



THE RELATIONSHIP BETWEEN EMPATHY, SELF-EFFICACY AND ACADEMIC ACHIEVEMENT: A SELECTED REVIEW OF LITERATURE

Mr. Prasanta Kumar Dash

Ph.D. Scholar

Department of Education

Ravenshaw University, Cuttack, Odisha, India

Abstract

The studies considered in this review of recent research on the relationship between empathy, self-efficacy and academic achievement can be divided into two stages: (1) studies in which the focus was related to the association between empathy and academic achievement, (2) studies in which the focus was related to the association between self-efficacy and academic achievement. This paper incorporates forty-two studies pertinent to the association between empathy, self-efficacy and academic achievement. Out of forty-two research studies, nine of them are from India and thirty-three are from abroad. A critical analysis of the studies reviewed has been presented as well taking into account four dimensions i.e. variables, design, participants and findings. From the studies reviewed, it was found that the recent existing literature offers a mixed result on the relationship between empathy, self-efficacy and academic achievement. Some studies depicted a significant relationship between the variables and some did not. There is a lack of consistent result on the relationship between these variables. It is argued that, in future research, more attention needs to be paid to understand the relationship between these variables.

Key Terms: Empathy, Self-efficacy, Academic achievement

Introduction

The most significant and influential factors playing in students' academic performance are psychological factors. Out of those factors, empathy and self efficacy are the important ones. Empathy is the ability to recognize and connect to other people's emotions without judgement (Rogers, 1975). In a broader sense, empathy implies the capability to understand a situation from other's perspectives and to feel other's emotions from their point of view and communicating it to them. On the other hand, self-efficacy is the personal beliefs that a person can do certain actions leading to specific outcomes. It is operationally defined as one's belief to perform a given task and to achieve the goal (Bandura, 1982). Persons with high self-efficacy are able to plan effectively and successfully in completion of a task (Bandura, 1982). Students with high self-efficacy are confident to understand a lesson, to solve educational problems, and to select most difficult courses (Zimmerman et.al, 1992). Academic self-efficacy is the beliefs about one's abilities in completing the

academic tasks effectively. From the theoretical understanding of these factors, it seems that they could contribute to academic performance. Therefore, it is highly desirable to gather more and more insights into these factors as predictors of academic achievement.

Review of Related Literature

A number of researches have been carried out to explore the relationship between empathy, self-efficacy and academic achievement at various levels of education. This review paper has focused on the following three dimensions.

I. Studies related to relationship between empathy and academic achievement

II. Studies related to relationship between self-efficacy and academic achievement

III. A critical analysis of the literature reviewed

I. Studies related to the relationship between empathy and academic achievement

Jain, (2021) studied the impact of empathy and personality on academic achievement among secondary school students. Data were collected through purposive sampling from 120 students 9th class in Kota city. Mean, SD, Pearson and other statistical techniques were used for analyzing the data. The finding of the research showed a positive correlation of empathy and personality on academic achievement among secondary school students.

Aldrup et.al, (2021) reviewed 41 literatures to find the association between teacher's empathy and their teaching effectiveness. Results showed that there was no consistent evidence for a relationship between teachers' empathy and classroom management, instructional support, or student outcomes.

Joshi, G., (2020) measured the association between academic achievement & emotional intelligence of the post-graduate management students employing a descriptive single cross-sectional research design. 210 postgraduate students of NCR of India were selected through convenient and judgmental sampling techniques for the study. Correlation and stepwise regression model were adopted for analyzing the data. Positive expressivities, attending to emotions, empathic concern were suggested as significant predictors of academic achievement.

Park & Choi (2020) investigated the relationship between empathy, self efficacy and nursing performance of nursing hospital nurses. The study followed a correlational research. A sample of 152 nurses was selected from 7 care hospitals. The results of the study demonstrated a significantly positive relationship of empathy and self efficacy with nursing performance. It was also noted that there was a significant difference in empathy levels of the participants depending on marital status and satisfaction with nursing as a job.

