**International Journal of Education and Cognitive Sciences** 



Volume 4, Number 1, 12-20, April 2023 https://iase-ijeas.com ISSN: 3041-8828 ۲

ll Journal <sub>of</sub> Education and Applied Scienc



Naser Shirkavand<sup>1</sup>, Asma Fooladi<sup>2</sup>, Zahra Arabsalari<sup>3</sup>, Jamal Ashoori<sup>4\*</sup>

1. Instructor, Department of Educational Science, Farhangian University, Zeynabiyeh Pishva Branch, Tehran, Iran.

- 2. Assistant Professor, Department of Psychology, Tabaran Institute of Higher Education, Mashhad, Iran.
- 3. MA, Department of Educational Sciences, Payam-e-Noor University, Tehran, Iran.
- 4. Assistant Professor, Department of Psychology, Islamic Azad University, Khorasgan Branch, Isfahan, Iran.

Keywords: Academic Buoyancy Education, Academic Self-Concept, Academic Engagement, Students The importance of academic activities is very high for ninth grade students because of choosing a course and enrolling in 10th grade. Therefore, the aim of this study was determine the effect of academic buoyancy education on academic selfconcept and engagement in ninth grade male students. This research in terms of purpose was applied and in terms of implementation method was semi-experimental with a pretest and post-test with a control group. The research population was the ninth grade male students of Pishva city in the 2022-23 academic years, which 40 people of them were selected with using the available sampling method as a sample and randomly divided into two equal groups. The experimental group received 12 sessions of 70 minutes the academic buoyancy education and the control group remained on the waiting list for training. Data were collected with the questionnaires of academic self-concept (Liu and Wang, 2005) and academic engagement (Reeve and Tseng, 2011) and analyzed by chi-square and multivariate analysis of covariance method in SPSS-19 software. The results showed that there was a significant difference between the experimental and control groups in terms of both variables of academic self-concept and academic engagement. In other words, academic buoyancy education increased self-concept and engagement in ninth grade male students (P<0.001). The results indicated the effect of academic buoyancy education on improving academic self-concept and Therefore. engagement. to improve the academic performance, including academic self-concept and engagement can be used from academic buoyancy education method along with other effective educational methods.

<sup>\*</sup> Corresponding Author Email: jamal\_ashoori@yahoo.com

# Introduction

Every year, Education and Training spends a considerable amount of money on the education, learning, and development of students, and examining academic variables in them is of great importance (Yun et al., 2020). One of the variables that can be investigated in students is academic self-concept (Westphal et al., 2018). Self-concept is an individual's perception of their abilities, attitudes, values, limitations, strengths, and weaknesses (Vander Aar, et al., 2019). Academic self-concept is a part of the overall self-concept and refers to the academic abilities, limitations, strengths, and weaknesses of students (Maynor et al., 2022). In another definition, academic self-concept refers to the positive and negative mental representations of students about their abilities in school and academic environments (Esnaola, Elosua & Freeman, 2018). Students with high academic self-concept perceive themselves as competent, capable, and successful in academic situations, unlike students with low academic self-concept (Sewasew & Schroeders, 2019). Such students have a positive feeling about their academic abilities and show more effort and perseverance in academic activities, and are often more successful (Wu et al., 2022).

Another variable that can be investigated in students is academic engagement (Metzger et al., 2020), which refers to involvement in the academic environment and extracurricular activities (Gremmen, Vanden Berg, Steglich, Veenstra & Dijkstra, 2018). Academic engagement is an important prerequisite for improving students' academic progress and experiencing academic success, which can be considered as an institutional success indicator (Li, Valiente, Eisenberg, Spinrad, Johns, Berger, et al., 2022). This construct refers to students' willingness to participate in daily academic activities such as attending classes, doing homework, studying course materials, and performing activities that the teacher wants (Lawson, Salter, Hughes & Kitson, 2019). Academic engagement includes behavioral, cognitive, and motivational components, with the behavioral component referring to observable behaviors such as effort, perseverance, and persistence when faced with academic tasks, the cognitive component referring to information processing processes and cognitive strategies for learning, and the motivational component referring to students' emotional and affective responses, intrinsic interest in academic activities, and valuing them (Shin & Chang, 2022). High academic engagement is associated with more social interactions, increased academic effort and perseverance, and greater positive

academic outcomes in educational environments (Larson, Bottiani, Pas, Kush & Bradshaw, 2019).

