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ATTACHMENT, BASIC PSYCHOLOGICAL NEEDS AND EMOTION REGULATION IN ADOLESCENTS

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Abstract

The present study aimed to examine the relationship between attachment patterns, basic psychological needs and emotion regulation in adolescents. It also focused on differences related to gender and age and moderating role of basic psychological need satisfaction between insecure attachment and maladaptive emotion regulation. 302 adolescents from age 12 to 19 were recruited for the study from educational institutes of Lahore. The measuring instruments included Inventory of Parent and Peer Attachment- Revised (Armsden, & Greenberg, 1987), Basic Psychological Need Satisfaction and Frustration Scale – Child Version (Van der Kapp Deeder et al., 2015) and Cognitive Emotion Regulation Questionnaire (Garnefski, & Kraaij, 1999). Urdu version of all measures was used to collect data. The results revealed significant relationship between attachment patterns, psychological needs satisfaction and emotion regulation. Secure attachment, and psychological need satisfaction, positively predicted adaptive emotion regulation whereas insecure attachment, psychological need frustration positively predicted maladaptive emotion regulation. Also, psychological need satisfaction played a significant role as moderator between insecure attachment and other-blame. The study found significant differences in attachment and basic psychological need satisfaction and frustration across different age groups. The study implicates the need for provision of counseling services to adolescents as well as parents in order to prevent mental health problems.

Keywords

Attachment Patterns, Basic Psychological Needs, Emotion Regulation, Adolescents

1. Introduction

The period from birth until puberty includes childhood as well as adolescence that correspond to the teenage years (Rundell, 2010). Adolescence is considered in some cultures as a component of social childhood which brings some physical, psychological as well as behavioral changes. The needs and capacities of children and adolescents significantly differ from adults' needs and capacities and they must be addressed in order for them to grow and develop in a healthy way. These needs include need for attachment and basic psychological needs of autonomy, competence and relatedness. Attachment involves an emotional bond which plays important role during infancy in dealing with distress, anxiety and illnesses. The attachment during infancy determines the quality of child's development in later life (Wambua, Obondo, Bifulco, & Kumar, 2018). According to attachment theory given by John Bowlby and Mary Ainsworth, for successful social and emotional development of an infant and regulation of his feelings, he needs to develop relationship with at least one of his parents. When a parent provides care to child and socially interacts with him, he becomes a principal attachment figure (Homes, 1993). In 1960s and 1970s, Mary Ainsworth researched and found out there are different attachment patterns in children also referred as attachment styles. The early time after birth is very important in determining what kind of attachment pattern will be adopted by child (Catlett, 2015). These patterns include secure attachment, insecure attachment and disorganized attachment. Insecure attachment further includes anxious ambivalent attachment and anxious avoidant attachment. Formation of attachment is a part of developmental process which continues beyond infancy and childhood (Allen *et al*., 2007). As it is a transition period where capacities and environmental demands increase for adolescents, intimate relationships are also likely to develop. The attachment in adolescence is complicated as compared to the attachment in infancy and early childhood period (Allen *et al*., 2007). Adolescence is found to be associated with stressful events and emotional experiences such as academic pressures, peer pressures, decrease in dependence and family support, involvement in romantic relationships (Casey Duhoux, & Cohen, 2010). This rapid development is also found to be linked with many problematic and risky behaviors. When adolescents are not securely attached to their parents, they engage in such behaviors to compensate for their emotional disturbances (Wambua, Obondo, Bifulco, & Kumar, 2018). When securely attached, adolescents trust that their parents will be available in time of need and it leads to internalization of secure representation of their attachment figures i.e. parents and as a result, they explore and develop new relationships (Comtois, Cyr, Pascuzzo, & Lessard, 2013). It is also very vital for adolescents to have their basic psychological needs satisfied. According to self-determination theorists, the internalization of needs is an important aspect of development and adolescence is a sensitive age of development where adolescents are at an active stage when they start realizing their self-concept (Demo, & Williams, 1992). Their satisfaction of psychological need is

influenced as they are responsive to their environmental factors (Deci, & Ryan, 2000). Self-determination also helps in individuation process as well as successful transition of adolescents from adolescence to the phase of young adulthood. Higher self-determination and sense of autonomy have been found to be associated with positive psychological functioning while low level is associated with negative consequences such as psychopathology and problematic behaviors (Nota, Wehmeyer, & Ferrari, 2011). Previous studies have shown that Emotion regulation capacities are likely to be developed during phase of adolescence. According to some studies, emotion regulation capacity is limited during early adolescence which is followed by increase in use of adaptive strategies and decrease in use of maladaptive strategies as the age increases (Zimmerman, & Iwanski, 2014). Those children and adolescents are likely to have better social relationships and higher social competence that can flexibly use emotion regulation strategies (Spinrad *et al*., 2006). Based on attachment theory, children are able to cope with stressful situation when they have secure attachment patterns which results from availability and responsiveness of caregivers. Secure attachment pattern leads to varying emotion regulation strategies (Bowlby, 1969). It has been shown from many studies that those children whose caregivers are inexpressive during their childhood and don't respond sufficiently to their needs, their own emotion regulation is more likely to be impacted when they grow (Carrere, & Bowie, 2012). According to Cassidy (1994), the nature of caregiving in childhood not only determines the type of attachment pattern but also the emotion regulation strategies that the children will use in order to regulate their emotions. The children with different attachment patterns display different competencies with respect to emotion regulation. According to Mikolincer and Shaver (2008), there seems to be a direct relationship between attachment patterns and the emotion regulation. When a person feels intense emotions such as fear in response to a threatening event, that person will try to seek comfort from a supportive figure but absence of such figure leads to intense emotions. Secure attachment in adolescence is likely to be associated with better development of social relationship and open communication with parents) whereas insecure attachment in adolescence is likely to be associated with feelings of resentment, alienation and also emotional detachment (Armsden, & Greenberg, 1987). Securely attached infants also experience the satisfaction of their basic needs such as autonomy, competence and relatedness (Deci, & Ryan, 2000). Such infants are self-confident when exploring their environments and as a result, they build sense of autonomy, competence and sense of belonging with others (Pietromonaco, & Barrett, 2000). Similarly, when parents are supportive and allow their children to make their own choices, it promotes exploration and develops a sense of autonomy (Grolnick, 2002). Parenting which supports autonomy has been found to promote integrative emotion regulation which is beneficial method to process emotions (Roth, Vansteenkiste, & Ryan, 2019). According to Gross, different strategies related to emotion regulation take place in modal model of emotions at five points and these strategies are known

