

## **Quality of Student-Teacher Relationship and Externalizing Problems in Adolescents: Mediating Role of Self-Esteem**

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Teachers play a significant role in the psycho-social development of children. The current study explored the mediating role of self-confidence in the association of quality of student-teacher relationship and externalizing problems in adolescents. A sample of 300 school children (boys = 50%, girls = 50%) with the ages of 13 to 15 years ( $M = 14.95$ ,  $SD = 1.11$ ) selected from mainstream government schools were given the Student Teacher Relationship Scale (STRS), Child Behavior Checklist (CBCL), and Self-Esteem Scale for Children (SESC). Correlation analysis suggested that quality of student teacher relationship and self-confidence were negatively associated with externalizing problems. Furthermore, quality of student-teacher relationship was positively associated with self-confidence. Mediation analysis indicated that self-esteem significantly mediates the association between quality of student teacher relationship and externalizing problems in adolescents. Implications of this study indicated that counseling sessions for teachers and students to boost their healthy relationship can be productive in the development of self-confidence and to reduce their externalizing problems.

**Keywords.** Student-Teacher Relationship, Self-Confidence, Externalizing Problems, Adolescents.

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Adolescent years are said to be a time of continuous adjustment with ever changing biological, social, emotional and academic demands (Zahra & Saleem, 2021; Zahra et al., 2021). As Erikson has described, during adolescence period, individuals continuously struggle to define and describe their roles that eventually help them to establish their sense of identity and relative status in society (Erikson, 1968). They shape their sense of identity by comparing themselves and adopt new roles with increased interaction in the social world including teachers, peer and friends (Kiuru et al., 2020). Developmental theories suggest that family, school context, teachers and peer are some important factors that determine psychosocial and emotional growth of adolescents (Mashburn & Pianta, 2006; O'Conno, 2010). Though parental influence is very crucial yet the teachers role increases with child's age and have a long lasting impact of academic, personal and social functioning (Silver et al., 2010; Sabol & Pianta, 2012). A positive student-teacher relationship comprises of healthy interaction, support, trust, warmth and less conflict (Roorda et al., 2011).

There are two conceptual models that describe the dynamics of teacher-student relationship; firstly, attachment theory that explains the nature of attachment with parents or significant others which plays a template for further relationships including with teachers (Bowlby, 1969). The other developmental system theory explains teacher-student relationship in terms of multilevel systems including individual, personal, familial, school and peer that influence each other to form a relationship (Bronfenbrenner & Morris, 1998). Keeping in view developmental process of growing individuals, World Health Organization stated that a positive environment at schools, healthy interaction and a sense of connectedness between teachers and students is associated with the positive outcomes of mental health.

Self-determination theory of motivation (Ryan & Deci, 2000) postulates that every individual has three basic psychological needs firstly, a sense of autonomy and actualization, secondly, a sense of belongingness, close bonding and respect and lastly competence with a sense of achievement and accomplishment. The application of this theory can be best seen in the study of intrinsic motivation, academic motivation and psychological well-being (Spilt et al., 2011). Teachers who not only provide academic knowledge but also provide motivation, acceptance, emotional warmth and respect can help a student to fulfill these basic needs (Goetz et al., 2021). A number of empirical studies have also demonstrated that positive, emotionally warmth and supportive teacher-student relationship is associated with positive academic outcomes, high motivation, better school adjustment, increased interest in academic activities, fewer mental health concerns and better social skills (Baker et al., 2008; Goetz et al., 2021; Marengo et al., 2018; Mitchell & DellaMatera, 2011; Myers & Pianta, 2008; O'Connor et al., 2012). There are a number of factors that also influence the quality of teacher-student relationship including gender, age, culture (Liu et al., 2016).

One of the important consequences of teacher-student relationship is the impact on self-esteem (Lavy & Naama-Ghanayim, 2020). Self-esteem is an important developmental task of adolescent years which is characterized by a sense of approval, acceptance and respect (Rosenberg, 1989). Self-esteem is a very dynamic construct that start developing from childhood and shaped by a sense of competence and worthiness in adulthood (Rubin et al., 2002). Self-esteem is associated with high life satisfaction, higher academic achievement, buffer against mental health problems and psychological well-being (Du et al., 2017; Duy & Yıldız, 2019; Wang & Fowler, 2019). Low self-esteem is associated with several mental health problems including anxiety and depression (Henriksen et al., 2017; Sowislo & Orth, 2013). Literature also highlights that self-esteem plays a role of a mediator between numerous variables and mental health outcomes (Xiang et al., 2019; Uba et al., 2020).

