

Mediating Role of Perceived Social Support between Locus of Control and Assertiveness among University Undergraduates

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Abstract

Background. Assertiveness is one's capacity to stand for one's views, opinions, and rights without being manipulated by others or manipulating others for building effective social relationships. Pertinent literature proposes that locus of control and perceive social support play important role in fostering one's level of assertiveness. The present study proposed a mediating role of perceived social support between locus of control and assertiveness among university undergraduates.

Method. A sample of 314 undergraduates from the University of Sargodha was purposively recruited for this study. Levenson Multidimensional Locus of Control Scale (Levenson, 1973), Self-Assertiveness Scale (Zahid, 2003), and Interpersonal Support Evaluation List (Cohen, Mermelstein, Kamarck, & Hoberman, 1985) were used to operationalize locus of control, self-assertiveness, and social support respectively.

Results. Multiple regression analysis provided empirical support for the proposed model, and perceived social support and internal locus of control positively predicted assertiveness. Moreover, perceived social support positively mediated the relationships between internal locus of control and negatively between external locus of control and assertiveness.

Conclusion. Our findings indicated the differential mediating role of perceived social support between internal/external locus of control and assertiveness. Therefore, we may conclude that people with internal locus of control are more likely to perceive high degree of social support, which in turn make them more assertive. In contrast, people with external locus of control are more likely to perceive low degree of social support, which may in tum reduces their chances of being assertive.

Keywords. *Perceived social support, assertiveness, locus of control*



Introduction

Human beings are social animals and for their survival, they need to interact with each other. During their interactions, sometimes they need to refuse unreasonable requests. Some individuals have the ability to say no without being afraid of any person and are confident enough to refuse unreasonable requests from others while others may lack this ability. This ability to say “no” exemplifies assertiveness, the ability that a person can stand for his/her views, opinions, and rights without being manipulated by others or manipulating others, essential for building effective social relationships (Alberti & Emmons, 2008; Castanyer, 2009).

Assertiveness comprises three different dimensions, i.e. cognitive, affective, and behavioral. Kraft and colleagues (1986), suggest cognitively assertive individuals have internal skills to cope with stressful events; and Saigh (1988) suggests, assertive individuals, regain their assertiveness after facing traumatic events. Gladding (1988) suggests that assertive individuals can easily deal with both positive and negative emotions on affective and cognitive levels while on behavioral levels, assertive individuals can easily express their emotions, can defend their goals and can easily establish favorable relationships.

The present research intended to explore the dynamics of relationships among assertiveness, locus of control (LOC), and perceived social support. Although pertinent literature suggests an association between LOC and assertiveness, however, it does not provide an insight into the mechanism of this relationship as few studies have tried to investigate the mediating mechanism of the relationship between LOC and assertiveness. The present research adds to the pertinent literature as it specifically postulates and tests perceived social support as the causal factor that links LOC with assertiveness.

Many researchers (French & Shojaee, 2014; Chibuike, Chimezie, Ogbuinya, & Omeje, 2013) indicate that there is a strong positive association between internal locus of control (ILOC) and assertiveness, especially among university students (Dinçyurek, Mehmet & Fatos, 2009).

Perceived social support (PSS) is the perception that one is cared for, is respected and is considered as a part of a group, and is positively influenced by well-being that protects victims from traumatic events such as depression, anxiety, and stress. On the other hand, a lower level of PSS is positively related to higher levels of distress (Yap & Devilly, 2004).

Elliott and Gramling (1990) found a significant interaction between social support and personal assertiveness under stressful situations among 141 undergraduate college students enrolled in a psychology class. Results revealed a significant positive relationship between assertiveness and social support in stressful situations. Voitkane and Mieziute (2006) found that university students with a high level of PSS reported higher scores on assertiveness; and in a sample of university students, a positive significant relationship between assertiveness and social support was revealed (Ates, 2016).