as antecedent focused or response focused depending on which stage they are being employed in emotion generation. There are some conscious cognitive processes that can also be used to regulate emotions involving adaptive emotion regulation strategies such as acceptance, positive refocusing, refocus on planning, positive reappraisal, putting into perspective and maladaptive emotion regulation strategies such as self-blame, rumination, catastrophizing, and other blame (Eisenberg, 2000; Gross, 1999). According to Perlman and Pelphrey (2011), the cortical cognitive control over emotional reactivity is increased during adolescence and it continues along with adolescence. It is very important for adolescents to be capable of using adaptive emotion regulation strategies in order to deal with the major transitions in adolescence period that have been discussed so far. Therefore, the present study aims at exploring how their emotion regulation is utilized in context of their attachment patterns and basic psychological needs.

1.1 Hypotheses

H1. Parental attachment, basic psychological need satisfaction and cognitive emotion regulation will be significantly related in adolescents.

H2. Secure attachment and autonomy, competence and relatedness satisfaction will predict use of adaptive cognitive emotion regulation strategies

H3. Insecure attachment and autonomy, competence and relatedness frustration will be likely to predict use of maladaptive cognitive emotion regulation strategies

H4. Basic psychological need satisfaction will play role as a moderator between insecure attachment and maladaptive emotion regulation strategies.

H5. There will be significant differences in attachment, basic psychological satisfaction and frustration and cognitive emotion regulation across gender.

H6. There will be significant differences in attachment, basic psychological satisfaction and frustration and cognitive emotion regulation across age.

2. Method

2.1 Research design

Cross-sectional correlational research design was used in the study.

2.2. Sample

The research sample included total 302 adolescents (136 males and 166 females). The age range of adolescents selected for study was within 12 to 19 years, (M=16.08, SD= 2.25) who were recruited from various government and private educational institutions of Lahore.

2.3 Sampling Strategy

Initially during data collection, data was gathered online due to pandemic situation through snowball sampling strategy. After opening of educational institutions, data was collected manually through printed questionnaires by using purposive sampling strategy was used.

2.4 Measures

2.4.1 Demographic Form

The demographics of this study included information regarding adolescent's gender, age, class, and their institutions.

2.4.2 Inventory of parent and peer attachment-revised (IPPA, Armsden, and Greenberg, 1987)

It was developed for measuring the perception of adolescents related to their attachment and positive and negative cognitive and affective dimension of their relation with their parents and peers. It measures how much secure they feel themselves with regards to these figures. The questionnaire is a format having five point Likert scale responses. The original version had 28 items related to parents and 25 related to peers. However, the revised version has 25 items separately for father and mother and 25 items for peers. This questionnaire measures the attachment patterns in three dimensions. These main dimensions that are measured in IPPA are degree of mutual trust, quality of communication and the degree of anger and alienation. High score on trust and communication subscales and low score on alienation subscale is considered as secure attachment whereas low trust and communication and high alienation was considered as insecure attachment. (Armsden, & Greenberg, 1987). The psychometric investigation of IPPA was conducted on sample consisting of adolescents of 16 to 20 years. Significant inter-correlations were found between all subscale by Armsden and Greenberg (1987). Urdu translation of this scale was used (Hashmi, Rasool, & Kausar, 2015).

2.4.3 Basic psychological need satisfaction and frustration scale – child version (Van der Kaap Deeder *et. al*, 2015)

Basic Psychological Need Satisfaction and Frustration Scale General addresses both satisfaction and frustration of psychological needs. It has been adapted to different contexts and has been used in many countries. There are total 24 items. 12 items are for measuring satisfaction in which four items are for each need such as autonomy, competence and relatedness. The other 12 items are for measuring frustration of need. All items are evaluated through Likert type 5-point response scale. Its Urdu translation was used for study (Shaukat, & Dildar 2018).