Many methods have been examined to improve academic variables, and one of the less studied methods is academic buoyancy (Azarian, Mahdian, & Jajarmi, 2020). Studies have shown that various cognitive and motivational sciences are successfully related to the educational system, and considering that academic buoyancy is also related to the educational system, designing and teaching academic buoyancy can somewhat guarantee the success of the educational system (Fooladi, Kajbaf, & Ghamarani, 2016). Academic buoyancy is defined as a positive, constructive, and adaptive response to various academic obstacles and challenges, and effective coping with them (Gill, Singhal, Schutze, & Turner, 2021). Academic buoyancy reflects academic resilience within the framework of positive psychology and has a tremendous impact on increasing students' coping abilities against academic difficulties (Hirvonen et al., 2019). Teaching academic buoyancy plays an important role in fruitful learning by increasing strength and energy and leads to the realization of students' abilities, capabilities, and scientific progress (Fooladi, Kajbaf, & Ghamarani, 2018). Individuals with high academic buoyancy have a high ability to use their academic abilities, participate in academic activities with more energy, show more effort and perseverance in successful academic tasks, and participate in academic topics with more interest and enthusiasm (Jia & Cheng, 2022).

Very few studies have been conducted on the effect of teaching academic buoyancy, and no research has been found on its effect on engagement and academic selfconcept in male students, but some studies have been conducted in this regard. For example, the results of the study by Emami Khotbesara, Mahdian, and Bakhshipoor (2021) showed that teaching academic buoyancy led to an increase in academic engagement in high school girls. Ershadi Chahardeh (2021) also found in a study that teaching academic buoyancy led to an increase in academic engagement and school adaptation in high school girls. In another study, Jalilian, Azimpour, and Gholizadeh (2018) reported that academic buoyancy had a significant and positive relationship with academic engagement and psychological hardiness. Additionally, the results of the study by Derakhshan, Yousefi, and Najarporyan (2021) showed that academic buoyancy and academic self-concept had a significant and positive correlation in elementary school girls and boys. Narimani, Rashidi, and Zardi (2019) also found in a study that there was a significant and positive correlation between self-concept and academic buoyancy in students with specific learning disabilities. In another study,

Colmar, Liem, Connor, and Martin (2019) reported that there was a significant positive relationship between academic buoyancy, academic self-concept, and academic performance in elementary school students.

The importance and necessity of the present study can be stated as follows: male ninth-grade students are in the early stages of adolescence and they must choose their field of study at the end of the ninth grade in order to register for the tenth grade. These matters lead to increased academic challenges for them, and there are many methods to cope with these challenges, one of which is the academic buoyancy teaching method. On the one hand, few studies have been conducted on the academic buoyancy teaching method, and on the other hand, no research has been found on its effectiveness on academic self-concept. Since academic self-concept affects many academic variables, it is essential that this variable be further investigated. Therefore, one of the gaps in the literature was the lack of research on the effect of the academic buoyancy teaching method on academic self-concept, and another gap was the lack of research on the effect of the academic buoyancy intervention method on academic self-concept and academic engagement of male ninth-grade students. Another important point about this study is that its results can help educational specialists and planners in planning to improve academic situations, and can provide significant assistance to school counselors, staff, and Education and Training personnel in providing solutions to improve academic situations. Given the above, the aim of this study was to determine the effect of academic buoyancy teaching on academic self-concept and academic engagement in male ninthgrade students.

### Methodology

The present study was applied in terms of its objective and quasi-experimental in terms of its execution method, with a pretest-posttest design and a control group. The research population consisted of ninth-grade male students in Pishva city during the academic year of 2022-

2023, from whom a sample of 40 individuals was selected through convenience sampling. In this sampling method, 40 students who had obtained lower scores in their academic self-concept and academic engagement questionnaires were selected from among ninth-grade male students in Pishva city, provided they met the study's inclusion criteria. The inclusion criteria for the study included living with parents, not taking psychiatric medications, not receiving psychological services in the past three months, not being infected with COVID-19 in the past three months, and the agreement of both the students and their parents to participate in the study. The exclusion criteria for the study included withdrawing from cooperation, being infected with COVID-19 or other contagious diseases during the intervention, and low cooperation or non-cooperation in the intervention sessions.

