



***ATTACHMENT RELATIONSHIPS, NEGATIVE AUTOMATIC THOUGHTS
AND PSYCHOLOGICAL PROBLEMS AMONG LATE ADOLESCENTS IN
RAWALPINDI, PAKISTAN***

SIDDRAH IRFAN

FPSK(p) 2020 17



**ATTACHMENT RELATIONSHIPS, NEGATIVE AUTOMATIC THOUGHTS
AND PSYCHOLOGICAL PROBLEMS AMONG LATE ADOLESCENTS IN
RAWALPINDI, PAKISTAN**

By

SIDDRAH IRFAN

**Thesis Submitted to the School of Graduate Studies, Universiti Putra
Malaysia, in Fulfilment of the Requirements for Degree of Doctor of
Philosophy**

November 2019

All material contained within the thesis, including without limitation text, logos, icons, photographs and all other artwork, is copyright material of Universiti Putra Malaysia unless otherwise stated. Use may be made of any material contained within the thesis for non-commercial purposes from the copyright holder. Commercial use of material may only be made with the express, prior, written permission of Universiti Putra Malaysia.

Copyright © Universiti Putra Malaysia



Abstract of thesis presented to the Senate of Universiti Putra Malaysia in fulfillment of the requirement for the degree of Doctor of Philosophy

ATTACHMENT RELATIONSHIPS, NEGATIVE AUTOMATIC THOUGHTS AND PSYCHOLOGICAL PROBLEMS AMONG LATE ADOLESCENTS IN RAWALPINDI, PAKISTAN

By

SIDDRAH IRFAN

November 2019

Chairman : Nor Sheereen Zulkefly, PhD
Faculty : Medicine and Health Sciences

The foundations for a prospect of a healthy development are established during adolescence. Secure attachment relationships with parents and peer play a significant role in adolescent positive development. However, problems with attachment relationships may result in negative automatic thoughts and psychological problems among adolescents. Nevertheless, the mechanism through which attachment relationships predict psychological problems via negative automatic thoughts has seldom been investigated, specifically in the Pakistani context. Moreover, similar and distinct etiological factors for psychological problems among males and females remain understudied. This study thus, investigated the mediating effect of negative automatic thoughts in the association between attachment relationships (maternal, paternal and peer) and psychological problems (depressive and anxiety symptoms), and the moderating effect of sex among late adolescents in Pakistan. Bowlby's attachment theory and Beck's cognitive theory were integrated to understand such mechanism among the study variables. A total of 936 participants (males=423, females=513) aged 17 to 19 were identified from the government colleges of Rawalpindi, Pakistan through multistage cluster sampling. Self-administered questionnaires including the Inventory of Parent and Peer Attachment-Urdu (IPPA-Urdu; Zafar, 2009), Depression, Anxiety, Stress Scale-Urdu (DASS-Urdu; Zafar, 2014), and Automatic Thoughts Questionnaire (ATQ-Urdu: Hashmi, 2012) were used to assess perceptions about attachment relationships, symptoms of depression and anxiety, and level of negative automatic thoughts. The preliminary statistics of the constructs including the means, standard deviations, minimum, maximum, frequencies, correlation and t-test were reported. Structural equation modelling was applied (AMOS-23 software) to test the models

illustrating the hypothesised linkages. All the measures were validated through confirmatory factor analysis and measurement model. Results from the present study indicated that the direct and indirect models achieved appropriate goodness-of-fit. Paternal and peer attachment were found to be negatively related to depressive symptoms. In contrast, negative automatic thoughts were positively associated with depressive and anxiety symptoms. Further, maternal, paternal, and peer attachment were all negatively related to negative automatic thoughts. Bootstrap analysis showed that negative automatic thoughts fully mediating the associations of maternal and peer attachment with depressive and anxiety symptoms, paternal attachment with anxiety symptoms, whereas, partially mediated the link between paternal attachment and depressive symptoms. The multi-group analysis demonstrated the moderating effect of sex in the mediation model. Overall, the results show that, for males, paternal and peer attachment play a significant role in determining and maintaining their psychological health. While for females, insecure maternal, paternal and peer attachment trigger negative automatic thoughts, which in turn, bring about psychological problems. The study provides greater insight and understanding of the integration of attachment and cognitive theories. Additionally, the study advances understanding of the role of attachment relationships in the development of positive cognitions during late adolescence and underscores that secure attachment relationships with parents and peer are required for the psychological health of late adolescents in Pakistan. Thus, the findings of this study can be helpful to educator, policy makers, practitioner and clinician to develop better intervention and prevention plan for youngsters. The findings help adolescents and parents to improve mental health by improving their communication and interpersonal relationships.

Abstrak tesis yang dikemukakan kepada Senat Universiti Putra Malaysia
sebagai memenuhi keperluan untuk ijazah Doktor Falsafah

**HUBUNGAN PERAPATAN, PEMIKIRAN AUTOMATIK NEGATIF DAN
MASALAH PSIKOLOGI DI KALANGAN REMAJA DI RAWALPINDI,
PAKISTAN**

Oleh

SIDDRAH IRFAN

November 2019

Pengerusi : Nor Sheereen Zulkefly, PhD
Fakulti : Perubatan dan Sains Kesihatan

Asas prospek pembangunan yang sihat hendaklah dipupuk pada zaman remaja. Hubungan perapatan dengan ibu bapa dan rakan sebaya memainkan peranan signifikan dalam perkembangan positif remaja. Walaubagaimanapun, masalah dengan hubungan perapatan mungkin menyebabkan pemikiran automatik negatif dan masalah psikologi di kalangan remaja. Namun begitu, mekanisme hubungan perapatan meramalkan masalah psikologi melalui pemikiran automatik negatif kurang diteliti, khususnya dalam konteks Pakistan. Selain itu, faktor etiologi yang sama dan berbeza dalam masalah psikologi di kalangan lelaki dan perempuan masih belum dikaji dengan lebih mendalam. Oleh itu, kajian ini meneliti kesan perantaraan pemikiran automatik negatif dalam perhubungan antara hubungan perapatan (ibu, bapa dan rakan sebaya) dan masalah psikologi (gejala depresi dan kebimbangan), serta kesan perantaraan jantina di kalangan remaja di Pakistan. Teori perapatan Bowlby dan teori kognitif Beck diintegrasikan untuk memahami mekanisme dalam kalangan pembolehubah kajian. Seramai 936 peserta (lelaki = 423, perempuan = 513) berumur 17 hingga 19 tahun dikenalpasti dari kolej-kolej kerajaan di Rawalpindi, Pakistan melalui pensampelan kluster. Soal selidik yang diselia sendiri termasuklah Inventori Perapatan Ibubapa dan Rakan – Urdu (IPPA-Urdu; Zafar, 2009), Skala Depresi, Kebimbangan, dan Stress -Urdu” (DASS-Urdu; Zafar, 2014), dan Pemikiran Automatik (ATQ-Urdu; Hashmi, 2012) digunakan untuk menilai persepsi mengenai hubungan perapatan, gejala depresi dan kebimbangan, dan juga tahap pemikiran automatik negatif. Statistik awal konstruk termasuk purata, sisihan piawai, minima, maksima, frekuensi, korelasi dan ujian-t dilaporkan. Pemodelan persamaan berstruktur (perisian AMOS-23) digunakan untuk menguji model yang menggambarkan

hubungan hipotesis. Semua langkah telah disahkan dengan menggunakan faktor analisis pengesahan dan model pengukuran. Keputusan dari kajian ini menunjukkan bahawa model langsung dan tidak langsung mencapai "goodness of fit". Perapatan bapa dan rakan sebaya didapati berhubung secara negatif terhadap gejala depresi. Sebaliknya, pemikiran automatik negatif adalah dikaitkan secara positif dengan gejala depresi dan kebimbangan. Selanjutnya, perapatan ibu, bapa dan rakan semuanya berkaitan secara negatif dengan pemikiran automatik negatif. Analisis Bootstrap menunjukkan bahawa pemikiran automatik negatif menjadi perantara sepenuhnya perhubungan di antara perapatan ibu dan rakan sebaya dengan gejala depresi dan kebimbangan, serta perapatan bapa dengan gejala kebimbangan. Namun begitu, analisis Bootstrap turut menunjukkan bahawa pemikiran automatik negatif sebagai perantara separa dalam hubungan antara perapatan bapa dan gejala depresi. Analisis multi-kelompok menunjukkan adanya perantaraan hubungan kesan jantung dalam model pengantaraan. Secara keseluruhannya, keputusan menunjukkan bahawa, dalam kalangan remaja lelaki, perapatan dengan bapa dan rakan sebaya memainkan peranan signifikan dalam menentukan dan mengekalkan kesihatan psikologi mereka. Manakala bagi remaja perempuan, perasaan tidak selamat terhadap ibu, bapa dan rakan sebaya mencetuskan pemikiran automatik negatif, yang membawa kepada masalah psikologi. Kajian ini memberikan pemahaman yang lebih mendalam terhadap integrasi perapatan dan teori kognitif. Selain itu, kajian ini juga meningkatkan kefahaman terhadap peranan hubungan perapatan dalam perkembangan kognisi positif sewaktu akhir remaja dan menggariskan bahawa hubungan perapatan yang selamat dengan ibu bapa dan rakan sebaya diperlukan untuk kesihatan psikologi di kalangan akhir remaja di Pakistan. Oleh itu, penemuan kajian ini dapat membantu pendidik, pembuat dasar, pengamal dan serta doktor untuk membangunkan pelan campur tangan dan pencegahan yang lebih baik untuk anak-anak muda. Penemuan ini juga diharapkan dapat membantu remaja dan ibu bapa untuk meningkatkan kesihatan mental dengan meningkatkan hubungan komunikasi dan interpersonal mereka.

ACKNOWLEDGEMENTS

It is my pleasure to acknowledge the roles of those individuals who were instrumental for completion of my doctoral research.

First of all, I would like to extend my gratitude to my supervisor Dr. Nor Sheereen Zulkefly for her continuous support, encouragement and patience. Her scholarly guidance, immense knowledge in the field and dedication to the work has enabled me to successfully commence this project.

I would also like to appreciate the support and guidance of supervisory committee members, Dr. Tan Kit-Aun and Dr. Siti Irma Fadhilah Ismail. Their time, expertise and knowledge in the field helped me to achieve my goals and complete my work.

I am thankful to Prof. Dr. Bahaman Abu Samah, an expert in multivariate analysis and structural equation modelling at Universiti Putra Malaysia, for his knowledge in statistics which influenced my study. I would also like to acknowledge the support of Prof. Dr. Rozumah Baharudin, for providing scholarly advice during the research work.

I want to express my heartiest gratitude to my family members for their overwhelming support. I would like to thank my parents for motivating and encouraging me. I am thankful to my sisters who supported me throughout the struggles in my life, emotional journey, joys, tears and accomplishments. Lastly, I want to thank my friends and colleagues in the field who continuously supported me to accomplish my work.

This thesis was submitted to the Senate of Universiti Putra Malaysia and has been accepted as fulfilment of the requirement for the degree of Doctor of Philosophy. The members of the Supervisory Committee were as follows:

Nor Sheereen Zulkefly, PhD

Senior Lecturer
Faculty of Medicine and Health Sciences
Universiti Putra Malaysia
(Chairman)

Tan Kit-Aun, PhD

Senior Lecturer
Faculty of Medicine and Health Sciences
Universiti Putra Malaysia
(Member)

Siti Irma Fadhilah Ismail, PhD

Senior Lecturer
Faculty of Medicine and Health Sciences
Universiti Putra Malaysia
(Member)

ZALILAH MOHD SHARIFF, PhD

Professor and Deputy Dean
School of Graduate Studies
Universiti Putra Malaysia

Date:

Declaration by graduate student

I hereby confirm that:

- this thesis is my original work;
- quotations, illustrations and citations have been duly referenced;
- this thesis has not been submitted previously or concurrently for any other degree at any other institutions;
- intellectual property from the thesis and copyright of thesis are fully-owned by Universiti Putra Malaysia, as according to the Universiti Putra Malaysia (Research) Rules 2012;
- written permission must be obtained from supervisor and the office of Deputy Vice-Chancellor (Research and Innovation) before thesis is published (in the form of written, printed or in electronic form) including books, journals, modules, proceedings, popular writings, seminar papers, manuscripts, posters, reports, lecture notes, learning modules or any other materials as stated in the Universiti Putra Malaysia (Research) Rules 2012;
- there is no plagiarism or data falsification/fabrication in the thesis, and scholarly integrity is upheld as according to the Universiti Putra Malaysia (Graduate Studies) Rules 2003 (Revision 2012-2013) and the Universiti Putra Malaysia (Research) Rules 2012. The thesis has undergone plagiarism detection software.

Signature: _____ Date: _____

Name and Matric No.: Siddrah Irfan, GS45554

Declaration by Members of Supervisory Committee

This is to confirm that:

- the research conducted and the writing of this thesis was under our supervision;
- supervision responsibilities as stated in the Universiti Putra Malaysia (Graduate Studies) Rules 2003 (Revision 2012-2013) are adhered to.

Signature: _____

Name of
Chairman of
Supervisory
Committee

Dr. Nor Sheereen Zulkefly

Signature: _____

Name of
Member of
Supervisory
Committee:

Dr. Siti Irma Fadhilah Ismail

Signature: _____

Name of
Member of
Supervisory
Committee:

Dr. Tan Kit-Aun

TABLE OF CONTENTS

	Page
ABSTRACT	i
ABSTRAK	iii
ACKNOWLEDGEMENTS	v
APPROVAL	vi
DECLARATION	viii
LIST OF TABLES	xiii
LIST OF FIGURES	xiv
CHAPTER	
1 INTRODUCTION	1
1.1 Background of the Study	1
1.2 Statement of the Problem	5
1.3 Research Questions	7
1.4 Theoretical Background	7
1.4.1 Bowlby's Attachment Theory	7
1.4.2 Beck's Cognitive Theory	11
1.4.3 Integration of Bowlby's Attachment Theory and Beck's Cognitive Theory	12
1.5 Conceptual Framework	13
1.6 Research Objectives	14
1.7 Hypothetical Model	15
1.8 Hypotheses	16
1.9 Significance of the Study	17
1.10 Definition of Terminologies	18
1.11 Chapter Summary	20
1.12 Organization of the Thesis	20
2 LITERATURE VIEW	22
2.1 Psychological Problems among Adolescents	22
2.1.1 Depressive Symptoms	26
2.1.2 Anxiety Symptoms	27
2.1.3 Consequences of Psychological Problems	29
2.1.4 Etiology of Psychological Problems	29
2.2 Negative Automatic Thoughts	30
2.3 Attachment Relationships of Adolescents	32
2.3.1 Maternal Attachment and Developmental Outcomes	33
2.3.2 Paternal Attachment and Developmental Outcome	35
2.3.3 Peer Attachment and Developmental Outcome	35
2.4 Attachment Relationships, Psychological Problems and Negative Automatic Thoughts	37
2.4.1 Attachment Relationships and Psychological Problems	37

	2.4.2 Attachment Relationships and Negative Automatic Thoughts	41
	2.4.3 Negative Automatic Thoughts and Psychological Problems	41
2.5	Mediating Effect of Negative Automatic Thoughts in the Relationship between Attachment Relationships and Psychological Problems	43
2.6	Moderating Effect of Sex between Attachment Relationships and Psychological Problems	45
2.7	The Linkages among the Study Variables in the Pakistani Context	46
2.8	Summary and Impact of Literature Review on the Present Study	48
2.9	Chapter Summary	49
3	METHODOLOGY	50
3.1	Research Design	50
3.2	Location	50
3.3	Sample	52
	3.3.1 Sampling Procedure	52
	3.3.2 Sample Size	54
	3.3.3 Sample Demographic Description	55
3.4	Measures	58
	3.4.1 Attachment Relationships	58
	3.4.2 Psychological Problems	59
	3.4.3 Negative Automatic Thoughts	60
3.5	Pilot study	60
3.6	Ethical Considerations	60
3.7	Data Collection Procedure	61
3.8	Data Analysis Plan	62
	3.8.1 Data screening and transformation	62
	3.8.2 Descriptive Statistics	63
	3.8.3 Factor Structure and Psychometric Properties	63
	3.8.4 Hypotheses Testing	66
3.9	Chapter Summary	67
4	RESULTS	68
4.1	Data Screening and Cleaning	68
4.2	Data Normality and Outliers	68
4.3	Preliminary Analysis	70
4.4	Psychometric Properties	74
	4.4.1 CFA of Attachment Relationship Constructs	75
	4.4.2 CFA for the Psychological Problem Constructs	76
	4.4.3 CFA for Negative Automatic Thoughts	77
	4.4.4 Measurement Model	78
4.5	Full Structural Model	80
	4.5.1 Direct Models (RQ1)	80
	4.5.2 Indirect Model-Mediation (RQ2)	84

4.5.3	Indirect Model-Moderation (RQ3)	90
4.6	Summary of Research Findings	97
4.7	Chapter Summary	100
5	DISCUSSION	101
5.1	Discussion of Findings	101
5.2	Research Question-1	101
5.2.1	Direct Associations between Attachment Relationships and Psychological Problems	101
5.2.2	Direct Associations between Negative Automatic Thoughts and Psychological Problems	103
5.2.3	Direct Associations between Attachment Relationships and Negative Automatic Thoughts	103
5.3	Research Question-2	104
5.3.1	Mediating Effect of Negative Automatic Thoughts	104
5.4	Research Question-3	105
5.4.1	Moderating Effect of Adolescent Sex	105
5.5	Implications of the Study	107
5.5.1	Theoretical Implications	107
5.5.2	Practical Implications	108
5.6	Chapter Summary	110
6	SUMMARY, CONCLUSION, LIMITATION, AND RECOMMENDATION	111
6.1	Summary of the Study	111
6.2	Conclusion	113
6.3	Limitations	113
6.4	Recommendation for Future Studies	114
6.5	Chapter Summary	115
	REFERENCES	116
	APPENDICES	151
	BIODATA OF STUDENT	204
	LIST OF PUBLICATIONS	207

LIST OF TABLES

Table		Page
1	Prevalence of psychological problems among adolescents	23
2	Distribution of sample in different clusters	55
3	Characteristics of the late adolescent participants	56
4	Characteristics of the respondents' family	57
5	Skewness and kurtosis of major variables	69
6	Results of mahalanobis distance (D^2)	69
7	Descriptive Statistics of the Maternal, Paternal and Peer attachment Relationship Constructs	70
8	Descriptive statistics of the negative automatic thoughts, depressive and anxiety symptoms	71
9	Correlations between constructs	72
10	Mean scores between males and females on the attachment relationships	73
11	Mean scores between males and females on the depressive and anxiety symptoms, and negative automatic thoughts	74
12	Construct validity of maternal, paternal and peer attachment relationships	76
13	Construct validity index of depressive and anxiety symptoms	77
14	Construct validity index of negative automatic thoughts	78
15	Discriminant validity index	78
16	Decision on mediation analysis	85
17	Bootstrap mediation results	88
18	Summary of mediation analysis results	90
19	Structural invariance of adolescent sex	92
20	Moderating effect of adolescent sex	93
21	Results of moderated mediation	96
22	Mediating effect of NAT among males and females	97
23	Summary of research findings	98

LIST OF FIGURES

Figure		Page
1	Attachment Theory	9
2	Conceptual Framework for the Study	14
3	Hypothetical Model	15
4	Map of Rawalpindi district	51
5	Sampling Procedure for the Study	53
6	Measurement Model of the Study (N=918)	79
7	Direct Model of Attachment Relationships on Psychological Problems (N=918)	81
8	Direct Model of Negative Automatic Thoughts on Psychological Problems (N=918)	82
9	Direct Model of Attachment Relationship on Negative Automatic Thoughts (N=918)	83
10 a	Direct Effect	84
10 b	Mediation Effect	84
11	Mediation Model (N=918)	87
12	Moderation Effect	90
13	Moderated-Mediation Model	91
14	Structural Model-A: Moderated Mediation Model Male (N=410)	94
15	Structural Model-B: Moderated Mediation Model Female (N=508)	95

CHAPTER 1

INTRODUCTION

This chapter begins with the background of the current study which focuses on the psychological problems of late adolescents in Pakistan. The statement of the problem is presented next, followed by the theoretical background that guided this study and research questions. The succeeding sections present the conceptual framework, general and specific study objectives, as well as the hypotheses and hypothetical model. The chapter ends with the significance of the study and definitions of key terms.