2.4.4 Cognitive emotion regulation questionnaire (CERQ**)** (Garnafski, and Kraaij, 1999)

It is a 5-point Likert type multidimensional questionnaire of 36 items developed to identify the strategies used for cognitive emotion regulation when someone experiences a negative event. Its psychometric properties were investigated and internal consistency of its subscales across different populations was good to very good. It has nine subscales such as i) self-blame that includes attributing the occurrence of negative event to own self, ii) other blame involving attributing the occurrence of stressful event to others, iii) acceptance involving accepting any negative situation and the emotions that follow the event, iv) planning which includes the thoughts about what to do about the negative event and how to handle it , v) positive refocusing involves focusing on positive events rather than thinking about negative events, vi) rumination involving thinking about feelings and thoughts related to any adverse or negative event, vii) positive reappraisal involving thoughts about giving positive meaning to negative events , viii) putting into perspective involving relativizing or downgrading the situation or event , and ix) catastrophizing involving emphasis on terror and consequences of negative event (Garnefski, & Kraaij, 2006). Urdu version of

this scae was used for the study (Butt, Khawar, Malik, & Sanam, 2012).

2.5 Procedure

Firstly, online google form was generated for online data collection due to lockdown in pandemic situation. Participants were instructed about filling form and they were ensured of confidentiality. They were also asked to answer all questions honestly. Initially, data was collected online from 128 adolescents through google form. Apart from online google form, data was also collected by visiting institutions such as schools and colleges. Participants were informed that they can ask researcher for clarification in case of any confusion. After data collection, appropriate statistical tests were applied to analyze the data.

Attachment Patterns, Basic Psychological Needs and Emotion Regulation in adolescents were investigated in this study. Preliminary analyses were conducted to clean the data. The research analyses included evaluation of psychometric properties such as Cronbach alpha to assess reliability of scales and subscales, Pearson product moment correlation to find correlation between attachment, basic psychological needs and emotion regulation, simple linear regression and multiple linear regression to find predicting role of attachment patterns and basic psychological needs and independent sample t-test to investigate the differences related to age and gender in adolescents.

3. Results

Table 3.1: Psychometric properties of scales and subscales (N=302)

Scale	*K*	Cronbach's α	Range	Skewness
Inventory of Parent and Peer Attachment	50	.92	1.60 - 4.71	-.83
Trust	20	.86	1.60 - 4.71	-1.19
Communication	18	.87	2.31 - 4.24	-.94
Alienation	12	.76	2.08 - 3.19	.27
Basic Psychological Need Satisfaction and Frustration Scale	24	.79	2.31 – 3.89	.25
Autonomy Satisfaction	4	.70	3.66 - 3.87	-.48
Autonomy Frustration	4	.64	2.70 - 3.34	-.07
Relatedness Satisfaction	4	.61	3.53 - 3.86	-.21
Relatedness Frustration	4	.67	2.31 - 2.72	.34
Competence Satisfaction	4	.75	3.43 - 3.89	-.48
Competence Frustration	4	.45	2.60 - 3.35	.13
Cognitive Emotion Regulation Questionnaire	36	.87	2.27 - 3.92	.009
Self-blame	4	.63	2.48 - 3.13	.21
Acceptance	4	.56	2.80 - 2.95	.08
Rumination	4	.69	2.96 - 3.36	-.11
Positive Refocusing	4	.55	2.93 - 3.92	-.06
Refocus on Planning	4	.56	3.35 – 3.68	-.41
Positive Reappraisal	4	.58	3.19 - 3.78	-.22

Putting into perspective	4	.54	3.19 – 3.35	-.15
Catastrophizing	4	.63	2.83 - 3.21	.02
Other Blame	4	.74	2.27 - 2.41	.56

K= no. of items

Table 3.2 indicates the results of correlation analysis between attachment and its dimensions, basic needs satisfaction and frustration and cognitive emotion regulation strategies in adolescents.

The results showed that attachment was positively correlated with trust, communication and satisfaction of autonomy, competence and relatedness. It was also significantly positively correlated with positive refocusing, refocuses on planning and positive reappraisal and was negatively significantly correlated with alienation, frustration of autonomy, competence and relatedness, self-blame and other blame. Trust was positively significantly correlated with communication, relatedness and competence satisfaction positive refocusing; refocus on planning and positive reappraisal whereas it was negatively significantly correlated with frustration of autonomy, competence and relatedness and other blame.

The analysis also indicated that communication was positively significantly correlated with satisfaction of autonomy; competence and frustration, positive refocusing, refocus on planning and negatively correlated to frustration of autonomy, competence and relatedness. Alienation was found to be positively significantly correlated with autonomy, competence and relatedness frustration, self-blame acceptance, rumination, catastrophizing and other blame.

Autonomy Satisfaction was positively significantly correlated with relatedness and competence satisfaction, rumination, positive refocusing, refocus on planning positive reappraisal and putting into perspective while autonomy frustration was positively significantly correlated with frustration of relatedness and competence, self-blame, acceptance, rumination, catastrophizing and other blame. Moreover, it indicated that relatedness satisfaction has positive significant relationship with autonomy and competence satisfaction, positive refocusing, refocus on planning and putting into perspective while its frustration has positive significant relationship with self-blame, acceptance, other blame and catastrophizing and negative significant relationship with positive refocusing and refocus on planning.

Competence satisfaction was revealed to have significant positive relationship with positive refocusing, refocus on planning positive reappraisal and putting into perspective, rumination whereas its frustration was found to be significant positive relationship with self-blame, acceptance, rumination, catastrophizing, and other blame.

Table 3.2: Correlation between scales and subscales of Attachment, Basic Psychological Needs and Emotion Regulation (N-=302).