Literature also reveals that poor quality, conflict, dissatisfactions and lack of trust in teacher-student relationship may result in poor academic performance, dropout from school, low self-esteem, internalizing/externalizing problems, depression, worry, boredom and poor social skills (Baker et al., 2008; Krane et al., 2016). The conflict in teacher-student relationship is characterized by anger, hostility, rejection, punishment and criticism in front of others which restrict learning of academic and social skills (Mantzicopoulos, 2005). The lack of positive interaction and closeness between a student and a teacher may result in a poor self-image and self-esteem that may further lead to serious mental health concerns (O'Connor et al., 2011). Teachers are an important source of socialization in adolescents' lives, and the quality of teacher-student relationship is associated with numerous academic, personal and social outcomes. The current study is aimed to identify the mediating role of self-esteem between teacher-student relationship and internalizing and externalizing problems in adolescents.

## Method

### Participants

Participants for this study were 300 (boys = 50%, girls = 50%) school students selected from 8<sup>th</sup> (33%), 9<sup>th</sup> (33%), and 10<sup>th</sup> (34%) grade by using multistage sampling strategy. Most of the participants in this study belonged to joint family system (62%).

### Measures

Student Teacher Relationship Scale (Amer & Saleem, 2015) was used to assess the quality of student teacher relationship. It consists of 20 items measured on 7-point Likert scale ranging from 1 (very bad) to 7 (very good). The scale has two subscales, positive student-teacher relationship and negative student-teacher relationship. In current research the positive student teacher relationship sub-scale was used to assess the quality of student teacher

STUDENT-TEACHER RELATIONSHIP, EXTERNALIZING PROBLEMS, SELF-ESTEEM relationship. Cronbach's alpha value of student teacher relationship scale for present study was .71 indicating the good internal consistency and reliability of the scale.

Self-esteem Scale for School Children (Saleem & Mahmood, 2011) was used to assess the self-esteem of the participants. The scale consists of 44 items with 5-point Likert scale ranging from 0 (never) to 4 (always). The scale comprises of 4 subscales academic self-esteem, self-confidence, social self-esteem, and low self-esteem. In current research academic self-esteem, self-confidence, and social self-esteem were used to yield the score of self-esteem. The alpha value of SESC for existing study was .77 depicting the good reliability of the scale.

Externalizing problems were assessed by using subscale of externalizing problems taken from Child Behavior Checklist (CBCL) (Achenbach & Rescorla, 2001). CBCL consists of 112 items with two subscales, *internalizing problems* and *externalizing problems* assessment. It consists of 3-point Likert scale ranging from 0 (absent) to 2 (often). Cronbach's alpha value of CBCL for present study was .95 depicting good internal consistency of the scale.

### Procedure

After getting approval from Institutional Review Board (IRB) researcher contacted 4 schools and gave them brief description related to the research to the school authorities. Two of them gave their consent to be the part of this study. After that researcher visited these schools and approached the participants in their class rooms. Researcher gained consent from the teachers as well as students. Participants were also given assurance of confidentiality and privacy of the data taken from them. The data were collected in groups with average 20 participants in each group. At the end participants were given some time to ask any question regarding research project. Average time to complete the research protocol was 15 minutes.

## Results

### Correlation Analysis

**Table 1**

*Inter-correlations among Student-Teacher Relationship, Self-Esteem and Externalizing Problems in Adolescents (N = 297)*

Variables	M	SD	STR	SE	EP
STR	76.45	13.67	-	.18**	-.21***
SE	31.17	9.87	-	-	-.20***
EP	10.66	7.13	-	-	-

*Note.* STR = Student-teacher relationship; SE = Self-esteem; EP = Externalizing problems, \*\* $p < .01$ , \*\*\* $p < .001$ ,  $df = 296$ .

Pearson Product Moment Correlation was conducted to find out the association among quality of teacher-student relationship, self-esteem and externalizing problems. Findings of correlation analysis reported in Table 1 depicted the positive association between quality of student-teacher relationship and self-esteem ( $r = .18, p < .01$ ) and negative association of quality of student-teacher relationship and externalizing problems ( $r = -.21, p < .001$ ) self-esteem and externalizing problems ( $r = -.20, p < .001$ ). It shows that having positive student-teacher relationship boost the level of self-esteem and lower the externalizing problems. Likewise, having escalated level of self-esteem also helps adolescents in overcoming their externalizing problems.