Satici, Uysal, and Akin (2013) found a relationship between social support and locus of control. The results of the study revealed that the internal locus of control positively predicted while the external locus of control (ELOC) negatively predicted the PSS. In light of the aforementioned literature review, the present study hypothesized:

Hypothesis 1: ILOC and PSS will be positive predictors of assertiveness while ELOC will be the negative predictor of assertiveness.

French and Shojaee (2014) suggested that ILOC means internal attribution of success and failure and concluded that this type of attribution is linked with PSS. This concept is also proposed by (Satici et al., 2013) who proposed that people having high ILOC are less reactive to external factors and perceive more social support. Therefore, assertive individuals have a high level of PSS and have focused on positive aspects of life and they can easily take a step for their own and others' rights too. Voitkane and Mieziute (2006) claimed that people who perceive more social support are more psychologically healthy and they can focus on positive thoughts and can refuse unreasonable requests easily.

Chibuike, Chimezie, Ogbuinya, and Omeje (2013) claimed that those who used external attribution can easily refuse their responsibilities and blame the environment for consequences of events or outcomes of personal actions. Asberq and Renk (2014) claimed that people scoring high on ELOC considered external factors and perceived less level of social support and become more depressed, hopeless, and unable to score high on psychological functioning. Moreover, Ates (2016) found that PSS and assertiveness were positively correlated. Therefore, it may be inferred that when a person perceives the unavailability of a supportive group, they may become a dishonest communicator due to the lack of self-confidence and low level of self-esteem. Based on the aforementioned literature, the next hypothesis is:

Hypothesis 2: PSS will mediate between LOC and assertiveness.

Method

Participants

We used G*Power 3.0 (Faul et al., 2008) for undertaking the power analysis. The findings of the power analysis revealed that in a multiple regression analysis with three predictor variables, a small to medium effect size of Cohen's $f^2 = .06$ could reliably be assessed with a sample size of $N = 279$ at $\alpha = .05$ and a power of .95. In order to be more cautious, we recruited a purposive sample of 175 male and 175 female undergraduates from different departments of the University of Sargodha. Age of the participants ranged from 20 to 26 years ($M = 21.84$, $SD = 1.43$). All participants were the students of masters (semesters I & III) and BS (semesters V & VII) programs. These specific semesters were included because the academic status of the last 2 years of the BS program is equivalent to that of the MSc program. The sample included 120 students of the social sciences, 115 students of natural sciences, and 115 students of faculty of arts.

Inclusion and Exclusion Criteria. As per the inclusion criteria of the sample of the present study, only full-time regular students of masters (semesters I & III) and BS programs (Semesters V & VII) of the University of Sargodha within the age range of 20 to 26 years were included in the sample.

Students doing part-time jobs, post-graduate students, and students of BS and masters programs in semesters other than the ones specified in the inclusion criteria, students of other universities, and students beyond the age range of 20 to 26 years were not included in the sample as per the exclusion criteria.

Instruments

Different self-reported instruments in Urdu were used to measure the study variables. These instruments are briefly described as follows:

Self-Assertiveness Scale (SA).

Assertiveness is measured through the Self-Assertiveness Scale (Zahid, 2003). It is a 5-point Likert scale with 28 items ranged from 1 = بالکل غیر متفق to 5 = بالکل متفق where items 5, 10, 15, 16, 21, 22, and 27 were reverse-scored. The scores on the scale ranged between 28-140, where higher depicted greater assertiveness. The reliability of the scale was ($\alpha = .70$), determined by Zahid (2003).

Levenson Multidimensional Locus of Control Scale (LMLCS).

Internal and external locus of controls were measured through LMLCS (Levenson, 1973) consisting of 24 items with a 6-point Likert rating scale (-3 = "بالکل غیر متفق" to 3 = "بالکل متفق"). Three sets of scores on three sub-scale ranged between 0-48, where the three subscales (internal, chance, and powerful others) consisted of eight adjectives. High scores expressed a high level of ILOC (internal) or ELOC (powerful others) or fate (chance). The reliability coefficients for subscale are .74 (internal), .79 (chance) and .79 (powerful others) respectively (Levenson, 1973).