Khatun & Halder, (2019) explored the relation between emotional intelligence and academic achievement of higher secondary students. The investigators employed normative survey method for the study. 800 randomly selected students from eleven higher secondary schools in Dakshin Dinajpur district of West Bengal were used as participants. The outcome of the study revealed a positive correlation between emotional intelligence and academic achievement of higher secondary students.

Darko et.al.,(2017) used a cross-sectional quantitative survey design to study the influence of dispositional empathy on mathematical engagement (mathematical performance) among Techiman North Senior High School (SHS) students in Ghana, West Africa. 156 Participants across SHS 1, 2 and 3 were selected randomly from the three SHS to take part in the study. It was found that dispositional empathy on student academic performance was independent of students' response on cognition in mathematical engagement.

Renthlei, (2017) investigated the relationship between the level of emotional intelligence and academic achievement of 180 UG students in Aizawl city with reference to their gender and stream of study. The researcher employed a descriptive survey method. Participants were selected through stratified random sampling. 30 male and 30 female students were selected from each stream of the study i.e., Arts, Science and Commerce. The results of the study revealed no significant relationship between emotional intelligence and academic achievement of college students in Aizawl city with reference to their gender and stream of study.

Chis & Rusu, (2016) focused on the connection between emotional intelligence and academic performance in compulsory education by examining 58 research studies. The primary objective was to summarize the knowledge on the connection between EI and academic achievement in adolescence. The second objective was to highlight specific factors that were investigated in this relationship. The study revealed that majority of the studies reviewed, indicated a significant association between EI and academic achievement.

Knowlson, (2016) analyzed the relationship between theory of mind (ToM) and affective empathy, with academic achievement. Randomly selected thirty-six participants (16 females and 20 males) in grades 4 to 6 from a public elementary school in British Columbia completed assessments of ToM and affective empathy. Results from these measures were compared with academic achievement, which was determined by grade point average (GPA). Results revealed that neither ToM, nor affective empathy correlated with academic achievement in the total sample. The study found conflicting results in the directionality of correlations and recommended longitudinal studies to understand these concepts.

Faisal & Ghani, (2015) examined the influence of empathy on academic achievement among gifted students in Saudi Arabia. A mixed method design was followed for the study. 150 intermediate gifted students were selected purposively for the study. Out of 150 students, 30 students were selected for qualitative study. The result of the study indicated positive effect of empathy on academic achievement.

Bostic, (2014) conducted a study to measure teachers' empathy and to assess its contribution to students' performance on the English reading scores on the Virginia Standards of Learning Test (VSOL) for 8th and 11th grade students. A correlational research design using hierarchical multiple regression was used to look for this relationship. The study used a sample 178 teachers from 5 high schools and 8 middle schools located in urban school district in Southeast Virginia. Also, the study sampled 1861 students. The findings did not support expected connections between teachers' empathy and students' academic achievement.

Yahaya et.al, (2012) examined the impact of the five emotional intelligence elements identified as self-awareness, emotional management, self motivation, empathy, interpersonal skills towards secondary school students' academic achievement. 370 secondary school students of Johor Bahru, Malaysia were sampled through stratified random sampling. Statistical inference of the Pearson-r and multiple regressions were used to analyze the data. The results showed that only self awareness, self motivation and empathy elements as significant predictors of academic achievement

Tilfarlioglu & Arikan, (2012) assessed students' empathy levels and their achievement in foreign language learning. The means of sixty-seven university level preparatory school students' three mid-term exams, six grammar quizzes, three writing portfolios and two oral exams were accepted as their achievement scores and were then compared to see whether or not there appeared significant correlation between students' achievement in foreign language learning and their empathy levels. The results showed no significant correlation between students' achievement in foreign language learning and their empathy levels.

II. Studies related to the relationship between self-efficacy and academic achievement

Fakhrou & Habib (2022) examined the relationship between academic self-efficacy and academic achievement. A descriptive correlational approach was employed for the study. The sample of the study consisted of 43 undergraduate final year students of the Department of Special Education. Results indicated a positive correlation between academic self-efficacy and academic achievement.

Hasan, et al. (2022) investigated the influence of university students' self efficacy on their academic achievement employing a quantitative study. A total of 889 students from Egypt and Saudi Arabia took part in the study. The findings demonstrated that self-efficacy influenced academic achievement.