The research process involved administering academic self-concept and academic engagement questionnaires to all male students, and selecting 40 individuals who had obtained lower scores in both questionnaires as the sample. These 40 individuals were randomly assigned to two groups (each group consisting of 20 individuals), including the experimental and control groups. The experimental group received 12 sessions of 70-minute academic buoyancy training, while the control group remained on the waiting list for training. The intervention was conducted by the author of the present article in a group setting for one and a half months (two sessions per week) in one of the schools in Pishva city, using teaching methods such as lectures, group discussions, cooperative learning, and educational aids such as whiteboards and smart boards. The content of academic buoyancy training was designed by Fooladi et al. (2018) based on Martin and Marsh's theory (2008), and its content validity was confirmed by experts and specialists using the Delphi method. The objectives and content of each session are summarized in Table 1.

Table 1. Objective and content of academic buoyancy training by sessions

Session	Objective		Content
1	Introduction Objective	and	Familiarity between students and researchers, expressing rules and expectations such as cooperation, participation, timely attendance, etc., expressing the goal and briefly explaining the educational content.
2	Teaching psychological		Academic resilience training includes familiarity with the concept, role, and importance of cognitive reconstruction and creating constructive and academic resilience thinking, awareness of academic abilities, perception of purposeful academic behavior, and setting short-term and long-term academic goals.
3	lactors		Intrinsic motivation training includes the role of optimism and hope in studying and having progressive academic goals.

15		Shirkavand, N & et al / The Effect of Academic Buoyancy Education on Academic
4		Academic self-regulation training includes familiarity with the concept and importance of it, using cognitive and metacognitive strategies, self-monitoring and self-reinforcement, time and place management of study, and their role in improving academic performance.
5		Academic self-efficacy training includes familiarity with the role and importance of self-efficacy and academic self-efficacy and improving them through problem-solving.
6	Teaching school and participation factors	Training on how to obtain cognitive support from family and friends in studying includes the role and importance of their support in studying, ways to attract their support, and how to solve cognitive problems in studying with the participation of students.
7		Training on emotional support from family and friends in studying includes the importance of their support in studying, ways to attract their support, and how to solve emotional problems in studying such as academic stress, academic anxiety, etc. with the participation of students.
8		Training on communication patterns and constructive communication with family and friends in studying includes communication patterns, recognizing communication barriers and how to cope with them, constructive communication skills with an emphasis on self-awareness and empathy, and effective intra and interpersonal communication.
9		Training on perception and positive attitude towards the structure and goal of the class includes awareness and recognition of the structure and goals of the class and their role in studying, the role of students and teachers in the structure and goals of the class, and teaching a positive perception of the structure and goals of the class.
10	Teaching family and peers factors	Training on improving the quality of time spent in class includes how to manage the class before the teacher enters and the importance of this time in studying, the importance of studying headlines before the teacher enters the class, how to manage the class in the last minutes of the class, the importance of studying the materials on the day of the teacher's teaching, and planning to spend time in class and at home.
11		Training on understanding the importance of participation with the goal of improving the class atmosphere and formal and informal communication networks of friends includes ways for students to participate in the class atmosphere and their role in studying, finding academic puzzles or jokes with the participation of students and the teacher with the goal of creating diversity and academic interest, and improving formal and informal communication networks with the goal of positive perception of the class atmosphere.
12	Conclusion and Review	Summary and review of previous session materials with the participation of students.

It should be noted that at the end of each session, students were given homework related to that session, and at the beginning of the next session, they were given constructive feedback after reviewing their homework. Additionally, in this study, academic self-concept and academic engagement questionnaires were used to collect data.