### Mediation Analysis

The findings of correlation analysis revealed significant relationships between quality of student-teacher relationship, self-esteem, and externalizing problems, fulfilling the assumptions of Baron and Kenny (1986). Therefore, the mediating role of self-esteem in the association of quality of student-teacher relationship and externalizing problems was explored

through Hayes (2018) bootstrapping approach. Hayes (2013) also investigated the conditional process analysis that proposed mediation model needed to establish link between the assumed independent variable ( $X$ ) to a presumed effect, i.e., dependent variable ( $Y$ ) at least in part through a mediator variable ( $M$ ). Therefore, in this study, Hayes (2018) bootstrapping approach was utilized to observe self-esteem as a mediator between the quality of student teacher relationship and externalizing problems as independent variables and depressive symptomatology as dependent variable.

**Table 2**

*Mediation Analysis of Self-Esteem in Quality of Student Teacher Relationship and Externalizing Problems in Adolescents (N=297)*

Antecedent	Consequent							
	M(SE)				Y(EP)			
	B	SE	p		B	SE	p	
STR (X)	a	.17	.03	.003**	c'	-.18	.03	.001***
SE (M)	---	---	---		b	-.17	.05	.002**
Constant	i	23.83	2.48	.001***	i	22.98	2.64	.001***
	$R^2 = .03$				$R^2 = .07$			
	$F(1,295) = 8.89, p = .003**$				$F(2,294) = 11.46, p = .001***$			

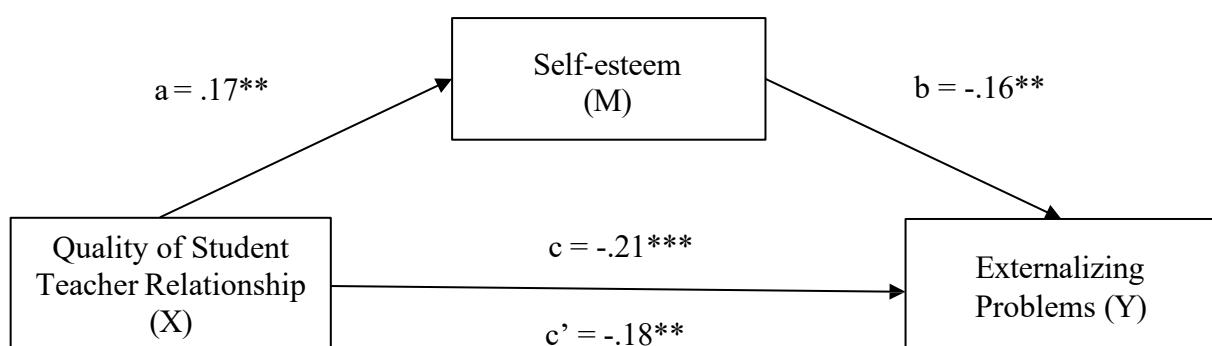
Note. STR = Student-teacher relationship; SE = Self-esteem; EP = externalizing problems.

\* $p < 0.05$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$

Figure 1 and table 2 show the results of mediation analysis. Path  $a$  depicts significant predictive association of quality of student teacher relationship with self-esteem,  $\beta = .17$ ,  $SE = .03$ ,  $p < .01$ . Path  $b$  reveals predictive association between self-esteem and externalizing problems,  $\beta = -.17$ ,  $SE = .05$ ,  $p < .01$ . Path  $c$  depicts the significant total effect of quality of student-teacher relationship on externalizing problems,  $\beta = -.21$ ,  $SE = .03$ ,  $p < .001$ . Findings indicate that self-esteem partially mediates the relationship of quality of student-teacher relationship and externalizing problems as after controlling self-esteem as mediator the direct effect of quality of student-teacher relationship on externalizing problems is reduced but model  $c'$  path is still significant,  $\beta = -.18$ ,  $SE = .03$ ,  $p < .001$ . Furthermore, findings also indicated the significant indirect effect of quality of student-teacher relationship on externalizing problems through self-esteem,  $\beta = -.02$ ,  $SE = .01$ ,  $CI [-.03, -.00]$ , confirming the mediating role of self-esteem in the association of quality of student-teacher relationship and externalizing problems.