1.1 Background of the Study

Depressive and anxiety symptoms are common psychological problems in most societies. According to the World Health Organization (2017), depression (7.5%) is the topmost contributor, while anxiety (3.4%) is the sixth largest contributor to worldwide mental disability. Depressive and anxiety symptoms are more prevalent among adolescents (Bhatia & Goyal, 2018; Twenge, Joiner, Rogers, & Martin, 2017). About 20% of adolescents are suffering from these psychological problems, which are among the leading causes of worldwide burden of disease for young individuals in the adolescence stage (United Nations International Children's Emergency Fund [UNICEF], 2011; World Health Organization [WHO], 2012). However, in South East Asian countries the situation is more problematic. Specifically, depressive and anxiety symptoms in these countries often remain untreated and undiagnosed during adolescence because of the limited access to psychiatry and psychological services; notwithstanding the societal stigma attached to these psychological health issues (WHO, 2017). This highlights the need to understand psychological problems among adolescents and their causal factors in Asian countries.

Adolescence is a critical developmental stage of life comprising the early, middle and late developmental stages. Among these, late adolescence, being a transitory period before adulthood, is important. During late adolescence, physical and psycho-social changes are rapid and simultaneously occurring (Marshall & Henderson, 2014; UNICEF, 2011). These metamorphoses are either positive or negative depending upon how adolescents acclimate with them. If adaptation is positive, then adolescents have high self-esteem and self-efficacy, positive identity development, good academic performance, and are well-adjusted psychologically and socially (Flueckiger, Lieb, Meyer, Mata, 2014; Hoyt, Chase-Lansdale, McDade, & Adam, 2012; Luan, Poorthuis, Hutteman, Denissen, van Aken, 2017; Topolewska-Siedzik, & Ciecuch, 2018). On the other hand, poor adaptation to these developmental changes may cause adolescents to remain in a state

of confusion and worry that could later result in psychological problems such as depressive and anxiety symptoms (Berg, Kiviruusu, Karvonen, Rahkonen, & Huurre, 2017; Maughan, DPhil & Stringaris, 2013; Naicker et al., 2012). In addition, WHO (2016) reported that depressive and anxiety symptoms are among the major causes of disability-adjusted life years (DALYs) in late adolescents of all regions, particularly in developing countries.

Besides, epidemiological studies have estimated that symptoms of depression and anxiety often escalate during late adolescence (Baxter, Vos, Scott, Ferrari, & Whiteford, 2014; Hankin et al., 2015; Ohannessian, Milan, & Vannucci, 2017). The prevalence of depressive symptoms in late adolescents in different countries has been reported to be 5.67% in Greece (Magklara et al., 2015), 31.9% in India (Waghachavare et al., 2016), 18.4% in Iran (Masjedi, 2018), and 17.7% in Malaysia (Kaur et al., 2014). However, in Pakistan, statistical data on the population-based prevalence of mental health problems among late adolescents are scarce; though, studies have reported that the psychiatric morbidity of depressive symptoms among adolescents in different cities range from 26% to 72% (Alwani, Kanpurwala, Noori, & Punjwani, 2016; Khalid, 2014; Zubair & Ali, 2015). On the other hand, the prevalence rate of anxiety symptoms in late adolescents across different nations has been estimated to be 38.7% in India (Waghachavare et al., 2016), 2.3% to 24.4% in Iran (Mohammadi et al., 2019), 29% in Malaysia (Shamsuddin et al., 2013), 14.1% in China (Jin, He, Kang, Chen, Lu, Ren, et al., 2014), and 21% to 24.5% in Pakistan (Ahmad & Bano, 2013; Khalid, 2014). Indeed, these data underscore the high prevalence rates of depressive and anxiety symptoms in Asian societies particularly Pakistan, which call for an investigation of their causes within this region.

The high prevalence of depressive and anxiety symptoms among youngsters is debilitating to societies. Consequently, the WHO (2014) has advised nations to spend on adolescents to create a better society as they are important social actors. The present study thus focused on adolescents of Pakistan who are deemed important assets as they are expected to shape the future of the nation. Pakistan is the sixth most populous country (US Census Bureau, 2012), containing 41.3% youngsters under 30 years of age (Pakistan Bureau of Statistics [PBS], 2017). Additionally, 22% to 60% of the population in Pakistan is suffering from depression and anxiety (Ahmed et al. 2016). Although these psychological problems are prevalent among adolescents, influence their daily functioning and are among the leading causes of suicide, little work has been done in understanding the reasons for these problems (Araa, 2018; Naveed, Qadir, Afzaal, & Waqas, 2017; Qidwai, Ishaque, Shah, & Rahim, 2010; Valika & Jalbani, 2004). The WHO Mental Health Atlas (2014) reported that Pakistan is spending 0.01 dollars per capita on mental health annually. Furthermore, there are only four child and adolescents psychiatrists available to address the needs of children and adolescents in the country (Younus, 2017). In the period 1993-2004, there were only 108 publications on psychological health (Irfan, 2011). Overall,

these facts indicated poor mental health conditions in Pakistan. However, in order to prevent adolescents from developing depressive and anxiety symptom, it is deemed necessary to understand the underlying factors that contribute to psychological problems among Pakistani adolescents.

For the past two decades, numerous studies have been conducted to understand the etiology of depressive and anxiety symptoms among adolescents. Specifically, socio-economic status, parent-child relationship, poor educational performance, parental conflict, low parental education, parenting styles, ethnicity, religious affiliation, family environment, mental health of caretaker and attachment relationship (Kamberi, Hoxha, Shala, Shahini, & Vehapi, 2018; Kosutic et al., 2017; Sajjadi, Kamal, Rafiey, Vameghi, Forouzan, & Rezaei, 2013; Stratton et al., 2014) have been identified as some of the main risk factors for the psychological problems of adolescents. Recent developments suggest that most of adolescents' problems arise from their immediate environment such as parents and peers (Pan, Zhang, Liu, Ran, & Wang et al., 2016; Yap et al., 2016). Therefore, the need to study the associations between adolescents' attachment relationships and psychological problems must be addressed (Mikulincer & Shaver, 2012; WHO, 2014).

Attachment relationship is one of the substantial elements in the development of psychological problems among adolescents (Marshall & Henderson, 2014; Mikulincer & Shaver, 2012; Yap et al., 2014). During adolescence, attachment relationships mainly include parents and friends. Previously, parental attachment with adolescents was studied as a unitary concept (e.g. Jackson & Horwood, 2012; Tambelli et al., 2012). However, recent studies have begun to examine the distinct characteristics of maternal and paternal attachment relationships (Keizer, Helmerhorst, & van Rijn-van Gelderen, 2019; Zulkefly & Wilkinson, 2015). There is an abundance of past studies (Brumariu, Kerns, & Seibert, 2012; Duchesne & Ratelle, 2014; McAndrew, 2017; Moreira, Gouveia, Carona, Silva, & Canavarro, 2014) on the attachment of mothers with their offspring, which has been ascribed as a determining factor for psychological problems. Nonetheless, literature reveals that father attachment is also a significant factor in maintaining psychological health and identity development of adolescents (Marshall & Henderson, 2014). Similarly, during late adolescence, attachment is extended to other autonomous relationships, specifically with peers. In this regard, strong associations have been found between peer attachment and low mood (Millingsa, Bucka, Montgomery, Spearsb, & Stallarda, 2012) as well as internalizing problems (Tambelli et al., 2013). Based on the aforementioned empirical literature, simultaneously investigating the three forms of attachment relationships (i.e., maternal, paternal, and peer) would provide better insights into the potential determinants of depressive and anxiety symptoms among late adolescents, including their underlying mechanisms.

Moreover, most studies on attachment relationships and psychological problems were conducted in Western societies (Brumariu et al., 2012; Marshall & Henderson, 2014; Tambelli et al., 2012; Umemura, Lacinová, Kraus, Horská, & Pivodová, 2018). In Pakistan, attachment relationships have been explored with identity development (Nawaz, 2011) and career decision-making (Nawaz & Gilani, 2011). An examination of electronic databases such as Science Direct, EBSCOhost, and Proquest revealed that there is limited published research on the associations between attachment relationships and psychological problems among late adolescents in Pakistan (Najam & Majeed, 2012; Haqqani, 2017; Irfan, Zulkefly, Tan, & Ismail, 2019). This highlights the need to study the associations among these variables in non-Western countries such as Pakistan.

Recently, scholars emphasized the mechanisms that link attachment relationships with psychological problems, instead of elaborating on the relationships between variables (DeKlyen, & Greenberg, 2016; Madigan, Brumariu, Villani, Atkinson, & Lyons-Ruth, 2016). In this respect, negative automatic thoughts have been identified as one of the possible cognitive mechanisms that act as an intervening variable between attachment relationships and psychological problems, particularly depressive and anxiety symptoms. Previous studies (Lee & Hankin, 2009; Roelofs, Lee, Ruijten & Lobbestael, 2011; Kamkar, Doyle, & Markiewicz, 2012; Roelofs, Onckels & Muris, 2013; Love & Murdock, 2011) examined the mediation role of cognitive processes through maladaptive schemas, self-esteem, dysfunctional attitudes, attribution styles and cognitive working models. Some studies (Love & Murdock, 2014; Roelofs et al., 2013; Stikkelbroek, Bodden, Kleinjan, Reijnders, & van Baar, 2016) are available on the prediction of depressive symptoms by attachment relationships through cognitive variables. However, little is known about the role of faulty thinking patterns in predicting anxiety symptoms among adolescents (Koerner, Tallon, & Kusec, 2015). Nonetheless, only one study was found that examined the mediating role of cognitions, measured as negative cognitive styles, on the associations of attachment relationships with depressive and anxiety symptoms simultaneously (Safford, Alloy, Crossfield, Morocco, & Wang, 2004). By the same token, no research has explored the role of negative automatic thoughts in the connections of maternal, paternal and peer attachment with depression and anxiety concurrently (Cassidy et al., 2013; Irfan et al., 2019; Khalid 2015; Lee & Hankin, 2009).

Previous studies (Gorrese & Ruggieri, 2012; Guarnieri, Ponti & Tani, 2010; Kamkar et al., 2012; Li, Delvecchio, Miconi, Salcuni, Risco, 2014; Pace, Martini, & Zavattini, 2011; Van Eijck, Branje, Hale-III, & Meeus, 2012) have likewise observed that the associations of psychological problems (i.e., depressive and anxiety symptoms) with negative automatic thoughts and attachment relationships (maternal, paternal and peer) vary across sex. Researchers have constantly examined the moderating role of sex (Imtiaz & Naqvi, 2012; Nilsen, Eisemann & Kvernmo, 2013). Yet, Groh, Ijzendoorn,

Bakermans-Kranenburg and Fearon (2012) and Madigan et al (2016) observed in a meta-analysis some inconsistencies and variations in the moderating effect of sex on the relationship between poor attachment and internalizing problems. Gorrese (2015) suggested exploring the moderating role of adolescents' sex in this particular relationship in future studies.

The aforementioned facts and figures have elaborated that the etiology of psychological problems with reference to attachment relationships and negative automatic thoughts has been overlooked in Asian societies particularly in Pakistan. There are a large number of studies conducted in Western societies on the psychological problems of adolescents. These societies are constantly investing on adolescents in order to understand the etiology of their psychological problems; and the progress can be observed by the increasing number of publications. Hitherto, the examination of the interaction between attachment relationship and psychological problems outside Western cultures is still at the initial stages. To address the abovementioned gaps in literature, the present study investigated the interplay between attachment relationships and negative automatic thoughts as one of the etiological factors for the psychological problems of late adolescents in Pakistan.

1.2 Statement of the Problem

As noted earlier, depressive and anxiety symptoms are more prevalent in late adolescents, which may cause serious impairments in later life if not immediately dealt with (Baxter et al., 2014; Hankin et al., 2015; Waghachavare et al., 2016). In Pakistan, these psychological problems are the leading causes of suicide among youngsters (Araa, 2018; Valika & Jalbani, 2004). Further, the high prevalence of depressive and anxiety symptoms among Pakistani adolescents (Alwani et al., 2016; Ahmad & Bano, 2013; Khalid, 2014), the scant baseline research (Irfan, 2011; Ali, Mclachlan, Kanwar, & Randhawa, 2016), and deficiencies of rehabilitation centers (Tareen et al., 2009; World Bank, 2012; WHO Mental Health Atlas, 2014) create more problems and refute the call of the WHO (2014) to take better care of youngsters to create better societies. Therefore, the present study was designed to identify potential predictors of the psychological problems experienced by late adolescents in Pakistan, specifically, Rawalpindi by taking into account two significant factors, such as attachment relationships and negative automatic thoughts.

Two traditional theories, Bowlby's attachment model (1969) and Beck's cognitive framework (1967) were integrated to gain a better understanding on the linkages among the research variables. According to Beck (1967) negative automatic thoughts are biased thinking patterns which are the major risk factors for many psychological problems. In view of this, the Bowlby's attachment theory (1969, 1982) theorized that problems in attachment

relationships such as low trust and communication and high alienation with attachment figure, may lead to maladaptive internal working models which become blueprints for future relationships and interpretations of events. The integration of the attachment and cognitive models emphasize adolescents' psychological problems as a function of the interaction between attachment relationships and negative automatic thoughts. This integration of theories proposes that negative automatic thoughts, which are developed in the context of experiences with significant others particularly parents and peers, increase vulnerability towards psychological problems. A more detailed description of these theories will be given in a later section of this chapter.

On the basis of the Bowlby's attachment theory (1969) and Beck's cognitive model (1967), the study variables encompassed attachment relationships (i.e., maternal, paternal and peer), negative automatic thoughts and psychological problems (depressive and anxiety symptoms). Studying depressive and anxiety symptoms together provide information and clarification on the differences and similarities of the etiology of these psychological problems (Cummings, Caporino, & Kendall, 2013). In examining the etiology of these psychological problems, a large number of earlier studies focused on either maternal, paternal or peer attachment separately in relation to psychological problems (Kosutic et al., 2017; McAndrew, 2017; Rawatlal, Kliwer, & Pillay, 2015). However, the interacting contributions of maternal, paternal and peer attachment are deemed potent in identifying the common and separate etiological factors for depression and anxiety (Bögels & Phares 2008; Van Eijck, et al., 2012; Khalid, 2014; Lee & Hankins, 2009; Jackobsen, & Horwood, 2011; Tambelli et al., 2013). Nonetheless, such processes still remain understudied.

In addition, while some studies are available on the association between negative automatic thoughts and depressive symptoms, studies on the potential mediating role of negative automatic thoughts for both depressive and anxiety symptoms are scarce (Alsaleh, Lebreuilly, Lebreuilly, & Tostain, 2016; Irfan et al., 2019; Kleiman, & Riskind, 2012). Lastly, inconsistencies were observed in past studies on the role of sex as a moderator between attachment relationships, negative automatic thoughts and psychological problems (Nilsen et al., 2013; Groh et al., 2012). Thus, the present research sought to address the abovementioned gaps by studying maternal, paternal and peer attachment as independent variables, depressive and anxiety symptoms as dependent variables, negative automatic thoughts as a potential mediator and sex as a prospective moderator.

1.3 Research Questions

The present study attempted to answer the following research questions:

1. To what extent does adolescent's perception of attachment relationships (maternal, paternal and peer) and negative automatic thoughts influence psychological problems?
2. Does negative automatic thoughts mediate the associations between adolescents' attachment relationships (maternal, paternal and peer) and psychological problems (depressive and anxiety symptoms)?
3. Are the structural relations between adolescent's attachment relationships (maternal, paternal and peer), negative automatic thoughts and psychological problems (depressive and anxiety symptoms) stable across sex?

