on academic achievement. *European Journal of Psychology Education* , 38, 287–309 . <https://doi.org/10.1007/s10212-022-00599-9>.
- Deci, E. L., & Ryan, R. M. (2000). The "what" and "why" of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, 11(4), 227-268. https://doi.org/10.1207/S15327965PLI1104_01
- Duncan, G. J., & Murnane, R. J. (2011). *Whither Opportunity?: Rising Inequality, Schools, and Children's Life Chances*. New York: Russell Sage Foundation.
- Durlak, J. A., Weissberg, R. P., Dymnicki, A. B., Taylor, R. D., & Schellinger, K. B. (2011). The impact of enhancing students' social and emotional learning: A meta-analysis of school-based universal interventions. *Child Development*, 82(1), 405-432. <https://doi.org/10.1111/j.1467-8624.2010.01564.x>
- Eisenberg, D., Golberstein, E., & Hunt, J. B. (2009). Mental health and academic success in college. *The B.E. Journal of Economic Analysis & Policy*, 9(1). <https://doi.org/10.2202/1935-1682.2191>
- Hagen, F. S., & Solem, S. (2020). Academic Performance: The Role of Grit Compared to Short and Comprehensive Inventories of Conscientiousness. *SAGE Journals. Collection* , <https://doi.org/10.25384/SAGE.c.5034626.v1>
- Hammen, C. (2005). Stress and depression. *Annual Review of Clinical Psychology*, 1, 293-319. <https://doi.org/10.1146/annurev.clinpsy.1.102803.143938>
- Huang, C., Zhou, J., Chen, J., Yang, J., Clawson, K., & Peng, Y. (2023). A feature weighted support vector machine and artificial neural network algorithm for academic course performance prediction. *Neural Comput & Applic* , 35, 11517–11529. <https://doi.org/10.1007/s00521-021-05962-3>.
- Jeno, L. M., Nylén, J., Hole, T. N., Raaheim, A., Velle, G., & Vandvik, V. (2021). Motivational Determinants of Students' Academic Functioning: The Role of Autonomy-support, Autonomous Motivation, and Perceived

- Competence. *Scandinavian Journal of Educational Research* , 67(2), 194–211. <https://doi.org/10.1080/00313831.2021.1990125>.
- Jeynes, W. H. (2002). Examining the effects of parental absence on the academic achievement of adolescents: The challenge of controlling for family income. *Journal of Family and Economic Issues* , 23(2), 189–210. doi:10.1023/A:1015790701554.
- John, R. K., Xavier, B., Waldmeier, A., Meyer, A. H., & Gaab, J. (2020). The governmental ranking of class and the academic performance of Indian adolescents. *PLOS ONE* , <https://doi.org/10.1371/journal.pone.0241483>.
- Hattie, J. (2012). *Visible learning for teachers: Maximizing impact on learning*. Routledge.
- Kuppuswamy, B. (1981). *Manual of Socioeconomic Status (urban)*, New Delhi: Manasayan.
- Krys, S., Otte, K.-P., & Knipfer, K. (2020). Academic performance: A longitudinal study on the role of goal-directed rumination and psychological distress. *Anxiety Stress and Coping* , 33(5), 545–559.
- Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal, and coping*. Springer.
- Liem, G. A. (2019). Academic performance and assessment. *Educational Psychology* , 39(6), 705–708. <https://doi.org/10.1080/01443410.2019.1625522>.
- Lovibond, S.H. & Lovibond, P.F. (1995). *Manual for the Depression Anxiety & Stress Scales*. (2nd Ed.) Sydney: Psychology Foundation.
- Mammadov, S., & Tozoglu, D. (2022). Autonomy support, personality, and mindset in predicting academic performance among early adolescents: The mediating role of self-determined motivation. *Psychology in the Schools* , 60(10), 3754–3769. <https://doi.org/10.1002/pits.22966>.
- Marsh, H. W., & Craven, R. G. (2006). Reciprocal effects of self-concept and performance from a multidimensional perspective: Beyond seductive pleasure and unidimensional perspectives. *Perspectives on Psychological Science*, 1(2), 133–163. <https://doi.org/10.1111/j.1745-6916.2006.00010.x>
- Min, W., Jun, G., & Feng, L. (2022). How Psychological Wellbeing and Digital Mental Health Services Intervene the Role of Self-Efficacy and Affective Commitment of University Students in Their Performance? *Frontiers in Psychiatry* , 13: 946793. <https://doi.org/10.3389/fpsy.2022.946793>.