Academic Self-Perception Questionnaire: This questionnaire was designed by Liu and Wang (2005) with 20 items. A four-point Likert scale ranging from "never" with a score of one to "always" with a score of four was

used to respond to each item, and half of the items (10 items) were reverse-scored. The score of the Academic Self-Perception Questionnaire was calculated by summing up the scores of all items, and the score range was between 20 and 80. A higher score indicates a higher and more desirable academic self-perception. Liu and Wang (2005) examined the construct validity of the tool using exploratory factor analysis and the results indicated the existence of two factors: academic effort and academic confidence. They reported the reliability of the tool using Cronbach's alpha method as 0.82. In Iran,

Baghbanpour Azari, Livarjani, and Hosseini Nasab (2022) confirmed the face validity of the tool by four professors at the University of Tabriz in two stages and reported the overall reliability using Cronbach's alpha method as 0.71. In the present study, the reliability coefficient was obtained through internal consistency by calculating Cronbach's alpha as 0.86.

Questionnaire: Academic Engagement This questionnaire was designed by Reeve and Tseng (2011) with 13 items. A five-point Likert scale ranging from "completely disagree" with a score of one to "completely agree" with a score of five was used to respond to each item, and none of the items were reverse-scored. The score of the Academic Engagement Questionnaire was calculated by summing up the scores of all items, and the score range was between 13 and 65. A higher score indicates higher and more desirable academic engagement. Reeve and Tseng (2011) examined the construct validity of the tool using exploratory factor analysis and the results indicated the existence of four factors: cognitive, emotional, behavioral, and agentic. They reported the reliability of the tool using Cronbach's alpha method as 0.82. In Iran, Shirzadi and Shekholeslami (2021) examined the construct validity of the tool using confirmatory factor analysis and the results indicated the existence of four factors. They reported the overall reliability using Cronbach's alpha method as 0.88. In the present study, the reliability coefficient was obtained through internal consistency by calculating Cronbach's alpha as 0.81.

The data were analyzed using multivariate covariance analysis and squared chi and collected through the Academic Self-Perception Questionnaire and Academic Engagement Questionnaire in SPSS-19 software at a significant level of 0.05.

### Findings

There was no dropout in any of the experimental and control groups, and the analyses were performed for two groups of 20 individuals. The results of comparing the demographic information of the experimental and control groups based on the chi-square test were reported in Table 2.

Variable	Value	Experime	ntal group	Control group		C:	
variable	value	Frequency	Percentage	Frequency	Percentage	- 51g.	
	Secondary school or below	4	20	3	15		
	Diploma	6	30	5	25		
Father's	Associate degree	3	15	4	20	>0.05	
cuteation	Bachelor's degree	4	20	4	20	-	
	Bachelor's degree or higher	3	15	4	20		
	Employed	4	20	2	10		
Father's job	Retired	2	10	3	15	>0.05	
	Self-employed	14	70	15	75	-	
	Secondary school or below	5	25	5	25		
	Diploma	5	25	6	30		
Mother's	Associate degree	2	10	3	15	>0.05	
cuteation	Bachelor's degree	6	30	4	20	-	
	Bachelor's degree or higher	2	10	2	10		
	Employed	2	10	3	15		
Job's education	Retired	1	5	2	10	- >0.05	
	Self-employed	5	25	4	20	0.05	
	Housewife	12	60	11	55	-	

Table 2. The results of comparing the demographic information of the experimental and control groups based on the

According to the results in Table 2, there was no significant difference between the experimental and control groups in terms of parental education and occupation variables (p > 0.05). The mean and standard deviation of self-esteem and academic engagement pre-

test and post-test of ninth-grade male students were reported in Table  $\boldsymbol{3}$  .

Table 3. Mean results and standard deviation of pre-test and post-test of self-concept and academic engagement of ninth grade male students

Variable	Stage	Experim	Experimental group		Control group		
		Mean	SD	Mean	SD		
Academic self-concept	Pre-test	86.35	30.4	13.34	37.4		
	Post-test	22.43	45.4	09.34	41.4		
Academic engagement	Pre-test	06.22	61.3	25.23	57.3		
-	Post-test	26.34	24.4	18.23	56.3		

According to the results in Table 3, the mean of selfesteem and academic engagement of ninth-grade male students in the experimental group had a greater increase from the pre-test to the post-test compared to the control group .