1.4 Theoretical Background

Based on past literature, Bowlby's attachment theory (1969) and Beck's cognitive theory (1967) were used to formulate the theoretical framework of the present study and to support the hypothesized associations among attachment relationships, negative automatic thoughts and psychological problems.

1.4.1 Bowlby's Attachment Theory

Attachment theory postulates that attachment is a bond between the infant and the primary caregiver, typically the mother (Bowlby, 1988). This bond is not only significant in maintaining general well-being (De Falco, Emer, Martini, Rigo, Pruner, & Venuti, 2014), but it also becomes a reference for all relationships across the life span (Winston, & Chicot, 2016; Young, Simpson, Griskevicius, Huelsnitz, & Fleck, 2017). The two components of attachment include normative and individual differences (see Figure 1). The normative component describes the basic growth of the child through different developmental stages of attachment systems and its association with other systems (Marvin, Britner, & Russell, 2016). In contrast, individual differences make up the developmental sequel of different patterns or styles of attachment and describe why each pattern or style should be "adaptive" in certain environments. Additionally, an internal working model (IWM) is an integral part of these components. It develops during the initial years of life, generally in the third phase of attachment development when information processing is established. The formation of IWM is explained in terms of neural paths, multi-models, developmental aspects, and relationship scripts. The first two (i.e., neural paths and multi-models) are biological perspectives of IWM construction; whereas, later two elucidate the role of attachment

figures (Bretherton & Munholland, 2016). A relationship script is one of the better approaches in explaining IWM, which is a systematized, multi-layered, partly hierarchal network of generalized event representations with different levels of generality (Bretherton & Munholland, 2008). These networks build higher-order general categories through habitual experiences, and relationship-specific scenarios. There are various IWMs for different relationships because, with the passage of time, an individual develops a hierarchy of working models (Howes & Spieker, 2016).



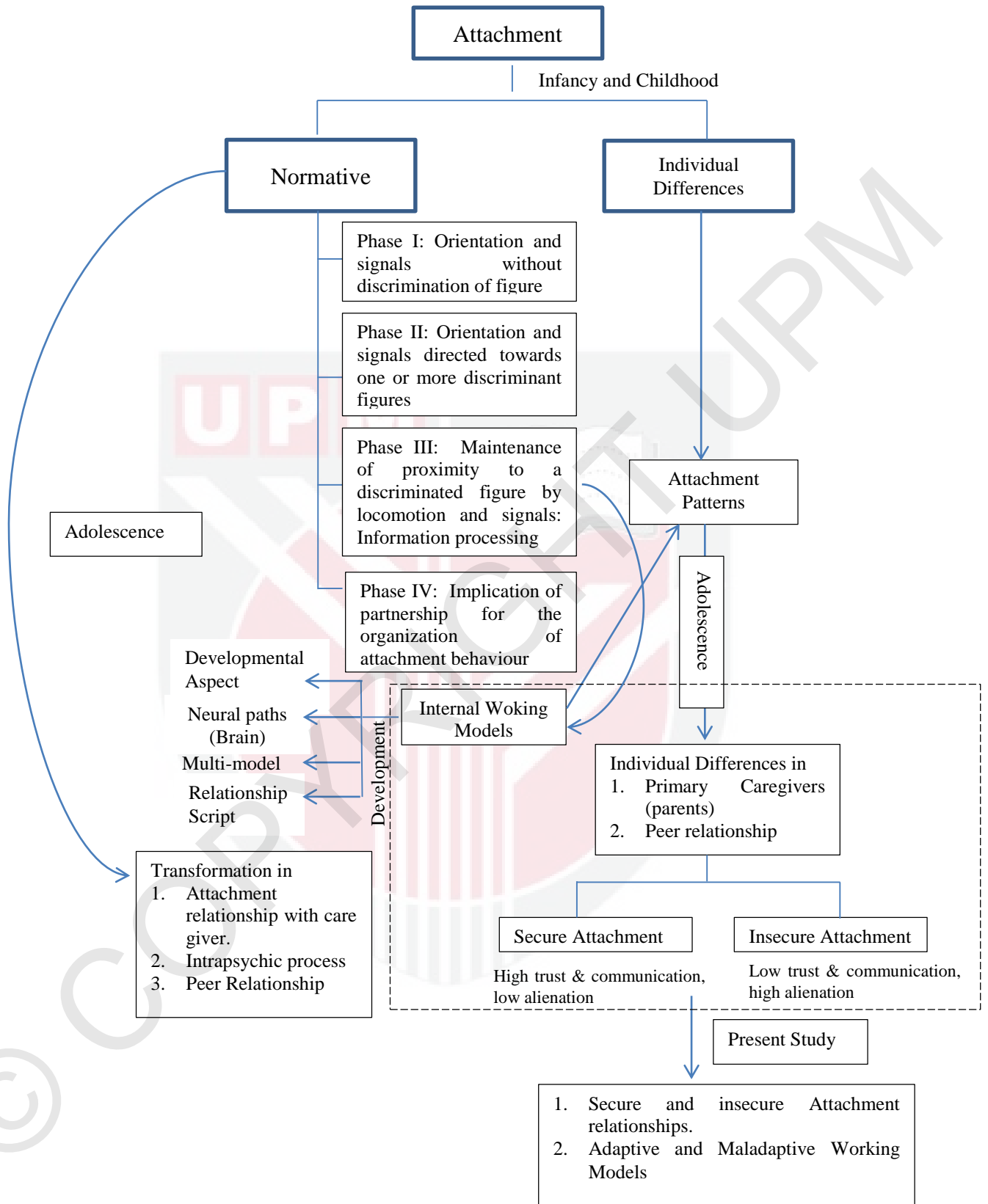


Figure 1 : Attachment Theory
(Source: Cassidy & Shaver, 2016)

During adolescence, attachment shifts to other relationships outside the family and the hierarchy of attachment directs the attachment behavior according to the experience with the principal attachment figure (Lucktong, Salisbury, & Chamrathirong, 2017; Scharfe, Pitman, & Coled, 2017). In adolescence, the transformations in the attachment relationships, specifically that with parents and peer, involve changes in the affective, relational and behavioral elements (Allen & Tan, 2016). Moreover, individual differences in adolescents' attachment relationships arise because of the struggle between their desire to obtain autonomy and processes of attachment systems. Negotiations between autonomy and attachment system are difficult for families where adolescents have unhealthy communication, low level of trust and aggravated feeling of detachment with both or one of the parents (Allen & Tan, 2016). However, if the adolescents are positively attached with their parents then the adaptive IWMs is developed which would facilitate them to develop better relationships with their peers and other adults (Bowlby, 1969). Additionally, attachment with peers and parents remain important during adolescence and the quality of attachment depends upon the nature of the IWMs (Bowlby, 1969; Scharfe et al., 2017).

IWMs are the mental representations of the self and others that develop through early experiences with the primary caregiver, which become the basis for interpretation of events, future relationships and broader representations (Brethertons, 1991). The formation of either adaptive or maladaptive IWMs is based on experiences and communication with attachment relationships. A previous study conducted by Dykas and Cassidy (2011) found that if an individual has a history of secure attachment, he/she may positively process information by attending and tolerating a painful information. Thompson (2010) observed that individuals with secure attachment had positive representations of the self and others, and better social and emotional understanding. On the other hand, Dykas and Cassidy (2011) found that insecurely attached individuals often process information negatively. Similarly, the IWM is activated by attachment-related threats and stressors when the individual faces interpersonal problems, difficulties with emotion and self-regulation or decreased relationship satisfaction (Ainsworth, Blehar, Waters, & Wall, 1978; Bartholomew, 1990; Bowlby, 1969, 1973; Hazan & Shaver, 1987). Additionally, most psychopathology is an outgrowth of negative and maladaptive IWM (Bowlby, 1969, 1982, p.80), which needs to be investigated further. Therefore, in this study, the roles of parent and peer attachment were investigated in relation to the development of psychological problems among adolescents.

1.4.2 Beck's Cognitive Theory

The Beck cognitive theory (1964, 1967) is one of the traditional models used by researchers, students and practitioners to understand the etiological factors of psychological problems, specifically the underlying cognitive determinants. The cognitive approach towards psychological problems and clinical disorders was initially developed on clinical observations of cognitive biases in depression (Beck, 1963). Beck (1964, 1967) assumed that beliefs are assimilated into schemas which play an important role in the development of depression and other disorders. In particular, cognitive styles, schemas, information-processing biases or maladaptive beliefs are vulnerability factors for psychological problems. Cognitive vulnerabilities increase the risk for the onset of symptoms and disorders whenever an individual is passing through stressful life events (Beck, 1967; Hamilton, Stange, Abramson, & Alloy, 2015).

Beck's theory (1967) postulated that the presence of cognitive errors increases the possibility of developing negative cognitive triads consisting of three types of depressive thinking patterns. The first is the negative view of the self, which is the belief that one is inadequate or unworthy. The second is the negative view about the world, in which an individual construes experiences of life as a defeat or disparagement. The third is the negative thinking about the future, such as, the perception that the difficulties will persist in the future and he/she cannot do anything to change it (Beck, 1964, 1967). This theory further elaborates that the development of the negative cognitive triad triggers the onset of depression.

The Beck cognitive theory (1967, 1974) affirms that psychological problems encompassing symptoms of depression and anxiety are accompanied by distortions in thinking, which are manifested as negative automatic thoughts. Such thoughts indicative of depressive symptoms includes negative views about the self, the world and the future. In anxiety, these thoughts reflect themes of danger and underestimation of coping (Beck & Haigh, 2014). Early negative experiences may facilitate the formation of negative beliefs, which may be activated by particular situations relevant to negative beliefs (Beck, 1967; Beck, Rush, Shaw, & Emery, 1979). Most studies examined the impact of negative automatic thoughts on the development of depressive symptoms (Choon et al., 2015; Nishikawa, Matsunaga, & Furutani, 2013; Wang et al., 2016). However, very few investigated the influence of negative beliefs on anxiety symptoms (Hjmedal et al., 2013; Hogendoorn et al., 2012; Răscol, 2014). In this study, the influence of negative automatic thought was explored for both depressive and anxiety symptoms.

1.4.3 Integration of Bowlby's Attachment Theory and Beck's Cognitive Theory

Recent trends recognize that psychological problems stem from early experiences of life and that a multilevel approach is required to understand the etiology of these problems (Cassidy & Shaver, 2016; Spruit, Goos, Weenink, Rodenburg, Niemeyer, Stams, Colonnese, 2019). In this regard, two traditional theories such as Bowlby's attachment theory and Beck's cognitive theory, provides a better explanation about the etiology of depressive and anxiety symptoms. As described earlier, the attachment theory (Bowlby, 1969; Ainsworth et al., 1978) states that insensitive, unsupportive and unreliable caregivers may prompt individuals to view themselves as unworthy and the world as untrustworthy. This may elicit maladaptive internal working models of the self and others that act as cognitive filters (Shaw & Dallos, 2006; Lai & Carr, 2018). These filters then guide the interpretation of current experiences and formulate the ongoing expectations of the self and others (Bowlby, 1982; Lai, & Carr, 2018). Consequently, it can be said that the idea on maladaptive IWMs emphasized by the attachment theory can be explained through Beck's concept of negative automatic thoughts about the self, world and the future (Hwang & Lee, 2012; Pössel, 2017). Past studies (Beck, 1967; Passanisi, Gervasi, Madonia, Guzzo, & Greco, 2015) reported that poor attachment brings about a negative view of the self and others, which may increase vulnerability to depression. Scholars (Borelli, Brugnera, Zarbo, Rabboni, Bondi, Tasca, & Compare, 2018; Van Eijck et al., 2012) found that insecure attachment increases vulnerability towards the development of anxiety symptoms among adolescents.

Only two studies (i.e., Lee & Hakin, 2009; Safford et al., 2004) have been found that described the interplay of insecure attachment and negative thinking patterns in the development of depressive and anxiety symptoms simultaneously. Specifically, Safford et al. (2004) found that negative cognitive style did not mediate the associations of attachment relationships with depressive and anxiety symptoms. While, Lee and Hakin (2009) stated that the dysfunctional attitudes and low self-esteem mediated the associations of attachment styles with depression and anxiety (Lee & Hakin, 2009). The results of above mentioned studies are incongruent to each other, which highlighted a need to explore these relationships further. Nevertheless, a more recent study by Pascuzzo, Moss, and Cyr (2015) have examined link between maternal, paternal and peer attachment, internal working model and psychopathology during adolescence and adulthood. Pascuzzo and colleagues (2015) noted that insecure attachment with significant others develop maladaptive internal working model which become a risk factor in the development of psychological problem among adolescents and emerging adults.

Furthermore, Zimmer-Gembeck et al. (2015) in a recent systematic review suggested that the integration of attachment theory with other stress and coping theories would provide better insight in explaining the link between attachment and emotion regulation-related problems. Up to now, far too little attention has been paid to the integration of theories to explain the link problems between attachment relationships and psychological problems. Only one study (Sander, 2001) has been found which integrated cognitive (Beck, 1979) and attachment theories (Bowlby, 1969) and used the constructs from these two theories. In this study, Sander (2001) examined the relationships between attachment classifications, depressive self-schema content and depressive symptoms. Findings from this study revealed that high level of depressive symptoms were not linked to attachment status and depressive self-schema. Sander (2001) examined the linkages only on adult sample. However, the results can be different in other age groups. Sander (2001) has also suggested investigating these links further to understand the risk factors of psychological problems. Findings from these studies (Lee & Hakin, 2009; Pascuzzo et al., 2015; Safford et al., 2004; Sander, 2001) provide a strong ground to conceptualize a cognitive pathway to depressive and anxiety symptoms by using constructs based on Bowlby's attachment model and Beck's cognitive theory, and a foundation to integrate these two theories for a better understanding of psychological problems.

The current research thus proposed the integration of Bowlby's attachment theory and Beck's cognitive model which posits that attachment relationships shape the internal working models of the self, others and the future. These working models then cause biases in the perceptions of others' actions, influence behavior and establish the pattern of attachment which either reinforces or stabilizes these biases. If adolescents have high trust and healthy communication with their attachment figure, then the positive working model about the self and others is developed. However, if adolescents are emotionally detached from the attachment figure, feels attachment figure as insensitive towards their emotional needs and have negative verbal communication with them, then a negative working model is developed, subsequently strengthening the negative thinking pattern of self and others. This maladaptive internal working model thus, leads to the development of psychological problems among adolescents.

1.5 Conceptual Framework

As noted in the attachment theory, problems in attachment relationships give rise to maladaptive IWMs, which may result in a negatively-biased thinking about the self and others (Bowlby, 1969, 1982). Additionally, Beck's cognitive theory stipulates that negative automatic thoughts increase vulnerability to psychological problems, such as depressive and anxiety symptoms.

In the present study, the integration of Bowlby's attachment theory and Beck's cognitive model postulate that poor attachment with parents and peers facilitates maladaptive IWMs of the self, others and the future, which subsequently foster psychological problems. Following past findings, negative automatic thought was considered as a mediator in the relations between attachment relationships (maternal, paternal and peer) and psychological problems (depressive and anxiety symptoms), whereas sex is the moderator that aimed to examine if the proposed model vary across sex of the respondent. Figure 2 illustrates the structural relations among the study variables as described for the present study. The hypotheses pertaining to each linkages are as outlined in Section 1.8 (p. 11-12).

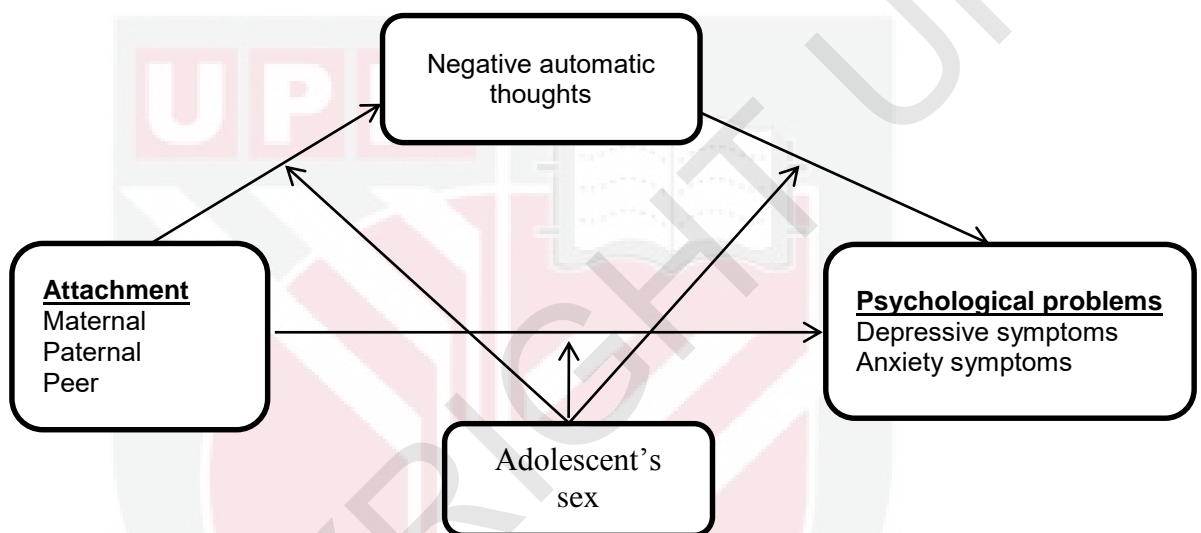


Figure 2 : Conceptual Framework for the Study

1.6 Research Objectives

Based on the conceptual framework, the overall aim of the study was to examine the associations between late adolescents' attachment relationships (maternal, paternal and peer) and psychological problems (depressive and anxiety symptoms). Additionally, the present study examined the potential mediating role of negative automatic thoughts and moderating role of adolescent's sex on these relationships. The specific objectives are as follows:

1. To determine the magnitude of the associations between attachment relationships (maternal, paternal, and peer) and psychological problems (depressive and anxiety symptoms) among late adolescents.