Okuroglu, (2022) examined the relationship between nursing students' clinical performance self-efficacy with their academic self-efficacy and academic achievement. Descriptive and correlational design was followed for the study. The research was carried out in Istanbul between January and March 2021. The study was completed with 307 students studying in the Nursing Department of the Health Sciences Faculty of Marmara University. The results showed that there was a low level positive correlation between the students' general academic grade point and Clinical Performance Self-Efficacy Scale mean scores; a moderate correlation was found between the Academic Self-Efficacy Scale and Clinical Performance Self-Efficacy Scale mean scores.

Sharififard, et.al, (2020) investigated the relationship of motivation, self-efficacy, stress and academic performance with academic burnout among paramedical and nursing students. The researchers followed descriptive-analytic study and conducted in Qom University of Medical Sciences. 264 nursing and paramedical undergraduate students were selected through simple randomization. The average of the university course grades was used as the academic performance scale. The results showed that all subscales of academic performance variables were related to academic burnout.

Mutar et.al, (2020) sought to examine the relationship between high and low achievers in terms of self-efficacy and academic adjustment using a correlational design. A total of 100 first stage female-students were chosen randomly from two Iraqi universities at Al-Karakh side of Baghdad city. The study revealed that self-efficacy is negatively correlated with academic adjustment.

Hol & Gul, (2020) examined the relationship between the self-efficacy level of Turkish EFL learners and their academic achievement. This study was implemented with 525 students enrolled at a state university in Turkey. The study followed a mixed-method design; first, quantitative data was collected through a questionnaire. Secondly, semi-structured interviews developed by the researcher, with randomly selected 24 participants were carried out to assist the quantitative data with the qualitative one. A negative correlation was observed between efficacy level of students in English and their academic achievement.

Basith et.al, (2020) explored the role of academic self-efficacy in determining academic achievement. using a survey method. The sample size was 223 students, which consisted of 112 males and 111 females. It was reported that self-efficacy has a positive relationship and is also a predictor in determining academic achievement.

Mookkiah & Prabu, (2020) attempted to find the relationship between self-efficacy and academic achievement in high secondary school students. Descriptive survey design was followed for the study. The size of the sample was 400 students selected randomly from 8 schools in XI standard level. The results of the study depicted that there was no significant relationship between self efficacy and academic achievement of higher secondary school students.

Gungor, (2020) assessed the relationship between academic procrastination, academic self-efficacy, and academic achievement. The data were obtained from 86 senior undergraduates studying at Faculty of Humanities and Social Sciences - Atatürk University . The results of the analysis showed that there was a positive and significant relationship between academic self-efficacy and academic achievement.

Christian & Okeke, (2020) sought to determine the relationship between motivation and self efficacy, and learner performance, respectively, in Physics. A correlational-survey research design was adopted for the research, with a sample of 375 senior secondary Physics learners selected through multi-stage sampling. Simple linear regression was used to analyze the data. The results showed that motivation and self-efficacy had significant positive relationships with learner performance in Physics.

Veresova & Foglova, (2019) analyzed the relationship between academic self-efficacy (ASE), approach to learning (deep – DA and surface – SA), heteronomous (HAA) and autonomous evaluation (AAA) of academic achievement of adolescents. The sample consisted of 457 adolescents (268 girls and 189 boys) studying at secondary schools in the Slovak Republic. Volunteer sampling was used for sample selection. The results showed that academic self-efficacy, similarly as the preferred approach to learning (deep or surface), constitute an important predictor of heteronomous evaluation of academic achievement.

Green, (2019) assessed the mediating effect of multiple intelligences between generalized self efficacy and academic achievement in a sample of 893 final year master's students (482 males and 411 females) studying in Islamabad, Rawalpindi, and Peshawar. The result revealed that self efficacy was positively related to each of the nine intelligences as well as academic achievement.

Alafghani & Purwandari, (2019) aimed to assess the relationship between self-efficacy, academic motivation, self-regulated learning and academic achievement. The study used quantitative expansive method. The sample of this study was 246 students of an Islamic senior high school selected using census technique; thus, the entire population was used as the sample of the study. The results showed that there was a negative relationship between self-efficacy and academic achievement.