- Morell, M., Yang, J. S., Gladstone, J. R., Faust, L. T., Ponnock, A. R., Lim, H. J., et al. (2021). Grit: The long and short of it. *Journal of Educational Psychology* , 113(5), 1038–1058.
- Okafor, C. N., Brennan-Ing, M., Ware, D., Haberlen, S., Egan, J., Brown, A. L., et al. (2022). Grit is associated with psychological health among older sexual minority men. *Aging & Mental Health* , 27(2), 434–444. <https://doi.org/10.1080/13607863.2022.2032594>.
- Pintrich, P. R., & De Groot, E. V. (1990). Motivational and self-regulated learning components of classroom academic performance. *Journal of Educational Psychology*, 82(1), 33–40. <https://doi.org/10.1037/0022-0663.82.1.33>
- Rahal, D., Shaw, S. T., & Stigler, J. W. (2022). Lower socioeconomic status is related to poorer emotional well-being prior to academic exams. *Anxiety Stress and Coping* , 36(4), 502–518. <https://doi.org/10.1080/10615806.2022.2110588>.
- Robbins, S. B., Lauver, K., Le, H., Davis, D., Langley, R., & Carlstrom, A. (2004). Do psychosocial and study skill factors predict college outcomes? A meta-analysis. *Psychological Bulletin*, 130(2), 261–288. <https://doi.org/10.1037/0033-2909.130.2.261>
- Rosenberg, M. (1979). *Conceiving the Self*. New York: Basic Books.
- Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*, 55(1), 68–78. <https://doi.org/10.1037/0003-066X.55.1.68>

- Schimschal, S. E., Cleary, M., Kornhaber, R. A., Barnett, T., & Visentin, D. C. (2023). Psychometric Evaluation of the Grit Psychological Resources Scale (GPRS). *Journal of multidisciplinary healthcare* , 16(9), DOI <https://doi.org/10.2147/JMDH.S401652>.
- Schimschal, S. E., Visentin, D., Kornhaber, R., Barnett, T., & Cleary, M. (2022). Development of a scale to measure the psychological resources of grit in adults. *Nursing & Health Sciences* , 24(3), 752-763. <https://doi.org/10.1111/nhs.12973>.
- Sirin, S. R. (2005). Socioeconomic status and academic achievement: A meta-analytic review of research. *Review of Educational Research*, 75(3), 417-453. <https://doi.org/10.3102/00346543075003417>
- Stumm, S. v., Cave, S. N., & Wakeling, P. (2022). Persistent association between family socioeconomic status and primary school performance in Britain over 95 years. *npj Science of Learning* , 7, 4. <https://doi.org/10.1038/s41539-022-00120-3>.
- Suldo, S. M., Thalji, A., & Ferron, J. (2011). Longitudinal academic outcomes predicted by early adolescents' subjective well-being, psychopathology, and mental health status yielded by a dual-factor model. *Journal of Positive Psychology*, 6(1), 17-30. <https://doi.org/10.1080/17439760.2010.536774>
- Tomasik, M. J., Napolitano, C. M., & Moser, U. (2019). Trajectories of Academic Performance Across Compulsory Schooling and Thriving in Young Adulthood. *Child Development* , 90(6), 745-762. DOI: <https://doi.org/10.1111/cdev.13150>.
- Tomaszewski, W., Xiang, N., & Western, M. (2020). Student engagement as a mediator of the effects of socio-economic status on academic performance among secondary school students in Australia. *British Educational Research Journal* , 46(3), 610-630. <https://doi.org/10.1002/berj.3599>.
- Vallerand, R. J., Pelletier, L., Blais, M. R., Brière, N. M., Senécal, C., & Vallieres, E. F. (1992). The Academic Motivation Scale: A Measure of Intrinsic, Extrinsic, and Amotivation in Education. *Educational and Psychological Measurement* , 52(4), 1003-1017. DOI: 10.1177/0013164492052004025.
- Vallerand, R., Blais, M. R., Brière, N. M., & Pelletier, L. (1989). Construction et validation de l'Échelle de Motivation en Éducation (EME). *Revue canadienne des sciences du comportement* , 21, 323-349.
- Voyer, D., & Voyer, S. D. (2014). Gender differences in scholastic achievement: A meta-analysis. *Psychological Bulletin*, 140(4), 1174-1204. <https://doi.org/10.1037/a0036620>
- Wigfield, A., & Eccles, J. S. (2000). Expectancy–value theory of achievement motivation. *Contemporary Educational Psychology*, 25(1), 68-81. <https://doi.org/10.1006/ceps.1999.1015>
- Yamane, T. (1967). *Statistics: An Introductory Analysis, 2nd Edition*. New York: Harper and Row.