Interpersonal Support Evaluation List (ISEL).

This is a 12-item scale with a 4-point Likert response format ranging from 1 = بالکل غلط to 4 = بالکل ٹھیک (Cohen, Mermelstein, Kamarck & Hoberman, 1985). It comprises three subscales i.e. appraisal support, belonging support, and tangible support with 4 items each. The score on each subscale ranges from 4-16 or a composite score that ranges from 12-48, where higher scores on the subscale depict higher support. Items 1, 2, 7, 8, 11, and 12 are reverse scored. The reliability of the scale (Cohen et al., 1985) is moderately high ($\alpha = .62$).

Procedure

Firstly, ethical approval was taken from the institutional ethical committee for conducting this study. Secondly, permission was taken from the authors to use the selected scales. Then, permission from the heads of various academic departments of the University of Sargodha was sought for the collection of data from their students. After taking permission, participants of the study were approached and contacted personally. After taking the informed written consent from the participants, they were briefed about the aims and objectives of the present study. Participants were facilitated in case of any query. Each participant took almost 15-20 minutes for completing the questionnaire. They were assured of the confidentiality of their data. After collecting data, respondents were acknowledged for their cooperation and precious time. We distributed 359 questionnaires and collected back 350 filled questionnaires with a response rate of 97.49%. The high response rate was made possible because the researchers personally distributed and collected back the questionnaires in the classrooms.

Results

Multivariate outliers were assessed through the calculation of Mahalanobis D2 where major variables of the present study were regressed on dummy coded demographic variables in the regression.

The SPSS cumulative density function was used to calculate the area under the chi-square curve from the left end of the distribution to the point corresponding to our statistical value. The right-tail probability of obtaining a D2 value of this size was computed by subtracting the cumulative density function value from 1. The analysis identified 36 multivariate outliers, therefore, these cases were deleted and the analyses were run on 314 cases. The missing values were replaced by linear interpolation. The reliability estimates, descriptive statistics, and correlations of variables of the present study have been illustrated in Table 1. The table demonstrated satisfactory levels of internal consistency. The correlation matrix revealed that all the correlations were in the expected directions and of the expected magnitude. Assertiveness is significantly positively correlated with PSS, ILOC, and significantly negatively correlated with a powerful subscale of LOC, the chance subscale of locus of control, and ELOC. PSS is significantly positively correlated with ILOC and negatively correlated with the powerful subscale and with the chance subscale of locus of control. CGPA was significantly positively related to ILOC and age whereas other variables are not significantly correlated (see Table 1).

Table 1

Descriptive, Alpha Reliability Estimates and Correlations of Variables (N = 314)

	Variables	M	SD	α	1	2	3	4	5
1.	Assertiveness	100.10	11.32	.74	-				
2.	PSS	36.04	6.05	.75	.32*	-			
3.	ILOC	37.90	4.91	.53	.53*	.18*	-		
4.	ELOC	49.14	12.96	.71	-.17*	-.25*	-.02	-	
5.	Gender	-	-	-	-.06	.08	-.10	-.06	-

Note. PSS = Perceived Social Support; ILOC = Internal locus of Control; ELOC = External locus of Control * $p < .001$

Multiple regression analysis was used to test the proposed hypotheses. ILOC, ELOS, and PSS were taken as independent variables of assertiveness (see Table 2). It revealed that internal locus of control ($t = 10.47, p < .000$) and PSS ($t = 4.33, p < .026$) positively and significantly predicted assertiveness. While, external locus of control ($t = -2.23, p < .001$) negatively predicted assertiveness. Overall, the model was found significant, $F(3, 310) = 54.17, p < .000$, and indicated a 34% variance in assertiveness was contributed by ILOC, PSS, and ELOC.