The examination of the assumptions of the one-variable covariance analysis showed that the normality assumption of self-esteem and academic engagement in the experimental and control groups in the pre-test and post-test stages based on the Kolmogorov-Smirnov test was not rejected, and the assumption of equality of variances based on the Levene's test for all variables and the assumption of equality of variance-covariance matrices based on the Box's M test were not rejected (p<0.05). Therefore, the conditions for using multivariate analysis of covariance existed. The results of the multivariate tests to determine the effect of academic buoyancy training on self-esteem and academic engagement of ninth-grade male students were reported in Table 4.

 Table 4. Results of multivariate tests to determine the effect of academic buoyancy training on self-concept and academic engagement of ninth grade male students

Test	Value	F	Sig.	Effect size	Power
Pillai's trace	0.45	17.46	< 0.001	0.83	1.00
Wilks' Lambda	0.13	17.46	< 0.001	0.83	1.00
Hotelling's trace	2.37	17.46	< 0.001	0.83	1.00
Roy's largest root	2.37	17.46	< 0.001	0.83	1.00

According to the results in Table 4, the results of all four tests showed that academic buoyancy training caused at least a significant change in one of the academic self-esteem and academic buoyancy variables in ninth-grade male students (p<0.001). The results of multivariate analysis of covariance to determine the effect of academic

buoyancy training on each of the self-esteem and academic engagement variables of ninth-grade male students were reported in Table 5 .

 Table 5. Results of multivariate covariance analysis to determine the effect of academic buoyancy training on each of the variables of self-concept and academic engagement of ninth grade male students

		1		00		0		
Variable	Source	SS	df	MS	F	Sig.	Effect size	Power
Academic self- concept	Group	38.274	1	38.274	91.16	001.0<	81.0	00.1
academic engagement	Group	61.155	1	61.155	54.21	001.0<	87.0	00.1

According to the results in Table 5, there was a significant difference between the experimental and control groups in terms of both academic self-esteem and

academic buoyancy variables, and based on the mean values, the academic buoyancy training method led to an

increase in self-esteem and academic engagement in ninth-grade male students (p < 0.001).

#### Conclusion

Given the importance of academic variables in ninthgrade students due to their choice of major at the end of ninth grade and enrollment in tenth grade, this study was conducted to determine the effect of academic buoyancy training on self-concept and academic engagement in ninth-grade male students. The findings of this study showed that academic buoyancy training led to an increase in academic self-concept in ninth-grade male students. This finding is consistent with the findings of Emami Khotbesara et al. (2021) regarding the effect of academic buoyancy training on increasing academic engagement in female students, Ershadi Chahardeh (2021) regarding the effect of academic buoyancy training on increasing academic engagement in female high school students, and Jalilian et al. (2018) regarding the positive and significant relationship between academic buoyancy and academic engagement. It can be said that academic buoyancy training focuses on issues such as understanding classroom structures, the role of classroom and school structures, the role of learners in classroom structures, the importance of classroom goals and structures, and teaching positive perceptions of classroom and school structures, all of which help students' academic engagement and increase their enthusiasm for engaging with academic content. Additionally, the learning environment refers to the physical, social, psychological, educational, and cultural context in which learning takes place, and the perceptions of the learning environment, the learner, the learning conditions, and the learner's growth and development affect learning. Therefore, students who have more diverse experiences in more suitable learning environments are more successful in learning and have a greater tendency to challenge themselves for successful learning. Since academic buoyancy training creates such environments in the classroom, school, or overall learning environment, it can be expected to have a significant role in increasing and improving the academic engagement of ninth-grade male students.