**Figure 1**

*Mediation Model of Self-esteem in Quality of Student Teacher Relationship and Externalizing Problems (N = 297).*



## STUDENT-TEACHER RELATIONSHIP, EXTERNALIZING PROBLEMS, SELF-ESTEEM Discussion

Adolescence is known as the period that demands continual adjustment with the ever-changing developmental process (Windle & Mason, 2004; Zahra et al., 2021). During this developmental period several changes takes place in terms of genetic, organic, physical, psychological, cognitive, emotional, behavioral, temperamental, sociocultural, career choice, adjustability in the new environment and relationship expand to the small level to big levels independence and self-government in life (Al-Gelban, 2007; Nicolson & Ayers, 1997; Zahra & Saleem, 2021). Due these developmental changes and demands several behavioral and emotional issues arise in adolescents leading them toward increased prevalence of externalizing problems like aggression and rule breaking behaviors associated with numerous negative outcomes. However, by exploring the factors associated with externalizing problems we can prevent adolescents from the adverse consequences of externalizing problems. The current research was therefore, designed to explore the association of student-teacher relationship and self-esteem with externalizing problems.

Findings of this research indicated the significant negative association of quality of student-teacher relationship and externalizing problems. These findings are also in line with previous empirical and theoretical literature suggesting the healthy and positive student-teacher relationship as a protective factor of externalizing problems (Marengo et al., 2018; Miller-Lewis et al., 2014; O'Connor et al., 2012). Caring and supportive student-teacher relationships may serve important functions for children's successful adaptation to the school environment because students spend most of the time with teachers (Goetz et al., 2021). Furthermore, consistent with literature, findings also indicated that quality of student-teacher relationship is significantly positively associated with self-confidence (Lavy & Naama-Ghanayim, 2020). According to Roeser et al. (1996) students who reported more positive teacher-student relationships also reported greater feelings of belonging, felt more high academic self-esteem, efficaciousness and less internalizing and externalizing problems. Whereas negative student teacher relationship leads to externalizing problems and low self-esteem in adolescents. Moreover, findings suggested the significant negative association of self-esteem with externalizing problems. Previous empirical literature also supported this finding demonstrating that having positive self-concept and evaluation help an individual in overcoming their negative emotions, hence serve as a protective factor against externalizing problems (Zahra & Saleem, 2021).

Mediation analysis indicated the significant mediating role of self-esteem in the association of quality of student-teacher relationship and externalizing problems. These results are supported by previous empirical students indicating that positive student-teacher relationship boosted the level of self-confidence and self-esteem which in turn help adolescents and children in overcoming their behavioral issue like aggressive behavior and rule breaking behaviors (Goetz et al. 2021; Marengo et al., 2018; Miller-Lewis et al., 2014). The cultural context of Pakistan also supports the current results in which teachers are considered like parents influencing the psycho-social development of children and adolescents. Teachers boost the level of self-worth and self-confidence by highlighting and encouraging the positive abilities of students (Lavy & Naama-Ghanayim, 2020). This escalated level of self-esteem and self-confidence ensure adjustment with challenges of adolescents and help them in overcoming mental health issues like externalizing behavioral issues. Therefore, ensuring the positive and healthy student-teacher relationship we can boost the level of self-esteem as well as prevent adolescents from externalizing problems.

## Conclusion

Teachers play a fundamental role in psycho-social and personal growth of children and adolescents. This study highlighted the healthy and productive role of student-teacher relationship in self-esteem and behavioral issues. Furthermore, this study confirmed that

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interplay of student teacher relationship and self-esteem helps adolescents in overcoming their externalizing behavioral problems.

### Limitations and Recommendations

Despite several implications, this study is also associated with few drawbacks which must be considered in upcoming studies. This study was carried out on urban school children and it would be useful to carry out a similar research for the rural population as well and make comparisons between urban and rural samples. Furthermore, in this research data were collected merely from adolescents. In future, it is recommended to use triangular approach to get the data from parents and teachers as well as adolescents.

### References

Achenbach, T.M. & Rescorla, L.A. (2001). *Manual for the ASEBA School-Age form & profile*. Burlington: University of Vermont Department of Psychiatry.

Amer, M., & Saleem, S. (2015). *Perceived student-teacher relationship, self-esteem, internalizing and externalizing problems in adolescents* (Masters Dissertation). Department of Clinical Psychology, University of Management and Technology, Lahore, Pakistan.