Table 2*Multiple Regression Analysis of Predictors of Assertiveness (N = 314)*

Predictor Variable	B	95% CI for B		β	R^2
		LL	UL		
ILOC	.86**	.69	1.02	.49	
ELOC	-.09*	-.17	-.01	-.09	.34**
PSS	.39**	.21	.56	.21	

Note. PSS = Perceived Social Support; ILOC = Internal Locus of Control; ELOC = External Locus of Control * $p < .05$. ** $p < .001$

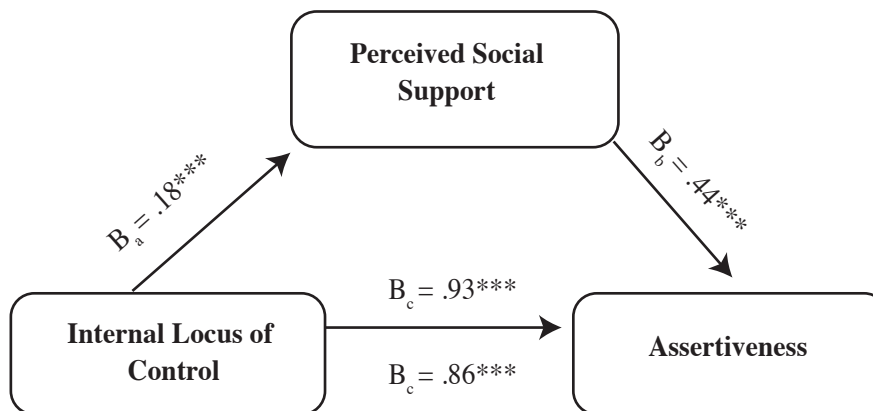
In mediation analysis, the direct and indirect effect of ILOC on assertiveness through PSS is described (see Table 3, Figure 1).

Table 3*Direct and Indirect Effects of Internal Locus of Control on Assertiveness through PSS (N = 314)*

Outcomes	Predictors	Direct Effect			Indirect Effect		
		β	95% CI		B	95% CI	
			LL	UL		LL	UL
PSS	ILOC	.18*	.06	.27			
Assertiveness	PSS	.44*	.27	.61	.07 ^a	.02	.14
	ILOC	.86*	.69	1.02			
Total Effect (ILOC → Assertiveness)		.93*	.76	1.10			

Note. PSS = Perceived Social Support; ILOC = Internal Locus of Control ^aSobel's $Z = 2.64^*$; * $p < .001$

The R^2 value of .03 indicated that ILOC explained 3% variance in perceived social support, $F(1, 312) = 9.98, p < .001$. The R^2 value of .33 indicated that PSS and ILOC explained 33% variance in assertiveness $F(2, 311) = 77.77, p < .001$. Indirect effect of ILOC on assertiveness was found to be significant ($\beta = .07, CI_{95\%} = .02-.14$). It indicated that internally controlled individuals perceived more social support which in turn led them to be more assertive.



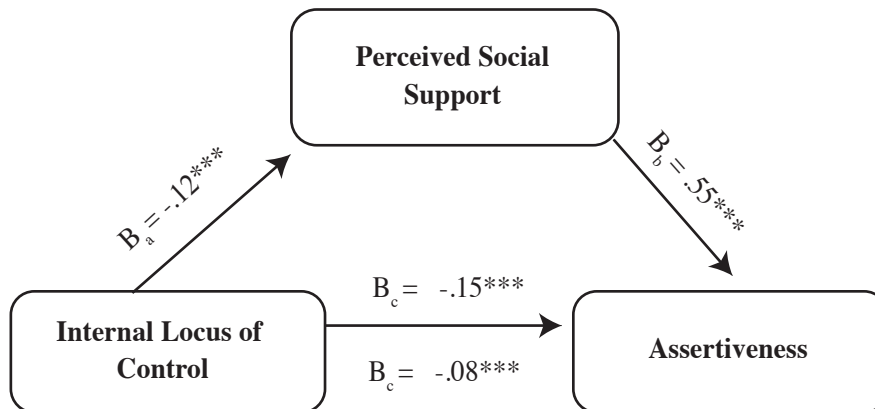
In the second model of mediation analysis, the direct and indirect effect of ELOC on assertiveness through PSS is illustrated (see Table 4, Figure 2).