2. To determine the magnitude of the associations between negative automatic thoughts and psychological problems (depressive and anxiety symptoms) among late adolescents.
3. To determine the magnitude of the associations between attachment relationships (maternal, paternal, and peer) and negative automatic thoughts among late adolescents.
4. To determine whether negative automatic thoughts mediate the associations between attachment relationships (maternal, paternal and peer) and psychological problems (depressive and anxiety symptoms) among late adolescents.
5. To determine whether the structural relations between attachment relationships (maternal, paternal and peer), negative automatic thoughts and psychological problems (depressive and anxiety symptoms) are stable across sex.

1.7 Hypothetical Model

As mentioned in the literature review, there is a need to develop a multivariate model to understand the mechanisms that link attachment relationships with the psychological problems of adolescents. Keeping this in view, the hypothetical model for the present study is as illustrated in Figure 3.

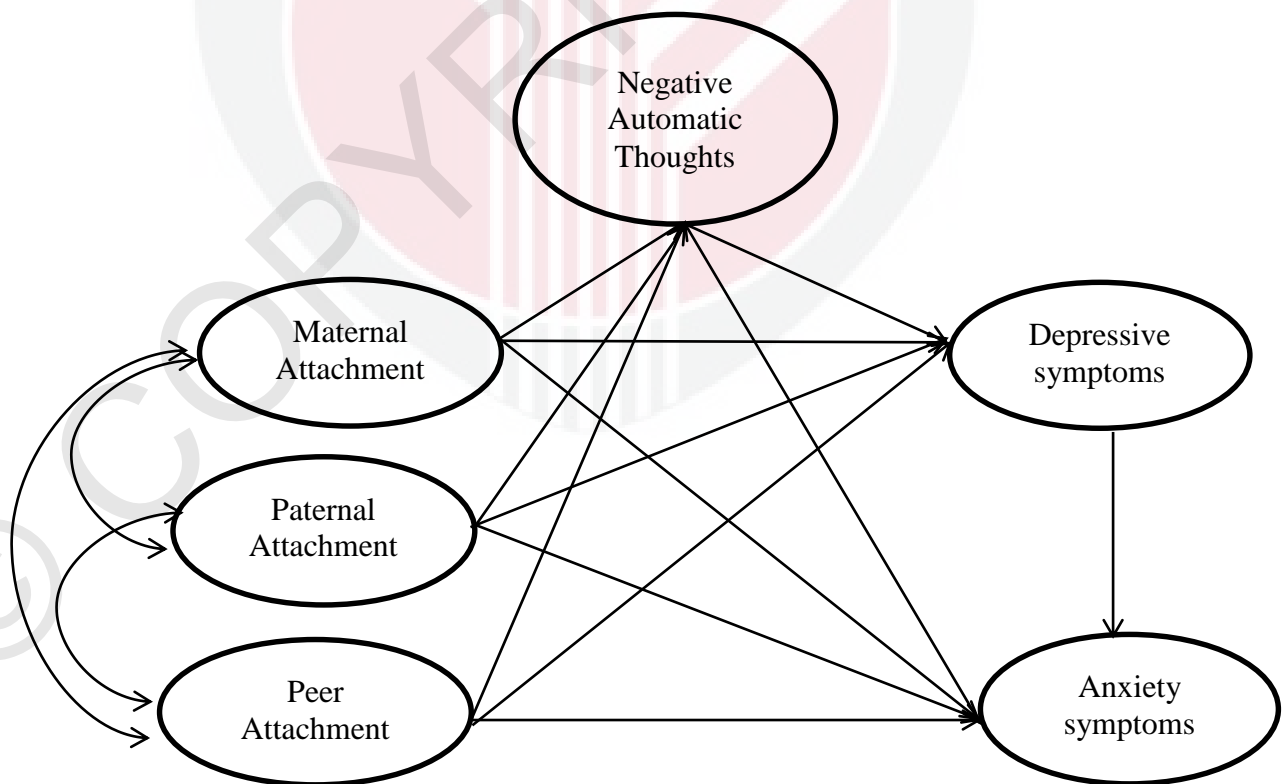


Figure 3 : Hypothetical Model

1.8 Hypotheses

Kline (2015) suggested that the development of hypotheses for the structural equation models should be based either on previously conducted research or theories. Accordingly, the hypotheses of the present study based on research question 1, 2 and 3 are as follows:

Research Question 1

The hypotheses based on the research question one are as follows:

- H1a: Secure maternal attachment will be negatively related to depressive symptoms among late adolescents.
- H1b: Secure maternal attachment will be negatively related to anxiety symptoms among late adolescents
- H1c: Secure paternal attachment will be negatively related to depressive symptoms among late adolescents.
- H1d: Secure paternal attachment will be negatively related to anxiety symptoms among late adolescents.
- H1e: Secure peer attachment will be negatively related to depressive symptoms among late adolescents.
- H1f: Secure peer attachment will be negatively related to anxiety symptoms among late adolescents.
- H1g: Negative automatic thoughts will be positively related to depressive symptoms among late adolescents.
- H1h: Negative automatic thoughts will be positively related to anxiety symptoms among late adolescents.
- H1i: Secure maternal attachment will be negatively related to negative automatic thoughts among late adolescents.
- H1j: Secure paternal attachment will be negatively related to negative automatic thoughts among late adolescents.
- H1k: Secure peer attachment will be negatively related to negative automatic thoughts among late adolescents.

For Research Question 2

The hypotheses corresponding to the second research question are as follows:

- H2a: Negative automatic thoughts will mediate the association between maternal attachment and depressive symptoms among late adolescents.
- H2b: Negative automatic thoughts will mediate the association between maternal attachment and anxiety symptoms among late adolescents.
- H2c: Negative automatic thoughts will mediate the association between paternal attachment and depressive symptoms among late adolescents.
- H2d: Negative automatic thoughts will mediate the association between paternal attachment and anxiety symptoms among late adolescents.
- H2e: Negative automatic thoughts will mediate the association between peer attachment and depressive symptoms among late adolescents.
- H2f: Negative automatic thoughts will mediate the association between peer attachment and anxiety symptoms among late adolescents.

For Research Question 3

The hypothesis based on the third research question is given as:

- H3: The structural relations between attachment relationships (maternal, paternal and peer), negative automatic thoughts and psychological problems (depressive and anxiety symptoms) are stable across sex.

1.9 Significance of the Study

The present study may contribute significantly to knowledge in a number of ways. Firstly, it is an important step in understanding psychological problems among late adolescents of Pakistan and an attempt to generalize past findings in Asian societies. Secondly, it may add to existing literature by examining common and separate etiological factors for depressive and anxiety symptoms with reference to attachment relationships. Thirdly, most prior studies (e.g., Brumariu et al., 2012; Brumariu, Obsuth, & Lyons-Ruth, 2013; Love & Murdok, 2010; Natarajan, 2013; Roelofs et al., 2013; Roelof et al., 2011; Tambelli et al., 2012) applied the attachment theory to study the role of attachment in the development of depressive and anxiety symptoms. Nonetheless, the current research may contribute to extant literature by integrating Bowlby's attachment theory and Beck's cognitive theory to

understand the linkages between attachment relationships and psychological problems. Fourth, most Western studies (e.g., Love & Murdock, 2011; Roelofs et al., 2011; Roelofs et al., 2011; Van Eijck et al., 2012) investigated the relationship of maternal attachment and psychological problems. However, maternal-adolescent relationship is understudied in Pakistan (Khalid, 2014). Furthermore, less attention has been paid on the importance of paternal and peer attachment during late adolescence. The present study thus attempted to fill the gap in literature about the influence of maternal, paternal and peer attachment on the psychological problems of late adolescents in Pakistan.

In addition, this study may add to existing literature by studying the roles of negative automatic thoughts and sex as potential mediator and moderator, respectively, in predicting adolescents' psychological problems. This may provide a foundation and baseline information for future longitudinal studies intending to establish causality among these variables in the Pakistani context. Sixth, it may also provide basic knowledge and guide for the development of training programs for parents on how to handle their children during late adolescence. Lastly, it is helpful in understanding the linkages between attachment relationship, negative automatic thoughts, and psychological problems, which may help policy makers in planning more effective prevention and intervention programs.

1.10 Definition of Terminologies

Some important key terms including the subjects of interest and key variables used in the present study are defined conceptually and operationally in this section.

Late Adolescents

Conceptual: The adolescence stage is often divided into early (10–13 years), middle (14–16 years) and late (17–19 years) adolescence (WHO, 2014).

Operational: Individuals aged 17-19 years old, attending a government college in Pakistan.

Psychological Problems

Conceptual: These are the difficulties and burdens which interfere with adolescent development and adversely affect their quality of emotional, social, and vocational life (Puwar, Yasobant, & Saxena, 2018).

Operational: These are the symptoms of depression and anxiety reported by late adolescents.

Depressive Symptoms

Conceptual: Symptoms of depression include feelings of sadness, loneliness, apathy with negative self-concept, alteration in activity level, regressive and self-punitive wishes (Beck, 1970)

Operational: Respondents' scores on the Depression Anxiety Stress Scale (DASS-Urdu; Zafar, 2014). The scores were rated as normal (00 – 09), mild to moderate depressive (10 – 13), moderate to severe (14 – 20), severe (21-27) or extreme (28 +).

Anxiety Symptoms

Conceptual: Symptoms of anxiety include excessive fear, worry, and physical changes associated with subjective distress and impairment (Clark & Beck, 2010).

Operational: Respondents' scores on the Depression Anxiety and Stress Scale (DASS-Urdu, 2014; Zafar). The scores were rated as normal (0-7), mild (8-9), moderate (10-14), severe (15-19), or extreme (20+).

Negative Automatic Thoughts

Conceptual: These are dysfunctional and irrational beliefs about the self, others and the future (Beck, 1976).

Operational: Respondents' scores on the 30-item automatic negative thought questionnaire (Hashmi, 2012) that measures the frequency of automatic negative statements about the self and the degree of belief of each of the items. Higher scores indicate elevated levels of automatic negative self-statements and greater believability in negative thoughts.

Attachment Relationships

Conceptual: An adolescent's perception of positive (secure) and negative (insecure) affective and cognitive dimensions of his/her relationship with

parents (mother and father) and peers, particularly, how well these figures serve as sources of psychological security (Armsden & Greenberg, 1987).

Operational: Respondents' scores on the IPPA-Urdu (Zafar, 2009) maternal, paternal and peer attachment scales comprising three subscales, namely, trust, communication, and alienation. Higher scores on the maternal, paternal and peer attachment scales of IPPA-Urdu indicate secure attachment while, low scores suggested insecure attachment with these figures.

1.11 Chapter Summary

This chapter initially provided descriptions of the background of the study and statement of the problem. Subsequently, the theoretical background and conceptual framework which guided the study were discussed. Then, the research objectives and hypotheses, along with the definitions of key terms of the study were presented. The next chapter will present the literature review on which the basic structure of the study was built.

1.12 Organization of the Thesis

This thesis comprises six chapters, which are further divided into sections and subsections. The descriptions of the thesis chapters are as follows:

Chapter 1: Introduction- *This chapter provides the background of the study, followed by the statement of the problem. The subsequent section elaborates the theoretical background that directed this study as well as the conceptual model. Then, the ensuing sections focus on the research questions, objectives and hypotheses, significance of the study and the operational definition of the study variables.*

Chapter 2: Literature Review- *This chapter covers a detailed and critical review of past studies concerning the topic of interest. This chapter further explains the impact of extant literature on the present study.*

Chapter 3: Methodology- *This chapter describes the research design, location, details of sample selection, sample size, and sample characteristics. The subsequent sections concisely describe the measures, pilot study, data collection procedure, ethical considerations, and strategies for the data analysis.*

Chapter 4: Results- This section reports the findings of the study based on the research question and objectives, primarily in the form of tables and figures.

Chapter 5: Discussion-In this section, the findings of the study are discussed with reference to previous studies, followed by the theoretical and practical implications of the findings.

Chapter 6: Summary, Conclusion, Limitations, and Recommendations - This chapter encompasses summary of the findings, conclusion, and limitations, followed by the recommendations for further research.



REFERENCES

- Agerup, T., Lydersen, S., Wallander, J., & Sund, A. M. (2015). Associations between parental attachment and course of depression between adolescence and young adulthood. *Child Psychiatry and Human Development*, 46, 632–642, doi 10.1007/s10578-014-0506-y.
- Ahmad, R & Bano, Z. (2013). Morbidity of Social Anxiety in Adolescent Students in Pakistan . Conference paper. *World Academy of Science, Engineering and Technology*, 79. Retrieved from https://www.researchgate.net/publication/292963203_Morbidity_of_Social_Anxiety_in_Adolescent_Students_in_Pakistan.
- Ahmad, Z. R., Yasien, S., & Ahmad, R. (2014). Relationship Between Perceived Social Self-Efficacy and Depression in Adolescents. *Iran Journal of Psychiatry Behavioral Science*, 8(3), 65–74.
- Ainsworth, M. D. S. (1967). *Infancy in Uganda: infant care and the growth of love*. Oxford, England: Johns Hopkins Press.
- Ainsworth, M. S., Blehar, M. C., Waters, E., & Wall, S. (1978). *Patterns of attachment: A psychological study of the Strange Situation*. Hillsdale, NJ: Erlbaum.
- Ainsworth, M. D. S., Bell, S. M., & Stayton, D. (1971). Individual differences in Strange Situation behavior of one-year-olds. In H. R. Schaffer (Ed.), *The origins of human social relations* (pp. 17-57). London: Academic Press.
- Aikinsa, J. W., Howes, C., & Hamilton, C. (2009). Attachment stability and the emergence of unresolved representations during adolescence. *Attachment & Human Development*, 11 (5), 491–512.
- Ali, T. S., Krantz, G., Gul, R., Asad, N., Johansson, E., & Mogren, I. (2011). Gender roles and their influence on life prospects for women in urban Karachi, Pakistan: a qualitative study. *Global Health Action*, 4 (10), doi: 10.3402/gha.v4i0.7448.
- Ali, N., Mclachlan, N. H., Kanwar, S., & Randhawa, G. (2016). Pakistani young people's views on barriers to accessing mental health services. *Journal International Journal of Culture and Mental Health*, 10 (1), doi: 0.1080/17542863.2016.1248456
- Allen, J. P., & Tan, J. S. (2016). The multiple facets of attachment in adolescence (399-415). In J. Cassidy & P. R. Shaver (Eds.), *Handbook of attachment: Theory, research, and clinical applications* (3rd ed., pp. 102–127). New York: Guilford Press.

- Alloy, L.B., Black, S.K., Young, M.E., Goldstein, K.E., Shapero, B.G., Stange, J.P., Boccia, A.S., Matt, L.M., Boland, E.M., Moore, L.C., & Abramson, L.Y. (2012). Cognitive vulnerabilities and depression versus other psychopathology symptoms and diagnoses in early adolescence. *Journal of Clinical Child and Adolescent Psychology, 41*, 539-560.
- Alwani, A., Kanpurwala, M. A., Noori, S., Punjwanl, K., Qasim, M. B., & Qasim, M. B. (2016). Frequency of Depression among School Going Adolescent Girls in Karachi, Pakistan. *Journal for Studies in Management and Planning, 2* (5). Retrieved from <http://edupediapublications.org/journals/index.php/JSMaP/>
- Alsaleh, M., Lebreuilly, R., Lebreuilly, J., & Tostain, M. (2016). Cognitive balance: states-of-mind and mental health among french students. *Best Practice in Mental Health, 11* (1), 42-53. doi:10.1016/j.jtcc.2016.02.002.
- Al-Yagon, M. (2015). Adolescents with Learning Disabilities: Socioemotional and Behavioral Functioning and Attachment Relationships with Fathers, Mothers, and Teachers. *Journal of Youth and Adolescence, 41*, 1294-1311. doi: 10.1007/s10964-012-9767-6.
- Al-Ghorabaie, F. M., Noferesti, A., Fadaee, M., & Ganji, N. (2016). Cognitive Vulnerability in Patients with Generalized Anxiety Disorder, Dysthymic Disorder and Normal Individuals. *Global Journal of Health Science, 8*(8), 49171. doi: 10.5539/gjhs.v8n8p8.
- Ames, M. E., Rawana, J. S., Gentile, P., & Morgan, A. S. (2015). The protective role of optimism and self-esteem on depressive symptom pathways among Canadian Aboriginal youth. *Journal of Youth and Adolescence, 44*(1), 142-54. doi: 10.1007/s10964-013-0016-4.
- Anniko, M. (2018). Struck on repeat: Adolescent stress and the role of repetitive negative thinking and cognitive avoidance. *Orebro Studies in Psychology 41*. Retrieved from <http://oru.diva-portal.org/smash/get/diva2:1203640/FULLTEXT01.pdf>
- Aslani, K., Derikvandi, N., & Dehghani, Y (2015). Relationship between parenting styles, religiosity, and emotional intelligence with addiction potential in high schools students. *Journal of Fundamentals of Mental Health, 17*(2), 74-80. <http://jfmh.mums.ac.ir>.
- Armsden, G. C., & Greenberg, M. T. (1987). The inventory of parent and peer attachment: Individual differences and their relationship to psychological well-being in adolescence. *Journal of Youth and Adolescence, 16* (5), 427-454. doi: 10.1007/BF02202939.