Baker, J. A., Grant, S., & Morlock, L. (2008). The teacher-student relationship as a developmental context for children with internalizing or externalizing behavior problems. *School Psychology Quarterly*, 23(1), 3–15. <https://doi.org/10.1037/10453830.23.1.3>

Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 51, 1173-1182.

Bowlby, J. (1969). *Attachment and loss: Attachment* (vol. 1). New York: Basic Books.

Bronfenbrenner, U., & Morris, P. A. (1998). The ecology of developmental processes. In W. Damon & R. M. Lerner (Eds.), *Handbook of child psychology: Theoretical models of human development* (5th ed., Vol. 1, pp. 993–1028). Hoboken: John Wiley & Sons.

Du, H., King, R. B., & Chi, P. (2017). Self-esteem and subjective well-being revisited: The roles of personal, relational, and collective self-esteem. *PloS One*, 12(8), e0183958. <https://doi.org/10.1371/journal.pone.0183958>

Duy, B., & Yıldız, M. A. (2019). The mediating role of self-esteem in the relationship between optimism and subjective well-being. *Current Psychology: A Journal for Diverse Perspectives on Diverse Psychological Issues*, 38(6), 1456-1463. <https://doi.org/10.1007/s12144-017-9698-1>

Erikson, E.H. (1968). *Identity, youth and crisis*. Faber and Faber, London.

Goetz, T., Bieleke, M., Gogol, K., Van Tartwijk, J., Mainhard, T., Lipnevich, A. A., & Pekrun, R. (2021). Getting along and feeling good: Reciprocal associations between student-teacher relationship quality and students' emotions. *Learning and Instruction*, 71, 101349. <https://doi.org/10.1016/j.learninstruc.2020.101349>

Hayes, A. F. (2013). *Introduction to mediation, moderation, and conditional process: A regression based approach*. New York: The Guilford Press.

Hayes, A. F. (2018). *Introduction to mediation, moderation, and conditional process: A regression based approach*. New York: The Guilford Press.

Henriksen, I. O., Ranøyen, I., Indredavik, M. S., & Stenseng, F. (2017). The role of self-esteem in the development of psychiatric problems: a three-year prospective study in a clinical sample of adolescents. *Child and Adolescent Psychiatry and Mental Health*, 11, 68. <https://doi.org/10.1186/s13034-017-0207-y>

Kiuru, N., Wang, M., Salmela-Aro, K., Kannas, L., Ahonen, T., & Hirvonen, R. (2020). Associations between adolescents' interpersonal relationships, school well-being, and

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academic achievement during educational transitions. *Journal of Youth and Adolescence*, 49 (5) (2020), 1057-1072.

Krane, V., Karlsson, B., Ness, O., & Kim, H. S. (2016). Teacher-student relationship, student mental health, and dropout from upper secondary school: A literature review. *Scandinavian Psychologist*, 3, e11. <https://doi.org/10.15714/scandpsychol.3.e11>

Lavy, S., & Naama-Ghanayim, E. (2020). Why care about caring? Linking teachers' caring and sense of meaning at work with students' self-esteem, well-being, and school engagement. *Teaching and Teacher Education*, 91, 103046. <https://doi.org/10.1016/j.tate.2020.103046>

Liu, W., Mei, J., Tian, L., & Huebner, E. S. (2016). Age and gender differences in the relation between school-related social support and subjective well-being in school among students. *Social Indicators Research*, 125, 1065–1083. <https://doi.org/10.1007/s11205-015-0873-1>

Mantzicopoulos, P. (2005). Conflictual relationships between kindergarten children and their teachers: Associations with child and classroom context variables. *Journal of School Psychology*, 43(5), 425-442. <https://doi.org/10.1016/j.jsp.2005.09.004>

Marengo, D., Jungert, T., Iotti, N. O., Settanni, M., Thornberg, R., & Longobardi, C. (2018). Conflictual student-teacher relationship, emotional and behavioral problems, prosocial behavior, and their associations with bullies, victims, and bullies/victims. *Educational Psychology*, 10, 1–17. <https://doi.org/10.1080/01443410.2018.1481199>

Mashburn, A. J., & Pianta, R.C. (2006). Social relationships and school readiness. *Early Education & Development*, 17 (1), 151-176. <https://doi.org/10.1207/s15566935eed17017>.