Measures	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Attachment	1	.91**	.93**	-.63**	.35**	-.33**	.34**	-.37**	.34**	-.21**	-.17**	-.05	-.07	.26**	.22**	.25**	.05	-.06	-.19**
Trust		1	.81**	-.39**	.40**	-.24**	.38**	-.34**	.39**	.16**	-.07	-.005	.003	-.29**	.25**	.28**	.07	.001	-.16**
Communication			1	-.44**	.35**	-.27**	.34**	-.27**	.35**	-.15*	-.11	.02	.04	.29**	.27**	.29**	.10	.02	-.07
Alienation				1	-.09	.41**	-.10	.41**	-.06	.28**	.33*	.23**	.22**	-.008	.01	.01	.07	.28**	.34**
Autonomy Satisfaction					1	-.005	.48**	-.15**	.63**	.07	.04	.099	.17**	.36**	.38**	.39**	.22**	.09	.05
Autonomy Frustration						1	-.015	.44**	-.03	.49**	.31**	.22**	.24**	-.04	.02	.01	.09	.31**	.35**
Relatedness Satisfaction							1	-.23**	.54**	.002	.05	.06	.06	.33**	.22**	.32**	.13*	.07	-.06
Relatedness Frustration								1	-.14*	.36**	.28**	.24**	.09	-.14*	-.14*	-.09	.01	.19**	.31**
Comptence Satisfaction									1	-.056	.022	.042	.14*	.34**	.42**	.41**	.21**	.09	-.03
Competence Frustration										1	.33**	.267**	.23**	-.03	.03	-.02	.09	.25**	.19**
Self-blame											1	.460**	.46**	.13*	.22**	.13*	.29*	.43**	.27**
Acceptance												1	.57**	.21**	.23**	.22**	.30**	.47**	.23**
Rumination													1	.24**	.41**	.29**	.36**	.49**	.16**
Positive Refocusing														1	.47**	.55**	.34**	.17**	.13*
Refocus on Planning															1	.58**	.49**	.39**	.11*
Positive Reappraisal																1	.52**	.32**	.17*
Putting into Perspective																	1	.39**	.13*
Catastrophizing																		1	.323**
Other Blame																			1
M	182.98	80.58	68.68	25.39	15.13	12.26	14.76	10.22	15.01	12.03	11.15	11.56	12.45	13.86	14.07	13.83	13.13	11.88	9.42
SD	26.57	11.05	12.82	8.29	3.05	3.33	3.11	3.71	3.14	2.89	3.62	3.58	3.95	3.44	3.32	3.59	3.49	3.72	3.90

Note. M= Mean S= Standard Deviation; *$p<0.05$. **$p<0.01$, ***$p<0.001$

Table 3.3: Secure attachment as predictor of adaptive cognitive emotion regulation strategies

Variables	Self-blame			Positive Refocusing			Refocus on Planning		
	B	β	*SE*	*B*	B	*SE*	*B*	β	*SE*
Constant	15.48		1.43	7.73		1.33	8.92		1.30
Secure Attachment	-.024**	-.17	.008	.03***	.25	.007	.028***	.22	.007
F (1,301)	9.29			21.49			16.01		
R^2.	.03			.06			.05		

The result of linear regression analysis in Table 3.3 to predict the impact of secure attachment on cognitive emotion regulation strategies used by adolescents indicated that secure attachment explained 6% variance in positive refocusing with *F (1,* 301) = 4.64 in positive refocusing and 6% in positive reappraisal with *F* (1, 301) = 19.40. It also explained 5% variance in refocus on planning with *F* (1, 301) = 16.01 and 3% of variance was also explained in other blame with F (1, 301) = 11.71. The findings suggest that secure attachment positively predicts positive refocusing (β =.03, p < .001), positive reappraisal (β =.03, p < .001) and refocus on planning (β= .03, p < .001) in adolescents. On the other hand, it negatively predicted other blame (β = -.19, p<.001).

Table 3.3: Continued

Variables	Positive Reappraisal			Other Blame		
	B	β	*SE*	*B*	B	*SE*
Constant	7.74		1.39	14.63		1.53
Secure Attachment	.03***	.24	.03	-.02**	-.19	.008
F (1,301)		19.40			11.71	
R^2.		.06			.03	

Note: *p<0.05. **p<0.01, ***p<0.001

Table 3.4: Insecure attachment as predictor of maladaptive cognitive emotion regulation strategies.

Variables	Self-blame			Other Blame		
	B	β	*SE*	*B*	B	*SE*
Constant	8.72		.69	5.62		.72
Insecure Attachment	2.10***	.21	.57	3.29***	.30	.59
F (1, 301)		13.67			30.59	
R^2		.04			.09	

Table 3.4 shows insecure attachment as predictor of maladaptive cognitive emotion regulation strategies in adolescents which indicated that insecure attachment explained 4% of variance in self-blame with F (1, 301) = 13.67. It also indicated that insecure attachment explained 9% variance in other blame with F (1, 301) = 30.59. The results suggested that insecure attachment positively predicted self-blame (B=2.10, p < 0.001) and other blame (B = 3.29, p < 0.001) among the cognitive emotion regulation strategies used by adolescents. Table 3.5 shows psychological need satisfaction i.e. autonomy, relatedness and competence satisfaction as predictor of adaptive cognitive emotion regulation strategies used by adolescents. Results indicated that autonomy satisfaction positively predicted positive refocusing (β = .20 p < 0.001), refocus on planning (β = .20, p < .01), positive reappraisal (β = .21, p = 0.01) and putting into perspective (β = .15, p > 0.05). They also revealed that relatedness satisfaction positively predicted positive refocusing (β = .32, p > 0.001) and competence satisfaction positively predicted refocus on planning (β = .22, p > 0.05) and positive reappraisal (β = .12, p > 0.05). The results also indicated that basic psychological need satisfaction explained 17% variance in positive refocusing and 20% variance in refocus on planning with F (3, 299) = 20.28 and F (3, 299) = 24.60

respectively. It also explained 20% variance in positive reappraisal with 25.65 and explained 6% variance in putting into perspective with F (3, 299) = 6.05.