Furthermore, the findings of this study showed that academic buoyancy training led to an increase in academic self-concept in ninth-grade male students. This finding is consistent with the findings of Derakhshan et al. (2021) regarding the positive and significant correlation between academic buoyancy and academic self-concept in elementary school boys and girls, Narimani et al. (2019) regarding the positive and significant correlation between self-concept and academic buoyancy in students with specific learning disabilities, and Colmar et al. (2019) regarding the significant positive relationship between academic buoyancy and academic self-concept in elementary school students. It can be said that academic buoyancy training creates interest in learning and increases the strength, ability, and motivation of learners, providing the necessary impetus to successfully complete academic tasks. Therefore, this teaching method can increase academic buoyancy in students, and students with higher academic buoyancy have more interest and motivation for learning and have a more positive view of themselves, their studies, and their school. These factors make students with higher academic buoyancy have a better understanding of the meaning of learning, expend more energy to cope with academic challenges, and adapt more quickly to academic challenges. Based on the discussed points, it can be expected that academic buoyancy training can have a significant role in increasing and improving the academic self-concept of ninth-grade male students in academic matters.

The main limitations of this study include the use of convenience sampling, self-report measures for data collection, a single-gender population, and a restricted sample of ninth-grade students. Therefore, if possible, the use of random sampling methods, structured interviews for data collection, conducting the study on girls and even students from other grade levels is recommended. Another research proposal is to investigate the effect of academic buoyancy training on other academic variables such as academic meaning, academic enthusiasm, academic buoyancy, academic fatigue, academic anxiety, etc. The results of this study showed the effect of academic buoyancy training on improving self-esteem and academic engagement, which has practical implications for educators and planners. Based on the results of this study and similar studies, they can design and implement programs to improve the academic situation of students. Therefore, to improve academic performance, including self-esteem and academic engagement, the use of academic buoyancy training alongside other effective teaching methods can be beneficial.

## Acknowledgment

Finally, appreciation is expressed to all those who contributed to this study.

## References

Azarian R, Mahdian H, Jajarmi M. (2020). Comparison the effectiveness of academic buoyancy and emotion regulation training on academic meaning and academic adjustment. Journal of Research in Educational Science, 14(Special Issue), 483-494.

- Baghbanpour Azari R, Livarjani Sh, Hosseini Nasab SD. (2022). The effectiveness of social skills training based on Timothy Campbell-Comerford theory on academic self-concept and academic emotions of students with behavioral problems. Community Health Journal, 16(1), 65-75.
- Colmar SH, Liem GAD, Connor J, Martin AJ. (2019). Exploring the relationships between academic buoyancy, academic self-concept, and academic performance: a study of mathematics and reading among primary school students. Educational Psychology, 39(8), 1-22.
- Derakhshan M, Yousefi S, Najarporyan A. (2021). The relation of family emotional atmosphere and academic buoyancy with mediating role of academic self-concept: Structural equation modeling. Scientific Journal of Education Research, 16(66), 37-56.
- Emami Khotbesara Z, Mahdian H, Bakhshipoor A. (2021). Comparison of the effectiveness of academic vitality training and psychological capital on academic engagement in female students. Iranian Journal of Educational Society, 14(1), 399-412.
- Ershadi Chahardeh Sh. (2020). Effectiveness of academic buoyancy training on academic engagement and adjustment to school in firth high school students. Iranian Journal of Educational Sociology, 3(2), 11-19.
- Esnaola I, Elosua P, Freeman J. (2018). Internal structure of academic self-concept through the Self-Description Questionnaire II-Short (SDQII-S). Learning and Individual Differences, 62, 174-179.
- Fooladi A, Kajbaf MB, Ghamarani A. (2016). Effectiveness of academic buoyancy training on academic meaning and academic performance of third grade girl students at the first period of high school in Mashhad city. Quarterly Journal of Research in School and Virtual Learning, 4(3), 93-103.
- Fooladi A, Kajbaf MB, Ghamarani A. (2018). Effectiveness of academic buoyancy training on academic success and academic self-efficacy of girl students. Journal of Instruction and Evaluation, 11(42), 37-53.
- Gill AC, Singhal G, Schutze GE, Turner TL. (2021). Educational coaches: Facilitating academic vitality and a pathway to promotion for clinician-educators. The Journal of Pediatrics, 235, 3-5.
- Gremmen MC, Vanden Berg YHM, Steglich C, Veenstra R, Dijkstra JK. (2018). The importance of nearseated peers for elementary students' academic engagement and achievement. Journal of Applied Developmental Psychology, 57, 42-52.
- Hirvonen R, Yli-Kivisto L, Putwain DW, Ahonen T,Kiuru N. (2019). School-related stress among sixthgrade students – Associations with academic

buoyancy and temperament. Learning and Individual Differences, 70, 100-108.