Atoum & Momani, (2018) conducted a research which aimed at exploring the relationship between perceived self-efficacy and academic achievement among a sample of Jordanian secondary stage students through identifying the levels of perceived self-efficacy among students and identifying the effect of gender and academic achievement on self-efficacy. The sample consisted of 356 secondary stage students chosen randomly. The results showed a significant effect of academic achievement on perceived self-efficacy in favor of higher achievement students.

Kassaw & Astatke, (2017) attempted to assess the relationships between gender, level of goal orientation, academic self efficacy and academic performance in Woldia college of teachers education. The study employed quantitative approach followed by correlation design. Participants of this study were 482 second and third year students at Woldia College of Teachers Education selected using simple random sampling technique. The result showed a significant positive relationship between self efficacy and academic achievement of participants.

Bala, I. (2017) made an investigation on exploring the relationship between decision making styles, self efficacy and academic achievement of senior secondary school students using a survey design. 500 students were selected through simple random sampling. The results showed a significant relationship between self efficacy and academic achievement of senior secondary school students.

Ali, et al. (2017) explored the relationship among emotional intelligence, self-efficacy, and achievement scores of students at elementary level. A sample of four hundred students of 5th class from twelve schools in the district Faisalabad participated in the study. The annual exam marks of 5th class students were taken as the achievement score. Data were analyzed using mean and Pearson product-moment correlation coefficient. It was also noted that achievement score did not have any significant relationship with emotional intelligence and self efficacy.

Azizollah et.al, (2016) conducted a study aiming at investigating relationship between self-efficacy and academic achievement of students of Zahedan University of Medical Sciences. It was a descriptive – analytical research on 190 students selected randomly. A significant relationship was observed between self-efficacy and academic achievement of students.

Nasa, G. (2015) studied the relationships among goal orientation, academic self efficacy, help seeking behavior and academic achievement of secondary school students. The study followed a survey research design. The sample of the study consisted of 600 school students of 10th class only who were selected using simple random sampling. The result of the study indicated a significant relationship between self efficacy and academic achievement.

Kumari & Qasim, (2015) investigated the structural relations among self-efficacy on the academic achievement of 200 students aged 14 to 18 years from govt. and private schools in Allahabad city. Participants were selected using quota sampling technique from various schools of Allahabad city. The results of the study depicted that the relationship between self-efficacy and academic achievement was not significant.

Ahmad & Safaria, (2013) studied the impact of self efficacy on academic achievement on 15 boys, students of the 5th grade of a local school in Pakistan. It was found that students with high self-efficacy obtained higher scores on 50 mathematical problems test.

Mohammadyari, (2012) made a comparative study of relationship between general perceived self-efficacy and test anxiety in academic achievement of male and female students using a correlational design. The sample consisted of 350 students (175 males' and 175 females) selected through random sampling method. The results showed that there was a positive significant relationship between general perceived self-efficacy and students' academic achievement

Meral et.al, (2012) investigated relationships between self-efficacy and academic performance among a sample of 82 sophomore students who attended Instructional Planning and Evaluation class at the Marmara University Technical Education Faculty. Participants' selection was done using volunteer sampling. Survey method was used in this research. The results of the investigation showed a significant positive correlation between self efficacy and academic achievement of the students.

Yazici et.al, (2011) conducted a cross-sectional study to investigate the influence of emotional intelligence and self efficacy beliefs on academic achievement of high school students. The sample consisted of 407 high school students. The results indicated that age, gender and self-efficacy are the significant predictors of academic achievement.

Motlagh et.al, (2011) investigated the relation between self-efficacy and academic achievement in high school students. 250 students from girls' high school in Tehran were selected by means of multistage cluster sampling. To analyze data, correlation coefficient and regression analysis was used. Analysis of data revealed that self-efficacy was positively and significantly correlated with academic achievement.

Tella, et.al, (2009) examined locus of control, interest in schooling and self-efficacy as predictors of academic achievement of junior secondary school students. An ex-post facto research design was adopted for the study. Twenty-five secondary schools were selected through stratified random techniques. The sample of the study consisted of 500 students comprising 300 boys and 200 girls selected randomly from the selected schools. The results indicated that locus of control, interest in schooling and self efficacy jointly and relatively contribute significantly to the prediction of academic achievement of the junior secondary school students.