Table 3.5: Basic psychological need satisfaction subscales as predictors of adaptive cognitive emotion regulation strategies (N=302)

Variables	Positive Refocusing			Refocus on Planning			Positive Reappraisal			Putting into Perspective		
	B	β	*SE*	*B*	B	*SE*	*B*	β	*SE*	*B*	β	*SE*
Constant	5.67		1.06	6.50		1.01	4.60		1.09	8.65		1.15
Autonomy Satisfaction	.23**	.20	.08	.22**	.20	.07	.24**	.21	.08	.17*	.15	.08
Relatedness Satisfaction	.19**	.17	.07	-.05	-.05	.06	.12	.11	.07	-.006	-.006	.08
Competence Satisfaction	.13	.12	.08	.34***	.32	.08	.25**	.22	.08	.13	.12	.09
R^2.		.17			.20			.20			.06	1.15
ΔR^2.		.16			.20			.20			.05	.08
F(3, 299)		20.28			24.60			25.65			6.05	.08

Table 3.6: Basic psychological need frustration subscales as predictor of maladaptive cognitive emotion regulation strategies (N=302)

Variables	Self-blame			Acceptance		
	B	B	*SE*	*B*	β	*SE*
Constant	4.67		.91	6.54		.93
Autonomy Frustration	.16*	.15	.07	.07	.07	.07
Relatedness Frustration	.13*	.14	.06	.14*	.15	.06
Competence Frustration	.26**	.21	.08	.22**	.18	.08
R^2.		.15		.10		
ΔR^2.		.15		.09		
F(3, 299)		18.10		10.97		

Continued

Table 3.6: Continued

Variables	Rumination			Positive Refocusing			Refocus on Planning			Catastrophizing			Other Blame		
	B	β	*SE*	*B*	B	*SE*	*B*	B	*SE*	*B*	β	*SE*	*B*	B	*SE*
Constant	7.78		1.04	14.85		.93	14.03		.90	6.38		.96	3.63		.98
Autonomy Frustration	.21**	.18	.08	.03	.03	.07	.07	.07	.07	.25**	.23	.07	.31***	.27	.07
Relatedness Frustration	-.04	-.04	.07	-.14*	-.15	.06	-.18**	-.20	-.18	.04	.04	.06	.21**	.20	.06
Competence Frustration	.21*	.15	.09	.009	.008	.08	.081	.07	.08	.16*	.13	.08	-.02	-.01	.08
R^2.		.07			.02			.03			.11			.15	
ΔR^2.		.06			.01			.02			.23			.15	
F(3, 299)		7.86			1.99			.07			.04			18.19	

Note: *p<0.05. **p<0.01, ***p<0.001

Table 3.6 shows the result of role of psychological need frustration as predictor of maladaptive emotion regulation strategies in adolescents. The findings indicated that autonomy frustration positively predicted self-blame (β = .15, $p < .05$), rumination (β = .18, $p < .01$), catastrophizing (β = .23, $p < .01$) and other blame (β = .27, $p < .001$). Relatedness frustration positively predicted self-blame (β = .14, $p < .05$), acceptance (β = .15, $p < .05$) and other-blame (β = .20, $p < .01$) while on the other hand, it negatively predicted positive refocusing (β = .15, $p < .05$) and refocus on planning (β = .20, $p < .01$). Competence Frustration positively predicted self-blame (β = .21, $p < .01$), acceptance (β= .18, $p < .01$), rumination (β = .15 $p < .005$) and catastrophizing (β = .13, $p < .05$). The results indicated that psychological need frustration explained 15% of variance in self-blame with F (3,299) = 18.10, 7% variance in rumination with F (3, 299) = 7.86, 10% variance in acceptance with F (3, 299) = 10.97. It also explained 10% variance in catastrophizing and 15% variance in other blame with F (3, 299) = 12.33 and F (3, 299) = 18.19 respectively. Lastly, basic psychological need frustration also explained 2% variance in positive refocusing with F (3, 299) = 1.99 and 3% variance in refocus on planning with F (3, 299) = 3.32. Table 3.7 shows the results of multiple regression analysis for basic psychological need satisfaction as a moderator between insecure attachment and maladaptive cognitive emotion regulation strategies such as self-blame, rumination, catastrophizing, and other-blame. The results revealed that basic psychological need satisfaction played a significant role as a moderator between insecure attachment and other-blame among all maladaptive cognitive emotion regulation strategies (B = 1.48, SE = .61, $p < .05$).

Table 3.7: Moderating role of basic psychological need satisfaction between insecure attachment and maladaptive cognitive emotion regulation strategies.