- Jalilian S, Azimpour E, Gholizadeh N. (2018). Prediction of academic buoyancy based on academic engagement and psychological hardiness in secondary students. Quarterly Journal of Educational and Scholastic Studies, 7(1), 123-140.
- Jia Y, Cheng L. (2022). The role of academic buoyancy and social support on English as a foreign language learners' motivation in higher education. Frontiers in Psychology, 13(892603), 1-7.
- Larson KE, Bottiani JH, Pas ET, Kush JM, Bradshaw CP. (2019). A multilevel analysis of racial discipline disproportionality: A focus on student perceptions of academic engagement and disciplinary environment. Journal of School Psychology, 77, 152-167.
- Lawson C, Salter A, Hughes A, Kitson M. (2019). Citizens of somewhere: Examining the geography of foreign and native-born academics' engagement with external actors. Research Policy, 48(3), 759-774.
- Li L, Valiente C, Eisenberg N, Spinrad TL, Johns SK, Berger RH, et al. (2022). Longitudinal associations among teacher—child relationship quality, behavioral engagement, and academic achievement. Early Childhood Research Quarterly, 61, 25-35.
- Liu WC, Wang CKJ. (2005). Academic self-concept: A cross-sectional study of grade and gender differences in a Singapore secondary school. Asia Pacific Education Review, 6(1), 20-27.
- Martin AJ, Marsh HW. (2008). Academic buoyancy: Towards an understanding of students' everyday academic resilience. Journal of School Psychology, 46, 53-83.
- Maynor L, Galvez-Peralta M, Barrickman A, Hanif A, Baugh G. (2022). Perceived stress, academic selfconcept, and coping mechanisms among pharmacy students following a curricular revision. Current in Pharmacy Teaching and Learning, 14(2), 159-165.
- Metzger IW, Cooper SM, Griffin CB, Golden AR, Opara I, Ritchwood TD. (2020). Parenting profiles of academic and racial socialization: Associations with academic engagement and academic self-beliefs of African American adolescents. Journal of School Psychology, 82, 36-48.
- Narimani M, Rashidi J, Zardi B. (2019). The role of children's self-concept, family's social support, and parenting styles in predicting academic vitality among students with specific learning disability. Journal of Learning Disabilities, 8(3), 152-158.
- Reeve J, Tseng CM. (2011). Agency as a fourth aspect of students' engagement during learning activities. Contemporary Educational Psychology, 36(4), 257-267.

- Sewasew D, Schroeders U. (2019). The developmental interplay of academic self-concept and achievement within and across domains among primary school students. Contemporary Educational Psychology, 58, 204-212.
- Shin H, Chang Y. (2022). Relational support from teachers and peers matters: Links with different profiles of relational support and academic engagement. Journal of School Psychology, 92, 209-226.
- Shirzadi MM, Shekholeslami R. (2021). Academic moral civility: The mediating role of academic engagement in the relationship between academic motivation and academic incivility. Ethics in Science and Technology, 16(1), 51-59.
- Vander Aar LPE, Peters S, Vander Cruijsen R, Crone EA. (2019). The neural correlates of academic selfconcept in adolescence and the relation to making future-oriented academic choices. Trends in Neuroscience and Education, 15, 10-17.
- Westphal A, Kretschmann J, Gronostaj A, Vock M. (2018). More enjoyment, less anxiety and boredom: How achievement emotions relate to academic selfconcept and teachers' diagnostic skills. Learning and Individual Differences, 62, 108-117.
- Wu H, Zhao L, Guo Y, Lei W, Guo C. (2022). Neural correlates of academic self-concept and the association with academic achievement in older children. Neuroscience, 482, 53-63.
- Yun MR, Shin N, Kim H, Jang IS, Ha MJ, Yu B. (2020). Effects of school-based meditation courses on selfreflection, academic attention, and subjective wellbeing in South Korean middle school students. Journal of Pediatric Nursing, 54, 61-68.