Raja, M.V. (2009) attempted to find out the relationship between emotional intelligence, self efficacy, reflectiveness and academic achievement of high school students by adopting a survey research design. 1000 high school students were selected through stratified random sampling from 4 southern revenue districts of Tamil Nadu. Both descriptive and inferential statistics were applied to analysis of data. The results of the study indicated a significant influence of emotional intelligence, self efficacy and reflectiveness on academic achievement of the participants.

Caprara et al. (2006) examined how junior high school teachers' self-efficacy affects their students' achievement levels. The researchers collected the students' academic scores at the beginning and end of the school year to assess the students' overall academic performance. In the middle of the year, the researchers gave a sample of 102 Italian teachers a self-report questionnaire to determine their self-efficacy beliefs. Analysis indicated that there was a positive significant relationship between teachers' self-efficacy and students' academic scores. The researchers concluded that high teacher self-efficacy is correlated with high student academic achievement.

Tschannen-Moran & Barr, (2004) explored the relationship between collective teacher self-efficacy and student achievement among a sample of 8th grade students. The results revealed a positive correlation between collective teacher efficacy and student achievement in math, English, and writing tests.

III. Critical Analysis of the Literature Reviewed

A critical analysis of the studies reviewed has been elaborated in terms of (a) variables studied, (b) design used, (c) participants of the studies, (d) findings of the studies.

(a) Variables studied

A number of studies have examined the relationship between empathy and academic achievement along with some correlated variables such as personality, emotional intelligence, self concept, (Tilfarlioglu & Arikan, 2012; Bostic, 2014; Knowlson, 2016; Faisal & Ghani, 2015; Aldrup et.al, 2021; Darko et.al, 2017; Jain, 2021; Yahaya, et.al, 2012; Joshi, 2020; Renthlei, 2017; Khatun & Halder, 2019; Chis & Rusu, 2016). Comparatively a significant number of researches have also explored the relationship between self efficacy and academic achievement along with some correlated variables like emotional intelligence, reflectiveness, decision making styles, goal orientation, academic help seeking behavior, academic adjustment, locus of control, interest in schooling, multiple intelligences, academic motivation, self regulated learning, academic procrastination, academic eagerness, (Yazici, et.al, 2011; Motlagh, et.al, 2011; Kumari & Quasim, 2015; Atoum & Momani, 2018; Veresova & Foglova, 2019; Mookkiah & Prabu, 2020; Hol & Gul, 2020; Mohammadyari, 2012; Meral, et.al, 2012; Azizollah, et.al, 2016; Okuroglu, 2022; Basith, et.al, 2020; Ischannen-Moran & Barr, 2004; Raja, et.al, 2009; Bala, 2017; Nasa, 2015; Mutal, et.al, 2020; Kassaw & Astatke, 2017; Tella, et.al, 2009; Green, 2019; Alafghani & Purwandari, 2019; Gungor, 2020; Christian & Okeke, 2020; Sharififard, 2020; Ali, et al., 2017; Carpara, et.al, 2006).

(b) Design Used

Most of the studies reviewed, have followed a correlational survey research design (Jain, 2021; Yahaya, et.al, 2012; Mohammadyari, 2012; Meral, et.al, 2012; Raja, 2009; Bala, 2017; Nasa, 2015; Mutar, et.al, 2020; Kassaw & Astatke, 2017; Okoruglu, 2022; Kumari & Qasim, 2015; Basith, et.al, 2020; Christian & Okeke, 2020; Renthlei, 2017; Khatun & Halder, 2019; Ali, et.al, 2017; Ahmetoglu & Acar, 2016; Park & Chori, 2020; Tilfarlioglu & Arikan, 2012, Herrera, et.al, 2020, Knowlson, 2016). There are few studies that followed cross-sectional approach (Yazici, et.al, 2011; Green, 2019; Darko, et.al, 2017; Joshi, 2020). Two studies employed mixed methods research design (Faisal & Ghani, 2015; Hol & Gul, 2020).