Variables	Other Blame	
	M1 (β)	M2 (β)
Step 1		
IA	.30	
BPNS	.005	
R^2	.09	
Step 2		
IA × BPNS		.45*
R^2		.11
ΔR^2		.10

Table 3.8: Gender Differences in Attachment, Need Satisfaction and Frustration and Cognitive Emotion Regulation

Variables	Males		Females		*t(300)*	*P*	*Cohen's d*
	M	*SD*	*M*	*SD*			
Attachment	184.46	23.17	181.77	29.07	0.87	0.38	0.10
Need Satisfaction and Frustration	81.82	10.76	82.98	12.26	-0.85	0.39	0.10
Cognitive Emotion Regulation	113.07	22.10	109.98	19.23	1.29	0.19	0.14

Table 3.8 shows mean differences on attachment, need satisfaction and frustration and cognitive emotion regulation across gender. No gender differences were revealed in attachment between adolescent males (*M*=184.46, *SD*=23.17) and adolescent females (*M*=181.77, *SD*=29.07) with respect to Attachment (*t (300)* = -0.85, *p*>0.5). Similarly, no gender difference was found on need satisfaction and frustration (*t (300)* = 0.087, *p*>0.5) between males (*M*=81.82, *SD*= 10.76) and females (*M*=82.98, *SD*=12.26). Lastly, the results also didn't reveal significant gender differences between males (*M*=113.07, *SD*= 22.10) and females (*M*=109.98, *SD*=19.23) with respect to cognitive emotion regulation (*t (300)* = 1.29, *p*>0.5). However, significant differences were found across different age groups in attachment and basic psychological need satisfaction and between two age groups of adolescents aged 12 to 15 (*M* = 188.47, *SD* = 26.02) and aged 16 to 19 (*M* = 178.72, *SD* = 26.28) with respect to attachment (*t* (300) = 3.21, $p < 0.001$). The differences related to basic psychological need satisfaction and frustration (*t* (300) = 3.16, $p < 0.01$), were also significant between first age group 12 to 15 (*M* = 84.82, *SD* = 11.18) and second age group 16 to 19 (*M* = 80.62, *SD* = 11.64). However, no significant differences were found in cognitive emotion regulation (*t* (300) = 0.75, $p > 0.001$), between age group 12 to 15 (*M* = 108.95, *SD* = 21.74) and age group 16 to 19 (*M* = 113.25, *SD* = 19.52). Table 10 shows mean differences in maternal and paternal attachment

across age in adolescents. Significant differences were found related to maternal attachment (t (300) = 2.24, $p < 0.01$) between two age groups of adolescents aged 12 to 15 (M = 85.58, SD = 13.81) and aged 16 to 19 (M = 91.98, SD = 13.83). Similarly, significant differences were revealed in first age group 12 to 15 (M = 94.11, SD = 15.92), and second age group 16 to 19 M = 87.39, SD = 16.47) with respect to paternal attachment (t (300) = 3.56, $p < 0.001$).

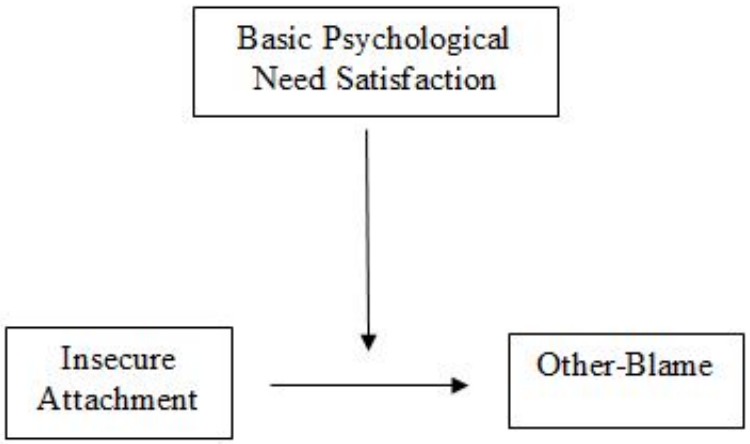

Figure 3.1: Showing the role of basic psychological need satisfaction as moderator between insecure attachment and other blame.

Table 3.9: Age Differences in Attachment, Basic Psychological Needs and Emotion Regulation in Adolescents

Variables	12-15		16-19		*t(300)*	*p*	*Cohen's d*
	M	*SD*	*M*	*SD*			
Attachment	188.47	26.02	178.72	26.28	3.21	.001	0.37
Need Satisfaction and Frustration	84.82	11.18	80.62	11.64	3.16	.002	0.37
Cognitive Emotion Regulation	108.95	21.74	113.25	19.52	-1.81	.075	0.21

Note: M = Mean, SD= Standard Deviation, p= Significance

Table 10: Differences in Paternal and Maternal Attachment across age (N=302)

Variables	12-15		16-19		*t(300)*	*p*	*Cohen's d*
	M	*SD*	*M*	*SD*			
Maternal Attachment	95.58	13.81	91.98	13.83	2.24	.026	0.46
Paternal Attachment	94.11	15.92	87.39	16.47	3.56	.000	0.41

Note: M = Mean, SD= Standard Deviation, p= Significance

Table 11: Differences in Autonomy, Competence and Relatedness Satisfaction and Frustration across age (N=302)

Variables	12-15		16-19		*t(300)*	*p*	*Cohen's d*
	M	*SD*	*M*	*SD*			
Autonomy Satisfaction	15.31	3.13	14.99	2.99	.89	.37	0.10
Autonomy Frustration	11.55	3.55	12.81	3.07	-3.30	.001	0.37
Competence Satisfaction	15.23	3.25	14.85	3.05	1.04	.29	0.12
Competence Frustration	11.85	3.05	12.05	2.78	-.58	.56	0.06
Relatedness Satisfaction	15.27	2.23	14.36	2.97	2.54	.012	0.34
Relatedness Frustration	9.58	3.75	10.71	3.61	-2.66	.008	0.30

Results in Table 11 indicated significant mean differences in autonomy, competence and relatedness satisfaction and frustration across age in in age group 12 to 15 (M = 11.55, SD = 3.55) and age group 16 to 19 (M = 12.81, SD = 3.07) with respect to autonomy frustration with (t (300) = -3.30, p < 0.001). Significant differences were also found regarding relatedness satisfaction (t (300) = 2.54, p < 0.01) in age group 12 to 15 (M = 15.27, SD = 2.23) and age group 16 to 19 (M = 14.36, SD = 2.97). Results in relatedness frustration (t (300) = -2.66, p < 0.01). Also indicated significant differences between age group 12 to 15 (M = 9.59, SD = 3.75) and age group 16 to 19 (M = 10.71, SD = 3.61).