- Araa, A. (2018). Suicidal ideation and self-harm among young adults, and its association with mental health. *Journal of Pioneering Medical Sciences*. Retrieved from <http://blogs.jpmsonline.com/2018/03/23/suicidal-ideation-and-self-harm-among-young-adults-and-its-association-with-mental-health/>
- Auerbach, R. P., Alonso, J., Axinn, W. G., Cuijpers, P., Ebert, D. D., Green, J. G., Hwang, I.,.....Bruffaerts, R. (2016). Mental disorders among college students in the World Health Organization World Mental Health Surveys. *Psychological Medicine*, 46(14), 2955-2970. doi:10.1017/S0033291716001665.
- Baig, N., Rehman, R. R., & Mobeen, N. (2014). A Parent-Teacher View of Teens Behaviors in Nuclear and Joint Family Systems in Pakistan. *The Qualitative Report*, 19(34), 1-12. Retrieved from <https://nsuworks.nova.edu/tqr/vol19/iss34/1>
- Balsamo, M., Carlucci, L., Sergi, M. R., Murdock, K. K., & Saggino, A. (2015). The mediating role of early maladaptive schemas in the relation between co-rumination and depression in young adults, *PLoS One*. 10(10). doi: 10.1371/journal.pone.0140177
- Bandalos, D. L. (2002). The Effects of Item Parceling on Goodness-of-Fit and Parameter Estimate Bias in Structural Equation Modeling, *Structural Equation Modeling, A Multidisciplinary Journal*, 9 (1), 78-102. http://dx.doi.org/10.1207/S15328007SEM0901_5
- Baron, P., & Perron, L. M. (1986). Sex differences in the Beck Depression inventory scores of adolescents. *Journal of Youth and Adolescence*, 15 (2), 165–171.
- 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 (6), 1173-1182. <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.169.4836&rep=rep1&type=pdf>
- Bartholomew, K. (1990). Avoidance of intimacy: An attachment perspective. *Journal of Social and Personal Relationships*, 7, 147-178. Retrieved from <http://spr.sagepub.com/content/7/2/147.full.pdf+html>.
- Baxter, A. J., Vos, T., Scott, K. M., Ferrari, A. J., & Whiteford, H. A. (2014). The global burden of anxiety disorders in 2010. *Psychological Medicine*, 44(11), 2363-74. doi: 10.1017/S0033291713003243.

- Bayrak, R., Güler, M., & Şahinc, N. H. (2018). The mediating role of self-concept and coping strategies on the relationship between attachment styles and perceived stress. *European Journal of Psychology*, 14(4), 897–913. doi: 10.5964/ejop.v14i4.1508
- Beck, A. T. (1963). Thinking and depression: I. Idiosyncratic content and cognitive distortions. *Archives of General Psychiatry*, 9(4), 324-333. <http://dx.doi.org/10.1001/archpsyc.1963.01720160014002>
- Beck, A. T. (1964). Thinking and depression: II. theory and therapy. *Archives of General Psychiatry*, 10(6), 561-571. <http://dx.doi.org/10.1001/archpsyc.1964.01720240015003>
- Beck, A. T. (1967). *Depression: Clinical experimental and theoretical aspects*. New York: Harper & Row.
- Beck, A. T. (1974). Ideational Components of Anxiety Neurosis. *Archives of General Psychiatry*, 31(3), 319. doi:10.1001/archpsyc.1974.01760150035.
- Beck, A. T., Rush, A. J., Shaw, B. F., & Emery, G. (1979). *Cognitive Therapy of Depression*. New York: The Guilford Press.
- Beck, A. T., Emery, G. & Greenberg, R. L. (1985). *Anxiety disorders and phobias: A cognitive perspective*. New York: Basic Books.
- Beck, A. T. (1987). Cognitive models of depression. *Journal of Cognitive Psychotherapy*, 1(1), 5-37.
- Beck, A. T. & Haigh, E. A. P. (2014). Advances in Cognitive theory and therapy: generic cognitive model. *Annual Review of Clinical Psychology*, 10, 1-24. doi: 10.1146/annurev-clinpsy-03813-153734.
- Beesdo, K., Knappe, S., & Pine, D.S. (2009). Anxiety and anxiety disorders in children and adolescents: developmental issues and implications for DSM-V. *Psychiatry of Clinical North America*, 32(3), 483–524. doi: 10.1016/j.psc.2009.06.002.
- Beesdo-Baum, K., & Knappe, S. (2012). Developmental epidemiology of anxiety disorders. *Child and Adolescent Psychiatric Clinics of North America*, 21(3), 457-78. doi: 10.1016/j.chc.2012.05.001.
- Berg, N., Kiviruusu, O., Karvonen, S., Rahkonen, O., & Huurre, T. (2017). Pathways from problems in adolescent family relationships to midlife mental health via early adulthood disadvantages – a 26-year longitudinal study. *PLOS One*, <https://doi.org/10.1371/journal.pone.0178136>

- Bhatia, M. S. & Goyal, A. (2018). Anxiety disorders in children and adolescents: Need for early detection. *Journal of Postgraduate Medicine*, 64(2), 75–76. doi: 10.4103/jpgm.JPGM_65_18.
- Birkeland, M. S., Breivik, K., & Wold, B. (2014). Peer Acceptance Protects Global Self-esteem from Negative Effects of Low Closeness to Parents During Adolescence and Early Adulthood. *Journal of Youth and Adolescence*, 43 (1), 70–80. <https://doi.org/10.1007/s10964-013-9929-1>
- Biro, S., Alink, L. R.A., Huffmeijer, R., Bakermans-Kranenburg, M. J., & Van IJzendoorn, M. H. (2017). Attachment quality is related to the synchrony of mother and infant monitoring patterns. *Journal of Attachment & Human Development* 19 (3). 3243-258 <https://doi.org/10.1080/14616734.2017.1302487>
- Blomgren, A. S., Svahn, K., Aström, E., & Rönnlund, M. (2016). Coping Strategies in Late Adolescence: Relationships to Parental Attachment and Time Perspective. *Journal of Genetic Psychology*, 177(3), 85-96. doi: 10.1080/00221325.2016.1178101.
- Bögels, S., & Phares, V. (2008). Fathers' role in the etiology, prevention and treatment of child anxiety: a review and new model. *Clinical Psychology Review*, 28(4), 539-58. Retrieved from <https://www.ncbi.nlm.nih.gov/pubmed/17854963>.
- Bor, W., Dean, A. J., Najman, J., & Hayatbakhsh, R. (2014). Are child and adolescent mental health problems increasing in the 21st century? A systematic review. *Australian & New Zealand Journal of Psychiatry*, 48(7), 606-616. <https://doi.org/10.1177/0004867414533834>.
- Bowlby, J. (1980). *Attachment and loss: Vol. 3. Loss*. NY: Basic Books. Retrieved from <http://www.abebe.org.br/wp-content/uploads/John-Bowlby-Loss-Sadness-And-Depression-Attachment-and-Loss-1982.pdf>.
- Bowlby, J. (1969). *Attachment and loss: Vol. 1. Loss sadness and depression*. NY: Basic Books.
- Bowlby, J. (1982). *Attachment and loss: Vol. 1. Attachment*. New York: Basic Books. (Original work published 1969).
- Branstetter, S. A., Furman, W., & Cottrell, L. (2009). The Influence of Representations of Attachment, Maternal-Adolescent Relationship Quality, and Maternal Monitoring on Adolescent Substance Use: A Two-Year Longitudinal Examination. *Child Development*, 80(5), 1448–1462. doi: 10.1111/j.1467-8624.2009.01344.x

- Beard, C., Millner, A. J., Forgeard, M. J., Fried, E. I., Hsu, K. J., Treadway, M. T., & Björgvinsson, T. (2016). Network analysis of depression and anxiety symptom relationships in a psychiatric sample. *Psychological Medicine*, 46(16), 3359-3369. doi: 10.1017/S0033291716002300
- Borelli, J. L., Brugnera, A., Zarbo, C., Rabboni, M., Bondi, E., Tasca, G. A., & Compare, A. (2018). Attachment comes of age: adolescents' narrative coherence and reflective functioning predict well-being in emerging adulthood. *Attachment & Human Development*, 1–20. doi:10.1080/14616734.2018.1479870
- Brenning, K., Bosmans, G., Braet, C., and Theuwis, L., (2012). Gender Differences in Cognitive Schema Vulnerability and Depressive Symptoms in Adolescents. *Behaviour Change*, 29 (3), 164-182.
- Bretherton, I. (1991). *Pouring new wine into old bottles: The social self as internal working model*. In M. R. Gunnar & L. A. Sroufe (Eds.), *The Minnesota symposia on child psychology*, Vol. 23. Self-processes and development (pp. 1-41). Hillsdale, NJ, US: Lawrence Erlbaum Associates, Inc.
- Bretherton, I., & Munholland, K. A. (2016). The internal Working model construct in light of contemporary neuroimaging research. In J. Cassidy & P. R. Shaver (2016). *Handbook of attachment: Theory, research and clinical applications*. (63-88). New York: Guilford.
- Bretherton, K., & Munholland, K. A. (2008). Internal working models in attachment relationships: Elaborating a central construct in attachment theory. In J. Cassidy & P. R. Shaver (Eds.), *Handbook of attachment: Theory, research, and clinical applications* (2nd ed., pp. 102–127). New York: Guilford Press.
- Briggsa, A., Clark, T., Wolstenholme, J., & Clarke, P. (2003). Missing.... presumed at random: cost-analysis of incomplete data. *Health Economics*, 12, 377–392. DOI:10.1002/hec.766
- Bronsard, G. , Alessandrini, M. , Fond, G. , Loundou, A. , Auquier, P. , Tordjman, S. , Boyer, L. & Manchia., M. (2016). The prevalence of mental disorders among children and adolescents in the child welfare system. *Medicine*, 95(7), e2622. doi: 10.1097/MD.0000000000002622.
- Brown, T. A. (2006). *Confirmatory factor analysis for applied research*. New York: The Guilford Press.
- Browne, M. W., & Cudeck, R. (1992). Alternative Ways of Assessing Model Fit. *Sociological Methods and Research*, 21 (2), 230-258. <https://doi.org/10.1177/0049124192021002005>

- Brown, H. M., Waszczuk, M. A., Zavos, H. M. S., Trzaskowski, M., Gregory, A. M., & Eley, T. C. (2014). Cognitive content specificity in anxiety and depressive disorder symptoms: a twin study of cross-sectional associations with anxiety sensitivity dimensions across development. *Psychological Medicine*, 1-12, doi:10.1017/S0033291714000828.
- Brumariu, L. E., & Kerns, K. A. (2010). Parent-child attachment and internalizing symptoms in childhood and adolescence: a review of empirical findings and future directions. *Development and Psychopathology*, 22(1), 177-203. doi: 10.1017/S0954579409990344.
- Brumariu, L.E., Kerns, K. A., & Seibert, A. (2012). Mother-Child attachment, emotion regulation, and anxiety symptoms in middle childhood. *Personal Relationships*, 19, 569-585. doi: 10.1111/j.1475-6811.2011.01379.x.
- Brumariu, L. E., Obsuth, I., & Lyons-Ruth, K. (2013). Quality of attachment relationships and peer relationship dysfunction among late adolescents with and without anxiety disorders. *Journal of Anxiety Disorders*, 27(1), 116-24. doi: 10.1016/j.janxdis.2012.09.002.
- Bryne, B.M. (2010). *Structural Equation Modeling with AMOS: Basic concepts, application and programing*. London: Lawrence Erlbaum Associates.
- Bystritsky, A., Khalsa, S. S., Cameron, M. E., & Schiffman, J. (2013). Current diagnosis and treatment of anxiety disorders. *Pharmacy and Therapeutics*. 38(1), 30-38, 41-44, 57. Retrieved from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3628173/>
- Caes, L., Fisher, E., Clinch, J., Tobias, J. H., & Eccleston, C. (2014). The role of pain-related anxiety in adolescents' disability and social impairment: ALSPAC data. *European Journal of Pain*. <https://doi.org/10.1002/ejp.611>
- Cassidy, J., Jones, J. D., & Shaver, P. R. (2013). Contributions of attachment theory and research: A framework for future research, translation, and policy. *Developmental Psychopathology*, 25(402), 1415–1434. doi: 10.1017/S0954579413000692.
- Clark, D. A., & Beck, A. T. (2010). *Cognitive Therapy of Anxiety Disorder: Science and Practice*. New York: Guilford press.
- Clark-Carter, D. (2010). *Quantitative Psychological Research: The Complete Student's Companion. Sampling & population* (3rd Edition). New York: Psychological Press.

- Clark, L. A., Cuthbert, B., Lewis-Fernández, R., Narrow, W. E., & Reed, G. M. (2017). Three Approaches to Understanding and Classifying Mental Disorder: ICD-11, DSM-5, and the National Institute of Mental Health's Research Domain Criteria (RDoC). *Psychological Science in the Public Interest*, 18(2), 72–145. doi:10.1177/1529100617727266.
- Cheema, J. R. (2014). Some general guidelines for choosing missing data handling methods in educational research. *Journal of Modern Applied Statistical Methods*, 13(2), 53-75.
- Chen, L., Wang, L., Qiu X. H., Yang, X. X., Qiao, Z. X., et al. (2013) Correction: Depression among Chinese University Students: Prevalence and Socio-Demographic Correlates. *PLOS ONE*, 8(11), doi: 10.1371/annotation/e6648eb3-37d6-44d7-8052-979af14fa921.
- Choon, M. W., Talib, M. A., Yaacob, S. N., Awang, H., Tan, J. P., Hassan, S., & Ismail, Z (2014). *Child and Adolescent Mental Health*, 20 (2), 89–93. doi: 10.1111/camh.12075.
- Comrey, A. L., & Lee, H. B. (1992). *A first course in factor analysis (2nd ed.)*. Hillsdale, NJ, US: Lawrence Erlbaum Associates, Inc.
- Costello, E. J., Egger, H., Angold, A. (2005). 10-year research update review: the epidemiology of child and adolescent psychiatric disorders: I. Methods and public health burden. *Journal of American Academy for Child and Adolescence*, 44, 972–86
- Crawford. T. N., Shaver, P. R., & Goldsmith, H. H. (2007) How affect regulation moderates the association between anxious attachment and neuroticism, *Attachment & Human Development*, 9 (2), 95-109, doi: 10.1080/14616730701349747.
- Creswell, J. W. (2013). *Research Designs*. (4th Ed). United States of America: Sage Publications.
- Curtis, A., C. (2015). Defining adolescence. *Journal of Adolescent and Family Health*, 7 (2), doi: <http://scholar.utc.edu/jafh/vol7/iss2/2>.
- Cummings, C. M., Caporino, N. E., & Kendall, P. C. (2013). Comorbidity of Anxiety and Depression in Children and Adolescents: 20 Years After. *Psychological Bulletin*, 140(3), 816–845. doi: 10.1037/a0034733.
- Curzik, D., & Salkicevic, S. (2016). Perceived parent and peer alienation and its relations to anxiety sensitivity, pathological worry, and generalised anxiety disorder symptoms. *Australian Psychologist*, 51, 223–230. doi:10.1111/ap.12183.

- De Falco, S. Emer, A., Martini, L., Rigo, P., Pruner, S., & Venuti, P. (2014). Predictors of mother–child interaction quality and child attachment security in at-risk families. *Frontier Psychology*, 5, 898. doi: 10.3389/fpsyg.2014.00898
- DeKlyen, M., & Greenberg, M. T. (2016). Attachment and psychopathology in childhood. In J. Cassidy & P. R. Shaver (Eds.), *Handbook of attachment: Theory, research, and clinical applications* (3rd ed., pp. 639-665). New York: Guilford Press.
- Dhillon, R., & Kanwar, P. (2015). Relationship of perceived parental attachment with internalizing problems among adolescents. *Indian Journal of Health and Wellbeing*, 6(2), 171-173. Retrieved from http://www.iahrw.com/index.php/home/journal_detail/19#list
- Dong, Y., & Peng, C. J. (2013). Principled missing data methods for researchers. *Springerplus*, 2, 222. <https://doi.org/10.1186/2193-1801-2-222>.
- Droogenbroeck, F. V., Spruyt, B., & Keppens, G. (2018). Gender differences in mental health problems among adolescents and the role of social support: results from the Belgian health interview surveys 2008 and 2013. *BMC Psychiatry*. 18 (6).doi: 10.1186/s12888-018-1591-4.
- Duchesne, S., & Ratelle, C.F. (2013). Attachment security to mothers and fathers and the developmental trajectories of depressive symptoms in adolescence: which parent for which trajectory?. *Journal of Youth and Adolescence*, 43 (4), 641-654. Retrieved from <http://link.springer.com/article/10.1007/s10964-013-0029-z>.
- Dykas, M. J., & Cassidy, J. (2011). Attachment and the processing of social information across the life span: theory and evidence. *Psychological Bulletin*, 137(1), 19-46. doi: 10.1037/a0021367.
- Dykas, M. J., Woodhouse, S. S., Ehrlich, K. B., & Cassidy, J. (2009). Do adolescents and parents reconstruct memories about their conflict as a function of adolescent attachment? *Child Development*, 81(5), 1445-59. doi: 10.1111/j.1467-8624.2010.01484.x.
- Durlak, J.A. (2009). How to select, calculate, and interpret effect sizes. *Journal of Pediatric Psychology*, 34(9), 917-28. doi: 10.1093/jpepsy/jsp004.
- Ebrahimi, M., Kharbou, A., Ahadi, H., & Hatami, H. (2015). The comparison of emotional self-regulation of students in different parenting styles. *Indian Journal of Fundamental and Applied Life Sciences*, 5(S2), 1146-1152. Retrieved from www.cibtech.org/sp.ed/jls/2015/02/jls.htm