Table 4*Direct and Indirect Effects of External Locus of Control on Assertiveness through PSS (N=314)*

Outcomes	Predictors	Direct Effect			Indirect Effect		
		B	95% CI		B	95% CI	
			LL	UL		LL	UL
PSS	ELOC	-.12* *	-.17	-.07			
Assertiveness	PSS	.55* *	.35	.75	-.06 ^a	-.11	-.03
	ELOC	-.08	-.18	.01			
Total Effect (ELOC → Assertiveness)		-.15 *	-.24	-.06			

Note. PSS = Perceived Social Support; ELOC = External Locus of Control aSobel's $Z = 3.45^*$; $*p < .01$; $**p < .001$

The R^2 value of .06 indicated that ELOC explained 6% variance in PSS, $F(1, 312) = 20.88, p < .001$. The R^2 value of .11 indicated that PSS and ELOC explained 11% variance for assertiveness $F(2, 311) = 19.61, p < .001$. Indirect effect of ELOC on assertiveness was found to be significant ($\beta = -.06, 95\% CI = -.11 -.03$). This indirect effect reflected that externally controlled individuals perceived less social support which led them to be less assertive.

Figure 2. Mediating effect of PSS between external locus of control and assertiveness**Discussion**

The present study aimed at finding the relationships among PSS, LOC, and assertiveness. Furthermore, the mediating role of PSS between locus of control and assertiveness is also examined. The results of the present study indicate significant positive correlations among PSS, ILOC, and assertiveness and supporting the first hypothesis of the present study. These findings are in line with the findings of Dinçyurek, Çağlar, and Silman (2009) that found a significant positive relation between assertiveness and ILOC among students and presented that those who are internally controlled show more assertive behavior (see Table 2). In the cultural context of Pakistan, Ijaz and Yousaf (2018) found that

university students with a high degree of perceived availability of support group in times of need were more confident, assertive, and believed that their actions and behaviors were responsible for their outcomes, they knew how to act in a certain situation without getting anxious and they did not make haphazard decisions. Therefore, on account of their self-confidence, internally controlled individuals show more assertive behavior.

The finding of the present study that PSS is a significant positive predictor of assertiveness is parallel to the finding reported by Voitkane and Mieziute (2006) which suggests that students who perceive high social support are more assertive.

Assertive individuals are capable to efficiently express their needs and desires. They are ready to ask for and receive support when required. In the cultural context of Pakistan, where assertiveness is not goaded and children are directed to conceal their feelings and emotions from others even when they are right, needs a change in social support coaching children to be more assertive for their rights (see Table 2).

Our findings suggested that ELOC negatively predicted assertiveness which provided empirical support for our first hypothesis. This finding is in line with the indigenous work of Zaidi, Mohsin, and Saeed (2013) who conducted research on students of Faisalabad with the age range between 19 to 25 years and found that externally-oriented students were not good at expressing their true feelings and were less likely to express their needs in a good way. They felt hesitant to stand for their rights and might experience problems in explaining their rights and responsibilities. Similarly, the work of Lam (1993) reported a negative correlation between external locus of control and assertiveness among elderly people. People who are externally controlled blame external factors for failure and poorly evaluate different aspects of life, owing to which their perceived level of social support remains low. Thus, the study suggested that for being assertive, it is ILOC which can make a person more independent.

In addition to this, the findings of the current study supported the second hypothesis as PSS mediated between ILOC and assertiveness. PSS turned out to be the most important predictor of assertiveness as it fully mediated the relationship between ILOC and assertiveness (see Table 3). The mediating mechanism of PSS between ILOC and assertiveness can be explained in terms of French and Shojaee's (2014) assertion, which referred to ILOC as an internal acknowledgment of success and failure. This internal attribution leads toward acceptance of achievements, difficulties, and different aspects of life toward internal determinants. This judgment is essentially reflected in a greater level of perceived social support. This line of reasoning is also promoted by Satici et al. (2013) who proposed that people having high ILOC were less reactive to external factors and perceived more social support. Therefore, a high level of PSS may make people more focused on positive aspects of life which ultimately leads them to stand for their own and others' rights too which is a prominent characteristic of assertiveness.