4. Discussion

The present study was conducted for the purpose of investigating attachment patterns, basic psychological need satisfaction and frustration and emotion regulation in adolescents from age 12 to 19. Firstly, significant relationship between Attachment and its dimensions, Basic Psychological Need Satisfaction and Frustration and Cognitive Emotion Regulation Strategies was assessed and this hypothesis was accepted by the results which indicated that

attachment was positively correlated with trust, communication and satisfaction of autonomy, competence and relatedness. It was also significantly positively correlated with positive refocusing, refocuses on planning and positive reappraisal and was negatively significantly correlated with alienation, frustration of autonomy, competence and relatedness, self-blame and other blame. According to Leak and Cooney (2001), secure attachment is positively associated with greater autonomy while on the other hand; attachment that is insecure is negatively linked to autonomy. Pietromonaco and Barrett (2000) found that when caregivers are sensitive towards the needs of their children, it leads to feelings of security and the children develop a sense of autonomy and competence. According to three previously conducted studies, it was revealed by LaGuardia, Ryan, Deci and Couchman (2000) that the three basic psychological needs such as autonomy, competence and relatedness pay a vital role in order to form and maintain secure attachment pattern to others. According to them, both basic need satisfaction and the secure attachment pattern go hand in hand. On the other hand, insecure attachment is formed when needs are frustrated (Leigh, & Anderson, 2013). The results of correlation also indicated that trust in parental attachment was positively significantly correlated with communication and satisfaction of basic psychological needs such as autonomy, competence and relatedness, and adaptive emotion regulation strategies such as positive reappraisal, refocus on planning whereas it was negatively significantly correlated with frustration of competence, autonomy and relatedness and other blame. This finding is supported by findings of another study by Mikulincer *et al*. (2003) that when caregivers do not provide adequate care to children when it is needed by them, this serves as factor for the feelings of helplessness and incompetence i.e. frustration of need of competence in their children. According to correlation analysis, communication in attachment to parents was also found to have a positive significant relationship with satisfaction of three basic needs, refocus on planning and positive refocusing. On the other hand, it was negatively significantly correlated with frustration of autonomy, competence and relatedness. The results also revealed alienation to have significant positive relationship with autonomy, competence and relatedness frustration, and emotion regulation strategies such as self-blame acceptance, rumination, catastrophizing and other blame. A research conducted by Gong in 2013 is in accordance with this correlation result which revealed that two dimensions of attachment with parents such as communication and alienation are related to emotion regulation. It revealed that better communication and low level of alienation is significantly associated with better emotion regulation. According to the correlation analysis, satisfaction of autonomy and relatedness was positively significantly associated with positive refocusing, refocus on planning and putting into perspective while their frustration was positively significantly related with rumination, self-blame, acceptance, catastrophizing and other blame and was negatively significantly correlated with positive refocusing, positive refocusing, positive reappraisal. This finding was according to the

research by Shoukat and Dildar (2020) which revealed that adaptive emotion regulation strategies were associated with the satisfaction of all three basic psychological needs while on contrary, their frustration was linked to maladaptive emotion regulation strategies. Another previous study is in line with the results of this correlation which stated that maladaptive cognitive emotion regulation strategies self-blame and rumination were negatively related with need of autonomy (Balzarotti, Biassoni, Villani, & Prunas 2014). According to Brenning, Soenens, Vansteenkiste, and Van Petegem (2015), those children are more likely to use adaptive emotion regulation strategies that experience autonomy support by their parents which was previously studied by Deci and Ryan (2009) who found that autonomy support in adolescents is linked to the motivation to expression of emotions and use of adaptive emotion regulation strategies. The role of secure attachment and the three basic psychological need satisfactions as predictor of adaptive cognitive emotion regulation strategies while insecure attachment and basic psychological need frustration as predictor of maladaptive cognitive emotion regulation strategies was assessed. The results indicated that secure attachment indeed significantly and positively predicted adaptive cognitive emotion regulation strategies involving positive refocusing, refocus on planning and positive reappraisal. While on the other hand, it negatively significantly predicted the other blame which is a maladaptive strategy. Similarly, they also indicated that insecure attachment pattern in adolescents positively significantly predicted the maladaptive emotion coping strategies involving self-blame and other blame. This finding was supported by study of Prrigon, Kerns, Abtahi and Koehn in 2015 in which it was concluded that securely attached children and adolescents are known to have advantage regarding emotion regulation over those who are insecurely attached. According to Feeney (1995), differences in attachment patterns are related with individual differences in the strategies that are used to regulate emotions. Secure attachment leads to healthy emotion regulation strategies (Brandao et. al, 2019). According to Phuoc (2020), adolescents with higher level of frustration of the three basic needs such as autonomy, competence and relatedness are more likely to experience emotional problems. So, the multiple regression analysis for basic psychological need satisfaction including autonomy, competence and relatedness satisfaction as predictor of adaptive emotion regulation strategies was performed to assess what type of cognitive emotion regulation strategies are adolescents involved when their basic needs are satisfied. The results of analysis revealed that satisfaction of basic psychological needs positively significantly predicted adaptive emotion regulation strategies. Autonomy satisfaction positively predicted positive refocusing, refocus on planning, positive reappraisal and putting into perspective. Relatedness Satisfaction was also found to be a positive significant predictor of positive refocusing and lastly, competence satisfaction positively significantly predicted refocus on planning and positive reappraisal. Self-determination theory also states that parents who are autonomy-supportive, they encourage their children to explore, express and discuss their emotions and parent's acknowledgement