Miller-Lewis, L. R., Sawyer, A. C., Searle, A. K., Mittinty, M. N., Sawyer, M. G., & Lynch, J. W. (2014). Student-teacher relationship trajectories and mental health problems in young children. *BMC Psychology*, 2(1), 1-18. <https://doi.org/10.1186/s40359-014-0027-2>

Mitchell, S., & DellaMatera, J. (2011). Teacher support and student's self-efficacy beliefs. *Journal of Contemporary Issues in Education*, 5, 24–35. doi:10.20355/C5X30Q

Myers, S.S., & Pianta, R.C. (2008). Developmental commentary: Individual and contextual influences on student-teacher relationships and children's early problem behaviors. *Journal of Clinical Child and Adolescent Psychology*, 37 (3), 600-608. <https://doi.org/10.1080/15374410802148160>.

O'Connor, E. (2010). Teacher-child relationships as dynamic systems. *Journal of School Psychology*, 48 (3), 187-218. <https://doi.org/10.1016/j.jsp.2010.01.001>

O'Connor, E., Collins, B.A., & Supplee, L. (2012). Behavior problems in late childhood: The roles of early maternal attachment and teacher-child relationship trajectories. *Attachment & Human Development*, 14 (3), 265-288. <https://doi.org/10.1080/14616734.2012.672280>.

O'Connor, E., Dearing, E., & Collins, B.A. (2011). Teacher-child relationship and behavior problem trajectories in elementary school. *American Educational Research Journal*, 48 (1), 120-162. <https://doi.org/10.3102/0002831210365008>.

Roorda, D.L., Koomen, H.M.Y., Spilt, J.L., & Oort, F.J. (2011). The influence of affective teacher-student relationships on students? School engagement and achievement: A meta-analytic approach. *Review of Educational Research*, 81 (4), 493-529. <https://doi.org/10.3102/0034654311421793>

Rosenberg, M. (1989). *Society and the adolescent self-image*. Wesleyan University Press.

Rubin, K.H., & Burgess, K.B. (2002). Stability and social-behavioural consequences of toddlers' inhibited temperament and parenting. *Child Development*, 73 (2) (2002), 483-495. <https://doi.org/10.1111/1467-8624.00419>

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>

Sabol, T. J., & Pianta, R. C. (2012). Recent trends in research on teacher-child relationships. *Attachment & Human Development*, 14(3), 213–231. <https://doi.org/10.1080/14616734.2012.672262>

Saleem, S., & Mahmood, Z. (2011). The development of a self-esteem scale for children in Pakistan. *Pakistan Journal of Psychological Research*, 26(1), 1-21.

Silver, R.B., Measelle, J.R., Armstrong, J.M., & Essex, M.J. (2010). The impact of parents, child care providers, teachers, and peers on early externalizing trajectories. *Journal of School Psychology*, 48 (6), 555-583. <https://doi.org/10.1016/j.jsp.2010.08.003>

Spilt, J. L., Koomen, H. M., Y., & Thijs, J. T. (2011). Teacher well being: The importance of teacher-student relationships. *Educational Psychology Review*, 23(4), 457-477. <https://doi.org/10.1007/s10648-011-9170-y>

Uba, I., Yaacob, S. N., Juhari, R., & Talib, M. A. (2020). Does self-esteem mediate the relationship between loneliness and depression among Malaysian teenagers? *Editorial Board*, 20(1), 179-188.

Wang, S.C., & Fowler, P.J. (2019). Social cohesion, neighbourhood collective efficacy, and adolescent subjective well-being in urban and rural Taiwan. *American Journal of Community Psychology*, 63 (3–4), 499-451. <https://doi.org/10.1002/ajcp.12324>

Xiang, Z., Tan, S., Kang, Q., Zhang, B., & Zhu, L. (2019). Longitudinal effects of examination stress on psychological well-being and a possible mediating role of self-esteem in Chinese high school students. *Journal of Happiness Studies*, 20(1), 283-305. <https://doi.org/10.1007/s10902-017-9948-9>

Zahra, S.T., & Saleem, S. (2021). Family cohesion and self-confidence as protective factors of depression in adolescents: A mediation analysis. *Journal of the Pakistan Medical Association*, 71(2B), 677-680. <https://doi.org/10.1177/10664807221139504>

Zahra, S.T., & Saleem, S., & Khurshid, H. (2021). Mediation analysis of social deficits between self-criticism and aggression in adolescents. *Clinical Child Psychology and Psychiatry*, 26(3), 870-881. <https://doi.org/10.1177/10664807221139504>