Voitkane and Mieziute (2006) claimed that people who perceive more social support are more psychologically healthy and allow positive thoughts to come into their mind and refuse unreasonable requests easily. This consistent merging in positive perceptions may result in elevated levels of assertiveness.

Mediation analysis also revealed the mediation effect of PSS between ELOC and assertiveness. In this model, PSS predicted ELOC in a negative direction (see Table 4). The mediating role of PSS between ELOC and assertiveness can be explained by the work of Chibuike, Chimezie, Ogbuinya, and Omeje (2013) which referred to ELOC as the attribution of external factors in determining consequences (success, failure). This external attribution leads toward refusing personal responsibilities and blaming the environment for the consequences of events or outcomes of personal actions. This judgment is essentially reflected in the lower level of PSS. This line of reasoning is also promoted by Asberq and Renk (2014) who found that people who scored high on ELOC considered external factors to blame and perceived lower levels of social support. Accordingly, a low level of PSS may lead people toward focusing on negative aspects of life without regarding positive ones. This attribution leads to dependence and a low level of confidence. Similarly, it was also elucidated that people who score low on the measure of PSS are more depressed, hopeless, and unable to score high on psychological functioning.

Limitations and Suggestions

Self-report measures may increase the probability of spurious relationships to account for common variance. However, the range of correlations in the present study is .12 to .53 (see Table 1) which is not very high even though many of the correlations were significant. Moreover, the cross-sectional design is not helpful for the causal interpretation of the findings. ILOC and ELOC are used as dispositional factors in the present study that influences the relationship between PSS and assertiveness. There could be other potentially mediating variables in terms of personal dispositions which must be investigated in future studies. For instance, further research should explore potential applications of PSS and assertiveness in improving psychological well-being.

Conclusion and Implications

A review of the literature and findings of the present research suggest that perception and attribution of consequences are influential in shaping life. It can make a person independent or dependent upon others. Our findings revealed that internally controlled individuals are likely to perceive more social support and consequently be more assertive. Therefore, assertiveness can be regulated by increasing PSS because it is important in ascertaining the role it may play in assertiveness, and ILOC can be boosted because it had a positive influence on PSS (Satici et al., 2013), which paves the way toward assertiveness (Sibel, Mehmet, & Fatos, 2009). The family appears to be one of the most important factors in the development of trust, interpersonal bonding, and self-reliance. Family provides the primary impetus for boosting PSS. A supportive family environment is instrumental in inculcating such core values as trust, self-respect, and self-reliance in children. If family and close relations strengthen internal cognitive processes of self-reliance, assertiveness should increase more than other social opportunities. Therefore, attention to the method of parenting and family bonding is an indispensable factor in life skill development. Moreover, mental health training programs (such as seminars, group activities, psycho-educational studies, instrumental support, and informational support opportunities, etc.) focusing on developing the levels of PSS and assertiveness among the participants may provide a scaffolding for boosting the psychological well-being of the people. Such applications of mental health training programs can help alleviate human psychological suffering and help us live a life that is happier and more fulfilling.