of their children's emotions lead them to reflection upon their negative emotions and as a result, they respond to them in non-defensive way (Roth, & Assor, 2012). Previous studies have revealed that adolescents with autonomy supportive parents have been found to use adaptive emotion regulation strategies (Brenning *et al*, 2012). Also, according to Kaap Deedar, Brenning, and Neyrinck (2020), adaptive emotion regulation strategies is related to a person's need for competence i.e. feelings of capability in dealing daily life experiences and need for relatedness i.e. developing communicative and solid relationships. On the other hand, the multiple regression analysis for frustration of basic psychological needs revealed that they positively predicted maladaptive emotion regulation strategies and acceptance and negatively predicted adaptive emotion regulation strategies. Autonomy frustration positively significantly predicted self-blame, acceptance, catastrophizing and other blame. Relatedness frustration also positively predicted self-blame and acceptance and negatively predicted positive refocusing and refocus on planning. Frustration of need of competence positively predicted self-blame, acceptance, rumination and catastrophizing. In previous studies, maladaptive cognitive emotion regulation strategies are found to be associated with frustration of basic needs as stated by Kaap Deedar, Brenning, & Neyrinck in their study in 2020. Need frustration has been found to be a core mechanism that leads to internalizing problems such as self-blame, rumination and catastrophizing. According to Panahi, Yunus, & Panahi, (2016), acceptance is an adaptive emotion regulation strategy but there are some items in acceptance subscale like "I think I will just have to accept it and I cannot change it" etc. Such items indicate some degree of hopelessness so in some special cases it can be maladaptive strategy and the result of analysis in current study also revealed frustration of basic needs to predict acceptance. The study also investigated the role of basic psychological need satisfaction as a moderator between insecure attachment pattern and maladaptive cognitive emotion regulation in adolescents and this hypothesis was partially accepted by results that revealed that fulfillment of basic psychological needs acted as a moderator between insecure attachment and other-blame which is one of maladaptive emotion regulation strategies. As previously mentioned, insecure attachment plays a significant role in predicting maladaptive emotion regulation strategy other blame. However, the results of regression moderation analysis indicated that when basic psychological needs such as autonomy, competence and relatedness are satisfied, the resulting maladaptive emotion regulation strategy "other blame" decreases even if the adolescents are insecurely attached to their parents. The study also investigated the role of basic psychological need satisfaction as a moderator between insecure attachment pattern and maladaptive cognitive emotion regulation in adolescents and this hypothesis was partially accepted by results that revealed that fulfillment of basic psychological needs acted as a moderator between insecure attachment and other-blame which is one of maladaptive emotion regulation strategies. As previously mentioned, insecure attachment plays a significant role in

predicting maladaptive emotion regulation strategy other blame. However, the results of regression moderation analysis indicated that when basic psychological needs such as autonomy, competence and relatedness are satisfied, the resulting maladaptive emotion regulation strategy "other blame" decreases even if the adolescents are insecurely attached to their parents. Lastly, with regards to basic psychological needs, significant differences were revealed in autonomy frustration and relatedness satisfaction and frustration within age groups. It was indicated that older group of adolescents from age 16 to 19 experienced more autonomy frustration as well as relatedness frustration and less relatedness satisfaction as compared to younger group of adolescents from age 12 to 15. A previous study by Thompson in 2006 also concluded high cognitive autonomy in college students as compared to school students. High relatedness satisfaction in younger adolescent group might be due to higher attachment to both mother and father than older group of adolescents.

4.1 Limitations and Suggestions

- The present study focused on two main attachment patterns such as secure and insecure attachment so, further studies should be conducted regarding attachment patterns, basic psychological need satisfaction and frustration and emotion regulation by including the further types of insecure attachment such as anxious attachment and ambivalent attachment patterns and disorganized attachment.
- Attachment to parents has been studied specifically in this research by using parent version of Inventory of Parent and Peer Attachment. Further research is suggested by considering peer attachment of adolescents with basic psychological needs and emotion regulation.
- The sample size of study was limited to educational institutes of Lahore so further studies should be conducted in other cities of Pakistan for generalizability of research findings.

4.2 Implications

- The research findings have provided understanding regarding insecure attachment and frustration as factors responsible for maladaptive emotion regulation.
- This study has raised the need of hiring counselors in educational institutions to provide support to adolescents with emotion regulation problems caused by insecure attachment and frustration of basic needs.
- This research not only emphasized the need for counseling services for adolescents but also for the parents to help them in understanding the importance of attachment in childhood so emotional problems could be prevented.
- The research findings will prove as an additional knowledge in existing literature.

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