- Essau, C. A., Lewinsohn, P. M., Seeley, J. R., & Sasagawa, S. (2010). Gender differences in the developmental course of depression. *Journal of Affective Disorders*, *127*, 185–190.
- Farrokhyar, F., Reddy, D., Poolman, R. W., & Bhandari, M. (2013). Why perform a priori sample size calculation? *Canadian Journal of Surgery*, *56*(3), 207-13. doi: 10.1503/cjs.018012.
- Finger, B., Hans, S. L., Bernstein, V. J., & Cox, S. M. (2009). Parent relationship quality and infant–mother attachment. *Journal of Attachment & Human Development*, *11* (3), 285-306. <https://doi.org/10.1080/14616730902814960>.
- Flouri, E., & Panourgia, C. (2012). Negative automatic thoughts and emotional and behavioural problems in adolescence. *Child and Adolescent Mental Health*, *19* (1), 46–51. doi:10.1111/camh.12004
- Fornell, C. and D.F. Larcker (1981). Evaluating Structural Equation Models with Unobservable Variables and Measurement Error. *Journal of Marketing Research*, *18*(1), 41-54.
- Fortuin, J., van Geel, M., Zibera, A., & Vedder, P. (2014). Ethnic preferences in friendships and casual contacts between majority and minority children in the Netherlands. *International Journal of Intercultural Relations*, *41*, 57-65. <http://dx.doi.org/10.1016/j.ijintrel.2014.05.005>
- Forgeard, M. J., Haigh, E. A., Beck, A. T., Davidson, R. J., Henn, F. A., et al. (2011). Beyond depression: toward a process-based approach to research, diagnosis, and treatment. *Clinical Psychology*, *18*, 275-99. DOI: 10.1111/j.1468-2850.2011.01259.x
- Frone, M. R. (1999). Work stress and alcohol use. *Alcohol Research & Health*, *23*, 284-291.
- Furlong, M., & Oei, T.P. S. (2002). Changes to automatic thoughts and dysfunctional attitudes in group CBT for depression. *Behavioural and Cognitive Psychotherapy*, *30* (3), 351-360. <https://doi.org/10.1017/S1352465802003107>
- Gallarín, M., & Alonso-Arbiol, I. (2013). Dimensionality of the Inventory of Parent and Peer Attachment: Evaluation with the Spanish Version. *The Spanish Journal of Psychology*, *16*. doi:10.1017/sjp.2013.47
- Garber, J. & Weersing, R V. (2011). Comorbidity of Anxiety and Depression in Youth: Implications for Treatment and Prevention. *Clinical Psychology*, *17*(4), 293–306. doi: 10.1111/j.1468-2850.2010.01221.x

- Gaskin, J. (2012a). Data screening. Gaskination's StatWiki. Retrieved March 30, 2015, from <http://statwiki.kolobkreations.com>
- Gorrese, A., & Ruggieri, R. (2012). Peer Attachment: A meta-analytic review of gender and age differences and associations with parent attachment. *Journal of Youth and Adolescence*, 41, 650–672. doi: 10.1007/s10964-012-9759-6.
- Gorrese, A. (2015). Peer Attachment and Youth Internalizing Problems: A Meta-Analysis. *Child Youth Care Forum*. doi: 10.1007/s10566-015-9333-y
- Groh, A.M., Roisman, G.I., van Ijzendoorn, M.H., Bakermans-Kranenburg, M.J., Fearon, R.R. (2012). The significance of insecure and disorganized attachment for children's internalize symptoms: a meta-analytic study. *Child Development*, 83 (2), 591-610. doi: 10.1111/j.1467-8624.2011.01711.x.
- Grossmann K. E., Grossmann K. E., Kindler H., Zimmermann P. (2008). "A wider view of attachment and exploration: the influence of mothers and fathers on the development of psychological security from infancy to young adulthood," in *Handbook of Attachment Theory, Research and Clinical Applications.*, eds Cassidy J., Shaver P., editors. (New York, NY: Guilford Press), 857–879.
- Guarnieri, S., Ponti, L., & Tani, F. (2010). The Inventory of Parent and Peer Attachment (IPPA): A study of the validity of styles of adolescent attachment to Parents and peers in an Italian Sample. *TPM*, 17 (3), 103-130.
- Gustavson, K., Knudsen, A. K., Nesvåg, R., Knudsen, G. P., Vollset, S. E., & Reichborn-Kjennerud, T. (2018). Prevalence and stability of mental disorders among young adults: findings from a longitudinal study. *BMC Psychiatry*, 18 (65). <https://doi.org/10.1186/s12888-018-1647-5>
- Hair, J.F., Anderson, R.E., Tatham, R.L. & Black W.C. (2010). *Multivariate Data Analysis: A Global Perspective (7th Edition)*. Upper Saddle River, New Jersey: Pearson Prentice Hall.
- Hair JF, Sarstedt M, Ringle CM, et al. (2018) *Advanced Issues in Partial Least Squares Structural Equation Modeling (PLS-SEM)*, Thousand Oaks, CA: Sage.
- Hall, R. J., Snell, A. F., & Foust, M. S. (1999). Item Parceling Strategies in SEM: Investigating the Subtle Effects of Unmodeled Secondary Constructs. *Organizational Research Methods*, 2 (3), 233-256. <https://doi.org/10.1177/109442819923002>

- Haller, S. P. W., Kadosh, K. C., Scerif, G., & Lauab, J. Y. F. (2015). Social anxiety disorder in adolescence: How developmental cognitive neuroscience findings may shape understanding and interventions for psychopathology. *Developmental Cognitive Neuroscience*, 13, 11-20 <https://doi.org/10.1016/j.dcn.2015.02.002>
- Hankin, B., Young, J., Abela, J., Smolen, A., Jenness, J., Gulley, L., Technow, J., Gottlieb, A. B., Cohen, J., & Oppenheimer, C. (2015). Depression from childhood into late adolescence: Influence of gender, development, genetic susceptibility, and peer stress. *Journal of Abnormal Psychology*, 124(4), 803–816. doi: 10.1037/abn0000089.
- Hamilton, J. L., Stange, J. P., Abramson, L. Y., & Alloy, L. B. (2015). Stress and the development of cognitive vulnerabilities to depression explain sex differences in depressive symptoms during adolescence. *Clinical Psychological Science*, 3(5), 702–714. doi: 10.1177/2167702614545479
- Hammen, C. L., & Padesky, C. A. (1977). Sex differences in the expression of depressive responses on the Beck Depression Inventory. *Journal of Abnormal Psychology*, 86(6), 609-614. <http://dx.doi.org/10.1037/0021-843X.86.6.609>.
- Haqqani, S. (2017). *Deliberate Self-Harm and Attachment: Mediating and Moderating Roles of Depression, Anxiety, Social Support and Interpersonal Problems among Pakistani School Going Adolescents* (Doctoral Dissertation). Retrieved from <https://www.era.lib.ed.ac.uk/bitstream/handle/1842/25818/Haqqani2017.pdf?sequence=3&isAllowed=y>
- Hashmi, H. A. (2012). *Translation, validation, adaptation of automatic thoughts questionnaire to assess the relations of negative thoughts with depression*. United States of America, Middletown DE: Amazon.
- Hayes, A. F. (2009). Beyond Baron and Kenny: Statistical Mediation Analysis in the New Millennium. *Journal Communication Monographs*, 76(4), 408-420. <https://doi.org/10.1080/03637750903310360>
- Hayes, A. F. (2013). *Methodology in the social sciences. Introduction to mediation, moderation, and conditional process analysis: A regression-based approach*. New York, NY, US: Guilford Press.
- Hayes, A. F. (2015). An Index and Test of Linear Moderated Mediation. *Journal Multivariate Behavioral Research*, 50 (1), 1-22. <https://doi.org/10.1080/00273171.2014.962683>
- Hazan, C., & Shaver, P. (1987). Romantic love conceptualized as an attachment process. *Journal of Personality and Social Psychology*, 52(3), 511-524. <http://dx.doi.org/10.1037/0022-3514.52.3.511>

- Heinze, J.E., Cook, S. H., Wood, E. P., Dumadag, A. C., & Zimmerman, M. A. (2018). Friendship Attachment Style Moderates the Effect of Adolescent Exposure to Violence on Emerging Adult Depression and Anxiety Trajectories. *Journal of Youth and Adolescence*, 47 (1), 177–193 <https://doi.org/10.1007/s10964-017-0729-x>.
- Hjmedal, O., Stiles, t., & Wells, A. (2013). Cognition and Neurosciences Automatic thoughts and meta-cognition as predictors of depressive or anxious symptoms: A prospective study of two trajectories. *Scandinavian Journal of Psychology*, 54, 59–65 DOI: 10.1111/sjop.12010.
- Ho., S, M.Y., Dai, D. W. T., Mak, C., & Liu, K. W. K. (2018). Cognitive factors associated with depression and anxiety in adolescents: A two-year longitudinal study. *International Journal of Clinical and Health Psychology*, 18 (3), 227-234. <https://doi.org/10.1016/j.ijchp.2018.04.001>.
- Hogendoorn, S. M., Prins, P. J., Vervoort, L., Wolters, L. H., Nauta, M. H., Hartman, C. A., Moorlag, H., de Haan, E., & Boer, F. (2012). Positive thinking in anxiety disordered children reconsidered. *Journal of Anxiety Disorder*, 26(1), 71-8. doi: 10.1016/j.janxdis.2011.09.003.
- Hollon, S. D., & Kendall, P. C. (1980). Cognitive self-statements in depression: Development of an automatic thoughts questionnaire. *Cognitive Therapy and Research*, 4 (4), 383–395.
- Holt, L., Mattanah, J., & Long, M. (2018). Change in parental and peer relationship quality during emerging adulthood Implications for academic, social, and emotional functioning. *Journal of Social and Personal Relationship*, 5 (5), 743-769. <https://doi.org/10.1177/0265407517697856>
- Hong, R. Y., & Cheung, M. W. L. (2014). The structure of cognitive vulnerabilities to depression and anxiety: Evidence for a common core etiologic process based on a meta-analytic review. *Clinical Psychological Science*, 3 (6), 892-912. <https://doi.org/10.1177/2167702614553789>
- Howes, C., & Spieke, S. (2016). Attachment relationships in the context of multiple caregivers (314-329). In J. Cassidy & P. R. Shaver (Eds.), *Handbook of attachment: Theory, research, and clinical applications* (2nd ed., pp. 102–127). New York: Guilford Press.
- Hoyt, L.T., Chase-Lansdale, P. L., McDade, T. W., & Adam, E. K. (2012). Positive Youth, Healthy Adults: Does Positive Well-being in Adolescence Predict Better Perceived Health and Fewer Risky Health Behaviors in Young Adulthood? *Journal of Adolescent Health*, 50, 66 –73. doi:10.1016/j.jadohealth.2011.05.002

- Hsiao, C., Koren-Karie, N., Bailey, H., & Moran, G. (2015). It takes two to talk: Longitudinal associations among infant–mother attachment, maternal attachment representations, and mother–child emotion dialogues. *Journal Attachment & Human Development*, 17 (1), 43-64 <https://doi.org/10.1080/14616734.2014.981671>
- Hwang, Y. D., & Lee, J.Y. (2012). The Mediating Effects of Negative Automatic Thoughts on the Relationships between Father's Communication Style and Children's Happiness. *Korean Journal of Child Studies*, 33 (1), 223-236. doi : 10.5723/KJCS.2012.33.1.223.
- Ibrahim, R. (2011). Demystifying the arduous doctoral journey: The eagle vision of a research proposal. *The Electronic Journal of Business Research Methods*, 9(2), 130-140. Retrieved from <http://www.ejbrm.com/issue/download.html?idArticle=262>.
- Ibrahim, N., Shiratuddin, M. F., & Wong, K. W. (2015). Instruments for Measuring the Influence of Visual Persuasion: Validity and Reliability Tests. *European Journal of Social Sciences Education and Research*, 4(1), Retrieved from http://journals.euser.org/files/articles/ejser_may_aug_15/Nurulhuda.pdf
- Imtiaz, S., & Naqvi, I. (2012). Parental Attachment and Identity Styles among Adolescents: Moderating Role of Gender. *Pakistan Journal of Psychological Research*, 27 (2), 241-264. Retrieved from <http://pjprnip.edu.pk/pjpr/index.php/pjpr/article/viewFile/197/167>
- Iancu, I., Bodner, E., Joubran, S., Lupinsky, Y., & Barenboim, D. (2015). Negative and Positive Automatic thoughts in Social Anxiety Disorder. *Israel Journal of Psychiatry and Related Sciences*. 52(2), 129-35.
- Irfan, M. (2011). The concept of mental health policy and its journey from development to implementation in Pakistan. *Khyber Medical University Journal*, 2 (2), 395-402.
- Irfan, S., Zulkefly, N. S., Tan, K. A., & Ismail, S. I. F. (2019). The role of negative automatic thoughts as a mediator in the relationship between maternal attachment and depressive Symptoms among late adolescents of Pakistan. *Malaysian Journal of Medicine and Health Sciences*, 15 (Suppl1). 21-29.
- Ishaq, M., Shah, M., Meghani, S. T., & Punjani, N. (2014). Suicidal behavior among teenagers: A Review. *International Journal of Endorsing Health Science Research*, 2 (1), Retrieved from www.aeirc-edu.com.
- Jakobsen, I.S., Horwood, L.J. & Fergusson, D.M. (2012). Childhood anxiety/withdrawal, adolescent parent–child attachment and later risk of depression and anxiety disorder. *Journal of Child and Family Studies*, 21, 303-310. doi:10.1007/s10826-011-9476-x.

- Jenchura, E. C., Gonzales, N. A., Tein, J., & Luecken, L. J. (2017). Gender and the Interplay of Source of Support and Peer Social Rejection on Internalizing Among Mexican American Youth. *Journal of Youth and Adolescence*, 46 (4), 787–800. doi: <https://doi.org/10.1007/s10964-016-0589-9>.
- Jibeen, T.(2015). Perceived social support and mental health problems among Pakistani university students. *Community Mental Health Journal*, 52 (8), 1004–1008. doi:10.1007/s10597-015-9943-8
- Jin, Y., He,L., Kang, Y., Chen, Y., Lu, W., Ren, X., Song, X., Wang, L., Nie, Z., Guo, D., & Yao, Y. (2014). Prevalence and risk factors of anxiety status among students aged 13-26 years. *International Journal of Clinical and Experimental Medicine*, 7(11), 4420–4426.<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4276221/>
- Johnson, D., Dupuis, G., Piche, J., Clayborn, Z. & Colma, I. (2018). Adult mental health outcomes of adolescent depression: A systematic review. *Depression and Anxiety*. 35. 700-716. doi:10.1002/da.22777.
- Johnson, L., Radesky, J., Zuckerman, B. (2013). Cross-cultural Parenting: Reflections on Autonomy and Interdependence. *Pediatrics*, 131 (4), Retrieved from <http://pediatrics.aappublications.org/content/131/4/631>.
- Kamberi, M., Hoxha, F., Shala, M., Shahini, M., & Vehapi, S. (2018). Anxiety predictors among college students in Kosovo. *Journal International Journal of Adolescence and Youth*, 24 (1), 117-124. <https://doi.org/10.1080/02673843.2018.1479277>
- Kakkad, A., Trivedi, M., Trivedi, G., & Raichandani, A. (2014). Study for adolescent problems and psychology. *Journal of Evolution of Medical and Dental Sciences*, 3(37):9564-9574. doi: 10.14260/jemds/2014/3237.
- Kamkar, K.,Doyle,A., & Markiewicz, D. (2012). Insecure attachment to parents and depressive symptoms in early adolescence: mediating roles of attributions and self-esteem. *International Journal of Psychological Studies*, 4(2), <http://dx.doi.org/10.5539/ijps.v4n2p3>.
- Kaur, J., Cheong, S. M., Naidu, B. M., Kaur, G., Manickam, M. A., Noor, M. M., Ibrahim, N., & Rosman, A. (2014). prevalence and correlates of depression among adolescents in Malaysia. *Asia-Pacific Journal of Public Health*, 26(5S), 53S–62S. doi: 10.1177/1010539514544356.
- Keizer, R., Helmerhorst, K.O.W. & van Rijn-van Gelderen, L. (2019). Perceived Quality of the Mother–Adolescent and Father–Adolescent Attachment Relationship and Adolescents’ Self-Esteem, Volume 48 (6), 1203–1217. <https://doi.org/10.1007/s10964-019-01007-0>

- Kenny, M. E. (1987). The extent and function of parental attachment among first-year college students. *Journal of Youth and Adolescence*, 16(1), 17-29. doi:10.1007/BF02141544.
- Kenny, D., & Judd, C. M. (1984). Estimating the nonlinear and interactive effects of latent variables. *Psychological Bulletin*, 96, 201-210.
- Kessler, R. C., & Bromet, E. J. (2013). The Epidemiology of Depression Across Cultures. *The Annual Review of Public Health*. 34, 119–38. doi: 10.1146/annurev-publhealth-031912-114409.
- Kessler, R. C., Avenevoli, S., Costello, J., Georgiades, K., Green, J. G., Gruber, M. J., He, J., Koretz, D., McLaughlin, K. A., Petukhova, M., Sampson, N. A., Zaslavsky, A. M., & Merikangas, K. R. (2012). Prevalence, Persistence, and Sociodemographic Correlates of DSM-IV Disorders in the National Comorbidity Survey Replication Adolescent Supplement. *Archives of General Psychiatry*. 69(4). doi:10.1001/archgenpsychiatry.2011.160.
- Kerns, K. A., Mathews, B. L., Koehn, A. J., Williams, C. T., & Shannon Siener-Ciesla, S. (2015). Assessing both safe haven and secure base support in parent–child relationships. *Journal of Attachment & Human Development*, 17(4), <https://doi.org/10.1080/14616734.2015.1042487>.
- Khalid, A. (2014). *Correlates of Mental Health among Pakistani Adolescents: An exploration of the interrelationship between attachment, parental bonding, social support, emotion regulation and cultural orientation using Structural Equation* (Doctoral Dissertation). Retrieved from <http://hdl.handle.net/1842/15925>.
- Khalily, M. T. (2011). Mental health problems in Pakistani society as a consequence of violence and trauma: a case for better integration of care. *International Journal of Integrated Care*, Retrieved from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3225239/>
- Khowaja, A. R., Khan, S. A., Nizam, N., Omer, S. B., & Anita Zaidi, A. (2012). Parental perceptions surrounding polio and self-reported non-participation in polio supplementary immunization activities in Karachi, Pakistan: a mixed methods study. *Bulletin of the World Health Organization*, 90, 822-830. doi: 10.2471/BLT.12.106260
- Kiang, L., & Bhattacharjee, K. (2018). Developmental change and correlates of autonomy in asian american adolescents. *Journal of Youth and Adolescence*, 1–12, <https://doi.org/10.1007/s10964-018-0909-3>.