Ethics and Consent to participate

Ethical approval obtained

Consent for Publication

Consent Approved by the authors

Availability of data and materials

Contact corresponding author

Competing Interest

None

Funding

None

References

- Alberti, R. E., & Emmons, M. L. (2008). *Your perfect right: Assertiveness and equality in your life and relationships* (9th ed.). Atascadero, CA: Impact Publishers.
- Asberg, K., & Renk, K. (2014). Perceived stress, external locus of control, and social support as predictors of psychological adjustment among female inmates with or without a history of sexual abuse. *International Journal of Offender Therapy and Comparative Criminology*, 58(1), 59-84.
- Ates, B. (2016). Perceived social support and assertiveness as a predictor of candidates' psychological well-being. *International Education Studies*, 9(5), 28-39.
- Castanyer, O. (2009). *Assertiveness: Expression of healthy self-esteem* (29th ed.). Bilbao, Spain: Editorial Desclée de Brouwer.
- Chibuiké, B. O., Chimezie, B. N., Ogbuinya, O. E. N., & Omeje, B. C. (2013). Role of locus of control on assertive behavior of adolescents. *Research on Humanities and Social Sciences*, 3(4), 137-145.
- Cohen, S., Mermelstein, R., Kamarck, T., & Hoberman, H. (1985). Measuring the functional components of social support. In I. G. Sarason & B. R. Sarason (Eds.), *Social support: Theory, research, and application* (pp. 73-94). The Hague, The Netherlands: Martinus Nijhoff.
- Dinçyurek, S., Çağlar, M., & Silman, F. (2009). Determination of the locus of control and level of assertiveness of the students studying in the TRNC in terms of different variables. *Procedia-Social and Behavioral Sciences*, 1(1), 12-22. doi:10.1016/j.sbspro.2009.01.007
- Elliott, T., & Gramling, S. (1990). Personal assertiveness and the effects of social support among college students. *Journal of Counseling Psychology*, 37(4), 427-436. doi:10.1037//0022-0167.37.4.427

- Faul, F., Erdfelder, E., Buchner, A., & Lang, A. G. (2008). Statistical power analyses using G*Power 3.0: Tests for correlation and regression analyses. *Behavior Research Methods*, 41(4), 1149-1160.
- Gladding, S. T. (1988). *Counseling: A comprehensive profession*. Princeton, NC: Merrill Publishing Company
- Herzberger, S. D., Chen, E., & Katz, J. (1984). The development of an Assertiveness Self-Report Inventory. *Journal of Personality Assessment*, 48(03), 317-323.10.1207/s15327752jpa48_03_16
- Ijaz, F., & Yousaf, A. (2018). Determinants and consequences of assertiveness. (Unpublished Master's thesis). *Department of Psychology*, University of Sargodha.
- Kraft, W. A., Litwin, W. J., & Barber, S. E. (1986). Relationship of Intrinsic-Extrinsic Religiousness and Assertiveness. *Psychological Reports*, 59(3), 35-50.
- Lam, M. C. (1993). Locus of control, assertiveness, and information-seeking behavior of elderly people. *Asia Pacific Journal of Social Work and Development*, 3(2), 38-49. 10.1080/21650993.1993.9755642.
- Levenson, H. 1973. Multidimensional locus of control in psychiatric patients. *Journal of Consulting and Clinical Psychology*, 41, 397- 404.
- Satici, S. A., Uysal, R., & Akin, A. (2013). Perceived social support as predictor of academic locus of control. *Education Science & Psychology*, 23(1), 79-86.
- Shojaee, M., & French, C. (2014). The relationship between mental health components and locus of control in youth. *Psychology*, 5, 966-978.
- Voitkane, S., & Miežite, S. (2013.). *The relationship of social support, psychological well-being, anxiety, depression, and student needs to self-esteem and assertiveness in first-year university students*. Presented at 19th International Conference on the First-Year Experience, Toronto, Ontario, Canada.
- Voitkane, S., Miežite, S., Rascevska, M., & Vanags, M. (2006). Student motivation for choice of study program, psychological well-being, perceived social support and needs at the start of university studies. *Baltic Journal of Psychology*, 7(1), 46-59.
- Yap, M. B., & Devilly, G. J. (2004). The role of perceived social support in crime victimization. *Clinical Psychology Review*, 24(1), 1-14.10.1016/j.cpr.2003.09.007
- Zaidi, H. I., Mohsin, N. M., & Saeed, W. (2013). Relationship between alexithymia and locus of control among graduation students: a case study from Faisalabad. *International Journal of Environment, Ecology, Family, and Urban Studies*. 3(1), 89-98.