From the review of designs used in the studies, it can be concluded that the trend is more or less centred on correlational survey research design.

(c) Participants of the Studies

From the articles reviewed, it was noted that most of the studies that explored the variables- empathy, self efficacy, and academic achievement have been conducted in school setting, particularly on secondary school students (Jain, 2021; Knowlson, 2016; Raja, 2009; Basith, et.al, 2020; Ischannen-Moran & Barr, 2004; Yahaya,et.al., 2012; Chis & Rusu, 2016; Bostic, 2014; Darko,et.al., 2017; Khatun & Halder, 2019; Raja, 2009; Tella, et.al, 2009; Yazici, et.al, 2011; Motlagh, et.al, 2011; Kumari & Quasim, 2015; Bala, 2017; Atoum & Momani, 2018; Veresova & Foglova, 2019; Alafghani & Purwandari, 2019; Christian & Okeke, 2020; Mookkiah & Prabu, 2020; Hol & Gul, 2020, Carpara, et.al, 2006, Jennabadi, et.al, 2018, Ali, et.al, 2017).

Relatively few studies have explored empathy, self efficacy and academic achievement in higher education (Faisal & Ghani, 2015;Joshi, G., 2020; Renthlei, 2017, Mohammadyari, 2012; Meral, et.al, 2012; Azizollah, et.al, 2016; Kassaw & Astatke, 2017; Gungor, 2020; Green, 2019; Okuroglu, 2022; Mutar, et.al, 2020, Basith, et.al, 2020, Park & Chori, 2020, Sharififard, 2020, Joshi, 2020). It was also found that a scant of research studies was carried out on teachers (Wilson, 2020; Carpara, et.al, 2006; Ahmetoglu & Acar, 2016). Comparatively very limited studies have been conducted in professional field to explore empathy, self efficacy and academic achievement. In professional field, studies that addressed these variables have been conducted on medical students (Azizollah, et.al, 2016; Sharififard, 2020; Park & Chori, 2020).

(d) Findings of the Studies

A significant correlation has been discovered between empathy and academic achievement in many studies (Yahaya, et.al., 2012; Faisal & Ghani, 2015; Chis & Rusu, 2016; Herrera,et.al, 2020; Jain, 2021). Similarly, studies have found no significant relationship between empathy and academic achievement (Tilfarlioglu & Arikan, 2012; Bostic, 2014; Knowlson, 2016; Darko, et.al,2017; Renthlei, 2017). Aldrup, et.al, 2021 found a lack of sufficient evidence in establishing concrete relationship between empathy and academic achievement.

Distinct results have been reported in studies that assessed the relationship between self efficacy and academic achievement. Many studies revealed a significant relationship between self efficacy and academic achievement (Ahmad & Safaria, 2013; Hasan, et al., 2022; Yazici, et.al, 2011; Motlagh, et.al, 2011; Atoum & Momani, 2018; Christian & Okeke, 2020; Veresova & Foglova, 2019; Tella, et.al, 2009; Nasa, 2015, Bala, 2017, Raja, 2009; Mohammadyari, 2012; Meral, et.al, 2012; Azizollah, et.al, 2016; Kassaw & Astatke, 2017; Gungor, 2020. A number of studies depicted no significant relationship between self efficacy and academic achievement (Kumari & Quasim; Mookkiah & Prabu, 2020). Few studies found a negative relationship between self efficacy and academic achievement (Hol & Gul, 2020; Mutart, et.al, 2020).

From the review of the findings of the studies, it could be noted that there is a need of more researches to comprehend the concrete association between these psychological factors.