- Kleiman, E. M., & Riskind, J. H. (2012). Cognitive vulnerability to comorbidity: looming cognitive style and depressive cognitive style as synergistic predictors of anxiety and depression symptoms. *Journal of Behavior Therapy and Experimental Psychiatry*, 43(4), 1109-14. doi: 10.1016/j.jbtep.2012.05.008.
- Kline, R. B. (2005). *Methodology in the social sciences. Principles and practice of structural equation modeling (2nd ed.)*. New York, NY, US: Guilford Press.
- Kish., L. (1965). "Survey Sampling". New York: John Wiley & Sons, Inc. ISBN 0-471-10949-5.
- Koerner, N., Tallon, K., & Kusec, A. (2015). Maladaptive core beliefs and their relation to generalized anxiety disorder. *Journal Cognitive Behaviour Therapy*, 44 (6). <https://doi.org/10.1080/16506073.2015.1042989>
- Koohsara, A.H., & Bonab, B.G. (2011). Relation among quality of attachment, anxiety and depression in college students . *Procedia - Social and Behavioral Sciences*, 30, 212–215. <https://doi.org/10.1016/j.sbspro.2011.10.042>
- Korn, C. W., Sharot, T., Walter, H., Heekeren, H. R., & Dolan, R. J. (2014). Depression is related to an absence of optimistically biased belief updating about future life events. *Psychological Medicine*. 44(3), 579-92. doi: 10.1017/S0033291713001074.
- Kosutic, Z., Voncina, M. M., Dukanac, V., Lazarevic, M., Dobroslavic, I. R., Soljaga, M...& Tosevski, D. L. (2017). Attachment and emotional regulation in adolescents with depression. *Vojnosanitetski pregled*, doi: <https://doi.org/10.2298/VSP160928060K>
- Kumar, K. S., & Akoijam, B. S. (2017). Depression, Anxiety and stress among Hhgher secondary school students of Imphal, Manipur. *Indian Journal of Community Medicine*, 42(2), 94–96. doi: 10.4103/ijcm.IJCM_266_15
- Kring, A. M., & Sloan, D. M. (2010). *Emotion regulation and psychopathology: A transdiagnostic approach to etiology and treatment*. New York, NY: Guilford Press.
- Laghi, F., D'Alessio, M., Pallini, S., & Baiocco, R. (2009). Attachment representations and time perspective in adolescence. *Social Indicators Research*, 90(2), 181-194. 10.1007/s11205-008-9249-0

- Lai, Y., & Carr, S. (2018). A critical exploration of child-parent attachment as a contextual construct. *Behavioral Sciences*, 8 (112). doi:10.3390/bs8120112
- Langley, A. K., Falk, A., Peris, T., Wiley, J. F., Kendall, P. C., Ginsburg, G., Birmaher, B., March, J., Albano, A. M., & Piacentini, J., (2014). The Child Anxiety Impact Scale (CAIS): Examining Parent- and Child-reported Impairment in Child Anxiety Disorders. *Journal of Clinical Child and Adolescent Psychology*, 43(4), 579–591. doi: 10.1080/15374416.2013.817311
- Lawrence, D., Johnson, S., Hafekost, J., de Haan, K. B., Sawyer, M., Ainley, J., & Zubrick, S. R., (2015). The mental health of children and adolescents report on the second Australian child and adolescent survey of mental health and Wellbeing. ISBN: 978-1-76007-187-5. Retrieved from [http://www.health.gov.au/internet/main/publishing.nsf/content/9DA8CA21306FE6EDCA257E2700016945/\\$File/child2.pdf](http://www.health.gov.au/internet/main/publishing.nsf/content/9DA8CA21306FE6EDCA257E2700016945/$File/child2.pdf)
- Lee, A., & Hankin, B. L. (2009). Insecure attachment, dysfunctional attitudes, and low self-esteem predicting prospective symptoms of depression and anxiety during adolescence. *Journal of Clinical Child & Adolescent Psychology*, 38 (2). 219-231 . Retrieved from <http://dx.doi.org/10.1080/15374410802698396>
- Li, J., Delvecchio, E., Miconi, D., Salcuni, S., Risco, D. (2014). Parental attachment among Chinese, Italian, and Costa Rican adolescents: A cross-culture study. *Personality and Individual Differences*, 71, 118–123. <http://dx.doi.org/10.1016/j.paid.2014.07.036>
- Li, J. (2010). *Effects of Full Information Maximum Likelihood, Expectation Maximization, Multiple Imputation, and Similar Response Pattern Imputation on Structural Equation Modeling with Incomplete and Multivariate Nonnormal Data* (Doctoral dissertation). The Ohio State University, Retrieved from https://etd.ohiolink.edu/!etd.send_file?accession=osu1281387395&disposition=inline
- Lichtenstein, M. B., Dervisevic, A., Eg, J., Wilson, R., & Wesselhoeft, R. (2019). A psychometric evaluation of the automatic thoughts questionnaire in Danish adolescents and emerging adults. *Journal Nordic Psychology*. <https://doi.org/10.1080/19012276.2019.1604252>
- Lievens, F., & Anseel, F. (2004). Confirmatory factor analysis and invariance of an organizational citizenship behaviour measure across samples in a Dutch-speaking context. *Journal of Occupational and Organizational Psychology*, 77(3), 299-306. <http://dx.doi.org/10.1348/0963179041752727>

- Lippe, A., Eilertsen, D. E., Hartmann, E., & Killèn, K. (2010) The role of maternal attachment in children's attachment and cognitive executive functioning: A preliminary study, *Attachment & Human Development*, 12(5), 429-444, DOI: 10.1080/14616734.2010.501967
- Little, T. D., Cunningham, W. A., Shahar, G., & Widaman, K. F. (2002). To parcel or not to parcel: Exploring the question, weighing the merits. *Structural Equation Modeling*, 9, 151–173. doi: 10.1207/s15328007sem0902_1
- Love, K. L., & Murdock, T.B. (2011). Parental attachment, cognitive working model, and depression among African American college. *Journal of College Counseling*, 15, doi: 10.1002/j.2161-1882.2012.00010.x
- Lovibond, P. F., & Lovibond, S. H. (1995). The structure of negative emotional states: Comparison of the Depression Anxiety Stress Scales (DASS) with the Beck Depression and Anxiety Inventories. *Behaviour Research and Therapy*, 33(3), 335-343. [http://dx.doi.org/10.1016/0005-7967\(94\)00075-U](http://dx.doi.org/10.1016/0005-7967(94)00075-U)
- Lucktong, A., Salisbury, T. T., & Chamrathirong, A. (2017). The impact of parental, peer and school attachment on the psychological well-being of early adolescents in Thailand. *International Journal of Adolescence and Youth*, 23 (2), <https://doi.org/10.1080/02673843.2017.1330698>
- Luan, Z., Poorthuis, A.M.G., Hutteman, R., Denissen, J. J.A., van Aken, M. A. G. (2017). See me through my eyes: Adolescent–parent agreement in personality predicts later self-esteem development. *International Journal of Behavioral Development*. 42 (1). 17-25. <https://doi.org/10.1177/0165025417690263>
- Maldonado, L., Huang, Y., Chen, R., Kasen, S., Cohen, P., & Chen, H., (2013). Impact of early adolescent anxiety disorders on self-esteem development from adolescence to young adulthood. *Journal of Adolescent Health*, 53(2), 287–292. doi: 10.1016/j.jadohealth.2013.02.025
- Man, Y., Mengmeng, L., Lezhi, L., Ting, M., & Jingping, Z (2017). The psychological problems and related influential factors of left-behind adolescents (LBA) in Hunan, China: a cross sectional study. *International Journal for Equity in Health*, 16 (163), <https://doi.org/10.1186/s12939-017-0639-2>.
- Mandell, D., Siegle, G., Shutt, L., Feldmiller, J., & Thase, M. E. (2014). Neural substrates of trait ruminations in depression. *Journal of Abnormal Psychology*, 123(1), 35–48. doi: 10.1037/a0035834

- Marsh, H. W., Wen, Z., & Hau, K.-T. (2004). Structural equation models of latent interactions: Evaluation of alternative estimation strategies and indicator construction. *Psychological Methods, 9*, 275–300.
- Marvin, R. S., Britner, P. A., & Russell, B. S. (2016). Normative development: The ontogeny of attachment in childhood. In J. Cassidy & P. Shaver (Eds.), *Handbook of attachment: Theory, research, and clinical applications* (3rd ed.) (pp. 273-290). New York: The Guilford Press.
- Matsunaga, M. (2008). Item Parcelling in Structural Equation Modelling: A Primer. *Journal Communication Methods and Measures, 2*(4), 260-293. <https://doi.org/10.1080/19312450802458935>.
- Mathews, A., & MacLeod, C. (2005). Cognitive vulnerability to emotional disorders. *Annual Review, 1*, 167–95. doi: 10.1146/annurev.clinpsy.1.102803.143916.
- Mathew, A. R., Pettit, J. W., Lewinsohn, P.M., Seeley, J. R., & Roberts, R. E. (2011). Co-morbidity between major depressive disorder and anxiety disorders: shared etiology or direct causation? *Psychological Medicine, 41*(10), 2023-34. doi: 10.1017/S0033291711000407.
- Mathews, A., & MacLeod, C. (2005). Cognitive vulnerability to emotional disorders. *Annual Review of Clinical Psychology, 1*, 167-95.
- Matthew J. Dykas, M. J., Ziv, Y., & Cassidy, J. (2008). Attachment and peer relations in adolescence. *Attachment & Human Development, 10* (2), 123–141.
- Magklara, K., Bellos, S. Niakas, D., Stylianidis, S., Kolaitis, G., Mavreas, V., & Kapinakis, P (2015). Depression in late adolescence: a cross-sectional study in senior high schools in Greece. *BMC Psychiatry, 15* (199), doi: 10.1186/s12888-015-0584-9.
- Marshall, C., & Henderson, J. (2014).The influence of family context on adolescent depression: a literature review. *Canadian Journal of Family and Youth, 6*(1), 163-187. <http://ejournals.library.ualberta.ca/index/php/cjfy>
- Masjedi, M. F. K. (2018). Prevalence depression among adolescents in north of Iran. *EC Psychology and Psychiatry, 7* (10), 738-743. Retrieved from <https://www.econicon.com/ecpp/pdf/ECPP-07-00328.pdf>
- Maughan, B., DPhil, S., & Stringaris, A. (2013). Depression in childhood and adolescence. *Journal of the Canadian Academy of Child and Adolescent Psychiatry, 22* (1), 35–40. Retrived on 28 September, 2016 from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3565713/>

- Madigan, S., Brumariu, L. E., Villani, V., and Atkinson, L., & Lyons-Ruth, K. (2016). Representational and Questionnaire Measures of Attachment: A MetaAnalysis of Relations to Child Internalizing and Externalizing Problems. *Psychological Bulletin*, 142 (4), 367–399. <http://dx.doi.org/10.1037/bul0000029>
- McAndrew, A. J. (2017). Maternal perinatal depression: emotional development in offspring from infancy to adolescence. *Journal Early Child Development and Care*, 189 (1), 168-177. <https://doi.org/10.1080/03004430.2017.1292398>
- McConnell, M., & Moss, E. (2011). Attachment across the life span: Factors that contribute to stability and change. *Australian Journal of Educational & Developmental Psychology*, 11, 60-77. Retrieved from <http://files.eric.ed.gov/fulltext/EJ960225.pdf>
- McGrath, J. J., Wray, N. R., Pedersen, C. B., Mortensen, P. B., Greve, A. N., & Petersen, L. (2014). The association between family history of mental disorders and general cognitive ability. *Translational Psychiatry*, 4(7), doi: 10.1038/tp.2014.60.
- MacKinnon, D. P., & Luecken, L. J. (2008). How and for Whom? Mediation and Moderation in Health Psychology. *Health Psychology*, 27(2).doi: 10.1037/0278-6133.27.2.
- McLeod, G. F., Horwood, L.J., & Fergusson, D. M. (2016). Adolescent depression, adult mental health and psychosocial outcomes at 30 and 35 years. *Psychological Medicine*, 46(7), 1401-12. doi: 10.1017/S0033291715002950.
- McLaughlin, K. A., & King, K. (2015). Developmental Trajectories of Anxiety and Depression in Early Adolescence. *Journal of Abnormal Child Psychology*, 43(2), 311–323.doi: 10.1007/s10802-014-9898-1
- Merikangas, K.R., He, J., Burstein, M., Swanson, S.A., Avenevoli, S., Cui, L., Benjet, C., Georgiades, K., & Swendsen, J. (2010). Lifetime prevalence of mental disorders in U.S. adolescents: results from the national comorbidity survey replication–adolescent supplement (NCS-A). *Journal of the American Academy of Child & Adolescent Psychiatry*, 49 (10), 980–989. <http://dx.doi.org/10.1016/j.jaac.2010.05.017>
- Merten, E. C., Cwik, J. C., Margraf, J., & Schneider, S. (2017). Overdiagnosis of mental disorders in children and adolescents (in developed countries). *Child and Adolescent Psychiatry and Mental Health*, 11 (5), doi: 10.1186/s13034-016-0140-5

- Mikulincer, M., & Shaver, P. R. (2012). An attachment perspective on psychopathology. *World Psychiatry, 11*(1), 11–15. Retrieved from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3266769/>
- Millingsa, A., Buck, R., Montgomery, A., Spearsb, M., & Stallarda, P (2012). School connectedness, peer attachment, and self-esteem as predictors of adolescent depression. *Journal of Adolescence, 35*(4), 1061–1067. <http://dx.doi.org/10.1016/j.adolescence.2012.02.015>
- Michl, L. C., McLaughlin, K. A., Shepherd, K., & Nolen-Hoeksema, S. (2013). Rumination as a mechanism linking stressful life events to symptoms of depression and anxiety: longitudinal evidence in early adolescents and adults. *Journal of Abnormal Psychology, 122* (2), 339 –352.
- Miguel-Hidalgo, J. J. (2014). Brain structural and functional changes in adolescents with psychiatric disorders. *International Journal of Adolescence Medicine and Health, 25*(3), 245–256. doi: 10.1515/ijamh-2013-0058
- Mohammadi, M. R., Alavi, S. S., Ahmadi, N., Khaleghia, A., Kamali, K., Ahmadi, A...Ashoori, S. (2019). The prevalence, comorbidity and socio-demographic factors of depressive disorder among Iranian children and adolescents: To identify the main predictors of depression. *Journal of Affective Disorders, 247*, 1-10. <https://doi.org/10.1016/j.jad.2019.01.005>
- Moilanen, D. L. (1993). Depressive information processing among nonclinic, nonreferred college students. *Journal of Counseling Psychology, 40*(3), 340-347. <http://dx.doi.org/10.1037/0022-0167.40.3.340>.
- Moore, S. E., Norman, R. E., Suetani, S., Thomas, H. J., Sly, P.D., & Scott J, G. (2017). Consequences of bullying victimization in childhood and adolescence: A systematic review and meta-analysis. *World Journal of Psychiatry, 7*(1), 60–76. doi: 10.5498/wjp.v7.i1.60.
- Moreira, H., Gouveia, M. J., Carona, C., Silva, N., & Canavarro, M. C. (2015). Maternal attachment and children's quality of life: The mediating role of self-compassion and parenting stress. *Journal of Child and Family Studies, 24*(8), 2332-2344. <http://dx.doi.org/10.1007/s10826-014-0036-z>
- Moreira, H. M., Gouveia, M. J., Canavarro, M. C. (2018). Is mindful parenting associated with adolescents' well-being in early and middle/late adolescence? The mediating role of adolescents' attachment representations, self-compassion and mindfulness. *Journal of Youth and Adolescence, 47* (8), 1771–1788.

- Morris, M. C., Kouros, C. D., Fox, K. R., Rao, U., & Garber, J. (2014). Interactive models of depression vulnerability: The role of childhood trauma, dysfunctional attitudes, and coping. *British Journal of Clinical Psychology, 53*(2), 245–263. doi: 10.1111/bjc.12038
- Morley, T. E., & Moran, G. (2011). The origins of cognitive vulnerability in early childhood: mechanisms linking early attachment to later depression. *Clinical Psychological Review, 31*(7), 1071-82. doi: 10.1016/j.cpr.2011.06.006.
- Mousavi, S. (2016). *The mediating role of early maladaptive schemas and parenting style on the relationship between insecure attachment and anxiety among adolescent students of international secondary schools in Kelang valley, Malaysia* (Doctoral Thesis). Retrieved from http://studentsrepo.um.edu.my/7354/2/Preface_section1.pdf
- Muris, P., Meesters, C., Melick, M.V., & Zwambag, L. (2001). Self-reported attachment style, attachment quality, and symptoms of anxiety and depression in young adolescents. *Personality and Individual Differences, 30*(5), 809–818. [http://dx.doi.org/10.1016/S0191-8869\(00\)00074-X](http://dx.doi.org/10.1016/S0191-8869(00)00074-X).
- Naqvi, H (2007). Depression in Pakistan: An epidemiological critique, *Journal of Pakistan Psychiatry Society, 4*(1), Retrieved from http://www.jpss.com.pk/article/depressioninpakistananepidemiologicalcritique_2294.html
- Naicker, K., Galambos, N. L., Zeng, Y., Senthilselvan, A., & Colman, I. (2013). Social, demographic, and health outcomes in the 10 years following adolescent depression. *Journal of Adolescents Health, 52*(5), 533-8. doi: 10.1016/j.jadohealth.2012.12.016.
- Najam, N., & Majeed, R. (2012). Relationship between depression and attachment in Pakistani children and adolescents. *Journal of Behavioural Sciences, 22* (1), 115-124.
- Natarajan, G. (2013). Differences in internalizing and externalizing problems among early adolescent subtypes based on attachment security. *Psychological Studies, 58* (2), 122–132. doi:10.1007/s12646-013-0179-9.
- Naveed, S., Qadir, T., Afzaal, T., & Waqas, A. (2017). Suicide and Its Legal Implications in Pakistan: A Literature Review. *Cureus, 9* (9), e1665. doi: 10.7759/cureus.1665.
- Nawaz, S. (2011). The relationship of parental and peer attachment bonds with the identity development during adolescence. *FWU Journal of Social Sciences, 5* (1), 2011, 104-119.