References

1. Ahmetoglu, E., & Acar, I. H. (2016). The correlates of Turkish preschool preservice teachers' social competence, empathy, and communication skills. *European Journal of Contemporary Education*, 16(2), 188-197.
2. Alafghani, S.W., & Purwandari, E.(2019). Self –efficacy, academic motivation, self regulated learning and academic achievement. *Jurnal Psikologi Pendidikan & Konseling*, 5(2): 104-111.
3. Ahmad, A., & Safari, T. (2013). Effects of self-efficacy on students' academic performance. *Journal of Educational, Health and Community Psychology*, 2(1), 22-29.
4. Hasan, M.; Al-Abyadh, A.; & Azeem, H. (2022). Academic achievement: Influences of university students' self-management and perceived self-efficacy. *J. Intell*, 10(3).
5. Aldrup, K., Carstensen, B., & Klusmann, U., (2021). Is empathy the key to effective teaching? A systematic review of its association with teacher-student interactions and student outcomes: *Educational Psychology Review*.
6. Ali, M.S., Azmat, N., & Parveen, S.(2017). Relationship among emotional intelligence, self efficacy and academic score of students at elementary level. *Journal of Managerial Sciences*, 11(3): 76-82.
7. Atoum, A.Y., & Momani, A.A.(2018). Perceived self efficacy and academic achievement among Jordanian students. *Trends in Technical and Scientific Research*, 3(1).
8. Bandura, A. (1982). Self-efficacy mechanism in human agency. *American Psychologist*, 37,122 -147.
9. Bala, I. (2017). Decision-making styles of senior secondary school students in relation to their self efficacy and academic achievement. Retrived from <https://www.researchgate.net/publication/339586418>
10. Basith, A., Syahputra, A., & Ichuwanto, M.A. (2020). Academic self efficacy as predictor of academic achievement. *Jurnal Pendidikan Indonesia*, 9(1): 163-167.
11. Bidhendi,S.S., Karbasi, M., & Vakilian, M.(2018). Predicting the academic eagerness on the basis of emotional intelligence and educational self-efficacy in students of Hamadan of Islamic Azad University. *Journal of Research in Medical and Dental Sciences*, 6(3):206-211.
12. Bostic, T.B.(2014). Teacher empathy and its relationship to the standardized test scores of diverse secondary English students. *Journal of Research in Education*, 24(1).
13. Caprara, G., Barbarnelli, C., Steca, P., & Malone, P. S. (2006). Teachers' self-efficacy beliefs as determinants of job satisfaction and students' academic achievement: A study at the school level. *Journal of School Psychology*, 44, 473-490.
14. Darko, I.O., Hughes, W.A., & Yaw, O.B. (2017). Cognitive dispositional empathy on mathematical engagement and performance: *European Journal of Education Studies*, 3(1).
15. Faisal, A.S., & Ghani, M.B. (2015). The influence of empathy on academic achievement among gifted students in Saudi Arabia. *Global Journal of Interdisciplinary Social Sciences*, 4(3): 62-71.
16. Fakhrou, A., & Habib, L.H. (2022). The relationship between academic self-efficacy and academic achievement in students of the department of special education. *International Journal of Higher Education*, 11(2), 1-12.
17. Green, Z.A.(2019). Multiple intelligences mediate generalised self efficacy and academic achievement. *Baltic Journal of Psychology*, 20(1, 2): 34-51.

18. Gungor, A.Y.(2020). The relationship between academic procrastination, academic self efficacy and academic achievement among undergraduates. *Oltu Beseri ve Sosyal Bilimler Fakultesi Dergisi*, 1(1):57-68.
19. Herrera, L., Lal, M.A., & Mohamed, L. (2020). Academic achievement, self concept, personality and emotional intelligence in primary education. Analysis by gender and cultural group. *Frontiers in Psychology*, 10.
20. Hol, O.U., & Gul, O.G.F. (2020). Discovering self efficacy beliefs of EFL learners and the relationship between self efficacy and academic achievement. 24(8): 425-448.
21. Jain, K. (2021). The impact of empathy and personality on academic achievement among secondary school students. *The International Journal of Indian Psychology*, 9(1).
22. Jenaabadi, H., Pouya, H.M., & Sarhaddi, M.(2018). Effectiveness of Empathy Training in Increasing Resilience and Academic Self-Efficacy among High School Students in Zahedan. *J Adv Pharm Edu Res* 8(2):100-105.
23. Kassaw, K., & Astatke, M. (2017). Gender, academic self efficacy and goal orientation as predictors of academic achievement. *Global Journal of Human-Social Science: A Arts & Humanities Psychology*, 17(6).
24. Khatun, M., & Halder, U.K. (2019). A study on the relation between emotional intelligence and academic achievement of higher secondary students. 6(2).
25. Kumari, K., & Qasim, S.H.(2015). A study of self efficacy in relation to academic achievement of students. *Indo-Indian Journal of Social Science Researches*, 11(1): 63-66.
26. Lumish,R., Simpkins, S., Black, J., & Whittaker, C.F.(2022). Fostering empathy and self-efficacy in pharmacy students through service learning. Educational review. *Currents in Pharmacy Teaching and Learning*, 14: 536-546.
27. Meral, M., Colak, E., & Zereyak, E.(2012). The relationship between self efficacy and academic performance. *Procedia-Social & Behavioral Sciences*, 46: 1143-1146.
28. Mohammadyari, G. (2012). Comparative study of relationship between general perceived self efficacy and test anxiety with academic achievement of male and female students. *Procedia-Social & Behavioral Sciences*, 69: 2119-2123.
29. Motlagh, S.E., Amrai, K., Yazdani, M.J., Abderahim, H.A., & Souiri, H.(2011). The relationship between self efficacy and academic achievement in high school students. *Procedia-Social and Behavioral Sciences*, 15:765-768.
30. Mutal, Q.M., Mohammed, H.M, & Hamed, S.H. (2020). Academic achievement and its relation with self efficacy and academic adjustment in EFL class. *International Journal of Multicultural and Multireligious Understanding*, 7(5): 1-13
31. Nasa, G. (2015). A study of goal orientation among secondary school students in relation to academic self efficacy, academic help seeking behaviour and achievement. Retrieved from <http://shodhganga.inflibnet.ac.in>
32. Okuroglu, G.K.(2022). The relationship between nursing students' self efficacy regarding their clinical performance with their academic self efficacy and academic achievement: Descriptive study. *Turkiye Klinikleri Journal of Nursing Sciences*, 14(1): 125-131.
33. Park, S., & Choi, B.(2020). Empathy, self efficacy and nursing performance of nurses at care hospitals. *International Journal of Advanced Nursing Education and Research*, 5(1): 63-70.
34. Raja, M.V.(2009). Influence of emotional intelligence, self efficacy and reflectiveness on academic achievement of high school students. Retrieved from <https://www.researchgate.net/publication/313039963>

35. Sharififard, F., Asayesh, H., Haji Mohammad Hosseini, M., & Sepahvandi, M.(2020). Motivation, self-efficacy, stress and academic performance correlation with academic burnout among nursing students. *J Nurs Midwifery Sci*, 7(2): 88-93.
36. Tella, A., Tella, A., & Adeniyi, O. (2009). Locus of control, interest in schooling, self efficacy and academic achievement. *Cypriot Journal of Educational Sciences*. 4: 168-182.
37. Tilfarlioglu, F.Y., & Arikan, A. (2012). Empathy levels and academic achievement of foreign language learners. *Procedia-Social & Behavioural Sciences*, 46: 4428-4430.
38. Tschannen-Moran, M., & Barr, M. (2004). Fostering student learning: The relationship of collective teacher efficacy and student achievement. *Leadership and Policy in Schools*, 3(3), 189-209.
39. Ugwuanyi, C.S., Okeke, C.I., & Ageda, T.A.(2020). Motivation and self efficacy as predictors of learners' academic achievement. *Journal of Sociology and Social Anthropology*, 11(4): 215-222.
40. Wilson, Amy, "A Study of Empathy and Teacher Self-Efficacy Among Preservice Early Childhood Educators" (2020). *Electronic Theses and Dissertations*. Paper 3701. <https://dc.etsu.edu/etd/3701>.
41. Yahaya, A., & Lee, G.M. (2012). The impact of emotional intelligence on academic achievement. 65(4).
42. Yazici, H., Seyis, S., & Altun, F.(2011). Emotional intelligence and self efficacy beliefs as predictors of academic achievement among high school students, *Procedia-Social & Behavioral Sciences*, 15: 2319-2323.
43. Zimmerman, B. J., Bandura, A., & Poons, M. (1992). Self -motivation for academic attainment. The role of self-efficacy belief and personal goals-setting. *American Educational Research Journal*, 29, 663-676.