- Nawaz, S., & Gilani, N. (2011). Relationship of parental and peer attachment bonds with career decision-making self-efficacy among adolescents and post adolescents. *Journal of Behavioural Sciences*, 21, Retrieved from http://pu.edu.pk/images/journal/doap/PDF-FILES/V21_3.pdf
- Nickerson, A. B. & Nagle, R. J. (2004). The influence of parent and peer attachments on life satisfaction in middle childhood and early adolescence. *Social Indicators Research*, 66 (1), 35–60. doi:10.1023/B:SOCI.0000007496.42095.2c .
- Nishikawa, D., Matsunaga, M., & Furutani, K. (2013). The effects of rumination on automatic thoughts and depressive symptoms. *Shinrigaku Kenkyu*, 84(5),451-7.Retrieved from <https://www.ncbi.nlm.nih.gov/pubmed/24505971>.
- Nilsen, T.S., Eisemann, M., & Kvernmo, S. (2013).Predictors and moderators of outcome in child and adolescent anxiety and depression: a systematic review of psychological treatment studies. *European Child and Adolescents Psychiatry*, 22, 69–87. doi: 10.1007/s00787-012-0316-3.
- Ohannessian, C. M., Milan, S., & Vannucci, A. (2017). Gender differences in anxiety trajectories from middle to late adolescence. *Journal of Youth and Adolescence*, 46 (4), 826–839. <https://doi.org/10.1007/s10964-016-0619-7>.
- Ogundele, M. O. (2018). Behavioural and emotional disorders in childhood: A brief overview for paediatricians. *World Journal of Clinical Pediatrics*, 7(1), 9–26.doi: 10.5409/wjcp.v7.i1.9.
- Okumura, Y., & Sakamoto, S. (2011). Statistical power and effect sizes of depression research in Japan. *Psychiatry and Clinical Neurosciences*, 65, 356–364 <https://doi.org/10.1111/j.1440-1819.2011.02208.x>.
- Omidvar, B., Bahrami, F., Fatehizade, M.,Etemadi,O.,& Ghanizadeh, A. (2015). Attachment quality and depression in iranian adolescents. *Psychological Studies*, 59(3), 309–315. doi. 10.1007/s12646-014-0250-1.
- Pace, C. S., Martini,P. S., & Zavattini, G. C. (2011). The factor structure of the Inventory of Parent and Peer Attachment (IPPA): A survey of Italian adolescents. *Personality and Individual Differences*, 51 (2), 83–88.
- Pakistan Bureau of Statistics (2017). *Household Integrated Economic Survey (HIES) 2015-16*. Retrieved from http://www.pbs.gov.pk/sites/default/files//pslm/publications/hies15-16/write%20up%2015-16-HIES-final_0.pdf

- Pan, Y., Zhang, D., Liu, Y., Ran, G., & Wang, Z. (2016). Attachment and internalizing symptoms: The mediating role of regulatory emotional self-efficacy among Chinese young adolescents. *Attachment and Individual Differences*, 101, 360–365. <http://dx.doi.org/10.1016/j.paid.2016.06.030>.
- Pan, P., Zhang, D., Liu, Y., Ran, G., Teng, Z. (2016). The effects of attachment style and security priming on the perception of others' pain. *Journal of Social and Personal Relationships*, 3(2), 184-208. <https://doi.org/10.1177/0265407515627509>
- Parker, G., Tupling, H., & Brown, L.B. (1979) A Parental Bonding Instrument. *British Journal of Medical Psychology*, 52, 1-10.
- Parsa, N., Yaacob, S. N., Redzuan, M., Parsa, P., & Esmaeili, N.S. (2014). Parental attachment, inter-parental conflict and late adolescent's self-efficacy. *Asian Social Science*, 10 (8), doi:10.5539/ass.v10n8p123.
- Pascuzzo, K., Moss, E., & Cyr, C. (2015). Attachment and emotion regulation strategies in predicting adult psychopathology. *Sage open*, 5 (3), <https://doi.org/10.1177/2158244015604695>
- Patton, G. C., Coffey, C., Romaniuk, H., Mackinnon, A., Carlin, J. B., Degenhardt, L., Olsson, C. A., & Moran, P. (2014). The prognosis of common mental disorders in adolescents: a 14-year prospective cohort study. *Lancet*, [http://dx.doi.org/10.1016/S0140-6736\(13\)62116-9](http://dx.doi.org/10.1016/S0140-6736(13)62116-9)
- Perveen, S., Kazmi, S. F., ur Rehman, A. (2016). Relationship between negative cognitive style and depression among medical students. *Journal of Ayub Medical College Abbottabad*, 28(1), 94-8 (Abstract).
- Pinto, A., Veríssimo, M., Gatinho A., Santos, A.J. & Vaughn, B. E. (2015) Direct and indirect relations between parent–child attachments, peer acceptance, and self-esteem for preschool children, *Attachment & Human Development*, 17 (6), 586-598. doi: 10.1080/14616734.2015.1093009.
- Pirbaglou, M., Cribbie, R., Irvine, J., Radhu, N., Vora, K., & Ritvo, P. (2013). Perfectionism, anxiety, and depressive distress: Evidence for the mediating role of negative automatic thoughts and anxiety sensitivity. *Journal of American College Health*, 61 (8), <http://dx.doi.org/10.1080/07448481.2013.833932>.

- Passanisi, A., Gervasi, M. A., Madonia, C., Guzzo, G., & Greco, D. (2015). Attachment, self-esteem and shame in emerging adulthood. *Procedia - Social and Behavioral Sciences* 191, 342-346. <https://doi.org/10.1016/j.sbspro.2015.04.552>
- Podsakoff, P. M., MacKenzie, S. B., & Podsakoff, N. P. (2012). Sources of Method Bias in Social Science Research and Recommendations on How to Control It. *Annual Review of Psychology*, 63(1), 539–569. doi:10.1146/annurev-psych-120710-100452
- Pössel, P. (2017). Comparing different sequential mediational interpretations of Beck's cognitive model of depression in adolescents. *Journal of Youth and Adolescence*, 46(4), 725-743. doi: 10.1007/s10964-016-0551-x.
- Preacher, K. J. & Hayes, A. F. (2004). SPSS and SAS procedures for estimating indirect effects in simple mediation models. *Behavior Research Methods, Instruments, & Computers*, 36 (4), 717–731.
- Preacher, K. J., & Hayes, A. F. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior Research Methods*, 40 (3), 879–891. doi: 10.3758/BRM.40.3.879.
- Puwar, T., Yasobant, S., & Saxena, D. (2018). Are School-going Adolescents Mentally Healthy? Case Study from Sabarkantha, Gujarat, India, *Indian Journal of Community Medicine*, 43 (Suppl 1), S23–S27. doi: 10.4103/ijcm.IJCM_56_18
- Qidwai, W., Ishaque, S., Shah, S., & Rahim, M. (2010). Adolescent lifestyle and behaviour: A survey from a developing country. *PLoS One*, 5(9), doi: 10.1371/journal.pone.0012914.
- Răscol, M. (2014). The Relation between anxiety and automatic thoughts associated to depression among people diagnosed with Type II diabetes. *Romanian Journal of Cognitive Behavioral Therapy and Hypnosis*, 1 (3), Retrieved from http://www.rjcbth.ro/articles/V1I3_Manuela%20Rascal_RJCBTH.pdf.
- Rawatlal, N., Kliwer, W., & Pillay, B. J. (2015). Adolescent attachment, family functioning and depressive symptoms. *South African Journal of Psychiatry*, 21(3), 80-85. doi:10.7196/SAJP.8252
- Riskind, J. H., Black, D., & Shahar, G. (2010). Cognitive vulnerability to anxiety in the stress generation process: interaction between the Looming Cognitive Style and Anxiety Sensitivity. *Journal of Anxiety Disorder*, 24 (1), 124-8. doi: 10.1016/j.janxdis.2009.09.007.

- Riskind, J.H., Calvete, E., González, Z., Orue, I., Kleiman, E. M., & Shahar, G. (2013). Direct and indirect effects of looming cognitive style via social cognitions on social anxiety, depression, and hostility. *International Journal of Cognitive Therapy*, 6, 73-85. doi:/10.1521/ijct.2013.6.1.73
- Rood, L., Roelofs, J., Bögels, S. M., & Alloy, L. B. (2010). Dimensions of negative thinking and the relations with symptoms of depression and anxiety in children and adolescents. *Cognitive Therapy and Research*, 34(4), 333-342. doi: 10.1007/s10608-009-9261-y.
- Roelofs, J., Lee, C., Ruijten, T., & Lobbestael, J. (2011). The mediating role of early maladaptive schemas in the relation between quality of attachment relationships and symptoms of depression in adolescents. *Behavioral and Cognitive Psychotherapy*, 39, 471–479. doi:10.1017/S1352465811000117.
- Roelofs, J., Onckels, L., & Muris, P. (2013). Attachment quality and psychopathological symptoms in clinically referred adolescents: The mediating role of early maladaptive schema. *Journal of Child and Family Studies*, 22, 377–385, doi: 10.1007/s10826-012-9589-x.
- Rosenthal, N. L., & Kobak, R. (2010). Assessing adolescents' attachment hierarchies: differences across developmental periods and associations with individual adaptation. *Journal of Research on Adolescence*, 20(3), 678–706. doi: 10.1111/j.1532-7795.2010.00655.x.
- Rucker, D. D., Preacher, K. J., Tormala, Z. L., & Petty, R. E. (2011). Mediation Analysis in Social Psychology: Current Practices and New Recommendations. *Social and Personality Psychology Compass*, 5(6), 359–371, doi: 10.1111/j.1751-9004.2011.00355.x.
- Ruijten, T., Roelofs, J., & Rood, L. (2011). Mediating role of rumination, in the relation between quality of attachment relations and depressive symptoms in Non-clinical Adolescents. *Journal of Children and Family Studies*, 20, 452-459. doi: 10.1007/s10826-010-9412-5.
- Ruhl, H., Dolan, E. A., & Buhrmester, D. (2015). Adolescent Attachment Trajectories with Mothers and Fathers: The Importance of Parent-Child Relationship Experiences and Gender. *Journal of Research in Adolescence*, 25(3), 427–442. doi: 10.1111/jora.12144.
- Rueger, S.Y. & George, R. (2017). Indirect effects of attributional style for positive events on depressive symptoms through self-esteem during early adolescence. *Journal of Youth and Adolescence*, 46, 701 – 708.

- Safdar, S., & Zahrah, S. M. (2016). Impact of parenting styles on the intensity of parental and peer attachment: exploring the gender differences in adolescents. *American Journal of Applied Psychology*, 4 (2), 23-30. doi:10.12691/ajap-4-2-1.
- Safford, S. M., Alloy, L. B., Crossfield, A. G., Morocco, A. M., & Wang, J. C.(2004). The relationship of cognitive style and attachment style to depression and anxiety in young adults. *Journal of Cognitive Psychotherapy*, 18 (1).
- Sajjadi, H., Kamal, S.H.M., Rafiey,H., Vameghi, M., Forouzan, A.S. & Rezaei, M. (2013). A systematic review of the prevalence and risk factors of depression among iranian adolescents. *Global Journal of Health Science*, 5 (3), doi:10.5539/gjhs.v5n3p16.
- Sander, A. J. B. (2001). Toward an integration of Beck's cognitive theory and Bowlby's attachment theory: self-schema and adult attachment classification in relation to depressive symptoms (Abstract). Retrieved from <https://repositories.lib.utexas.edu/handle/2152/10828>.
- Sheeber, L. B., Davis, B., Leve, C., Hops, H., & Tildesley, E. (2007). Adolescents' relationships with their mothers and fathers: associations with depressive disorder and sub-diagnostic symptomatology. *Journal of Abnormal Psychology*, 116(1), 144-54. doi: 10.1037/0021-843X.116.1.144.
- Schafer, J. L., & Graham, J. W. (2002). Missing data: our view of the state of the art. *Psychological Methods*, 7(2), 147-77.<http://dx.doi.org/10.1037/1082-989X.7.2.147>.
- Scharfe, A., Pitman, R., & Coled, V. (2017). Function of attachment hierarchies in young adults experiencing the transition from university. *An International Journal on Personal Relationships*. 11 (1). Retrieved from <https://interpersona.psychopen.eu/article/view/223/html>
- Schoenmaker, C., Juffer, F., van IJzendoorn, M., Linting, M., van der Voort, A., & Bakermans-Kranenburg, M. J. (2015). From maternal sensitivity in infancy to adult attachment representations: a longitudinal adoption study with secure base scripts. *Attachment and Human Development*, 17(3), 241-56. doi: 10.1080/14616734.2015.1037315.
- Scholten, S., Velten, J., Bieda, A., Zhang, X. C., & Margraf, J. (2017). Testing Measurement invariance of the depression, anxiety, and stress scales (DASS-21) across four countries. *Psychological Assessment*, Advance online publication. <http://dx.doi.org/10.1037/pas0000440>.

- Schwarz, B., Mayer, B., Trommsdorff, G., Ben-Arieh, A., Friedlmeier, M., Lubiewska, K., Mishra, R., & Peltzer, K. (2011). Does the importance of parent and peer relationships for adolescents' life satisfaction vary across cultures? *Journal of Early Adolescence*, 32 (1), 55-80. doi: 10.1177/0272431611419508.
- Shamsuddin, K., Fadzil, F., Ismail, W. S., Shah, S. A., Omar, K., Muhammad, N. A., Jaffar, A., Ismail, A., Mahadevan, R. (2013). Correlates of depression, anxiety and stress among Malaysian university students. *Asian Journal of Psychiatry*, 6(4), 318-23. doi: 10.1016/j.ajp.2013.01.014.
- Sharpa, C., Venta, A., Vanwoerden, Schramm, V., Ha, C., Newlin, E., Reddy, R., & Fonagy, P. (2016). First empirical evaluation of the link between attachment, social cognition and borderline features in adolescents. *Comprehensive Psychiatry*, 64, 4-11. <https://doi.org/10.1016/j.comppsy.2015.07.008>.
- Shaw, S. K., & Dallos, R. (2006). Attachment and adolescent depression: The impact of early attachment experiences. *Attachment & Human Development*, 7(4), 409 – 424.
- Shrout, P. E., & Bolger, N. (2002). Mediation in experimental and non-experimental studies: New procedures and recommendations. *Psychological Method*, 7 (4), 422–445. doi: 10.1037//1082-989X.7.4.422.
- Siddiqui, R. R. (2012). *Parental attachment and its relationships to depression: cross-cultural examination*. PhD Thesis. UMI Number: 3287693.
- Siegel, L. J., & Griffin, N. J. (1984). Correlates of depressive symptoms in adolescents. *Journal of Youth and Adolescence*, 13 (6), 475–487.
- Siegel, R. C., & Dickstein, D. P. (2012). Anxiety in adolescents: Update on its diagnosis and treatment for primary care providers. *Adolescent Health, Medicine and Therapeutics*, 3, 1–16. doi: 10.2147/AHMT.S7597
- Singh, K., Bassi, M., Junnarkar, M., & Negri, L. (2015). Mental health and psychosocial functioning in adolescence: An investigation among Indian students from Delhi. *Journal of Adolescence*, 39, 59-69. <http://dx.doi.org/10.1016/j.adolescence.2014.12.008>.
- Smoller, J. W. (2016). The genetics of stress-related disorders: PTSD, depression, and anxiety disorders. *Neuropsychopharmacology*. 41(1), 297–319.

- Sobel, M. E. (1982). Asymptotic intervals for indirect effects in structural equations models. In S. Leinhardt (Ed.), *Sociological methodology 1982* (pp.290-312). San Francisco: Jossey-Bass.
- Sooper, D. (2019). *Calculator: A-priori sample size for structural equation models*. Retrieved from <https://www.danielsoper.com/statcalc/calculator.aspx?id=89>.
- Spriestersbach, A., Röhrig, B., du Prel, J., Gerhold-Ay, A., & Blettner, M. (2009). The specification of statistical measures and their presentation in tables and graphs. Part 7 of a series on evaluation of scientific publications. *Deutsches Arzteblatt International*, *106*(36), 578–583. doi: 10.3238/arztebl.2009.0578.
- Stratton, K. J., Edwards, A. C., Overstreet, C., Richardson, L., Tran, T. L., Trung, L. T., ...Amstadter, A. B. (2014). Caretaker mental health and family environment factors are associated with adolescent psychiatric problems in a Vietnamese sample. *Psychiatry Research*, *220*, 453–460.
- Stockings, E. A., Degenhardt, L., Dobbins, T., Lee, Y. Y., Erskine, H. E., Whiteford, H. A., & Patton, G. (2016). Preventing depression and anxiety in young people: a review of the joint efficacy of universal, selective and indicated prevention. *Psychological Medicine*, *46*(1), 11-26. doi: 10.1017/S0033291715001725.
- Stikkelbroek, Y., Bodden, D. H.M., Kleinjan, M., Reijnders, M., & van Baar, A. L. (2016). Adolescent Depression and Negative Life Events, the Mediating Role of Cognitive Emotion Regulation. *PLoS One*, *11*(8), doi: 10.1371/journal.pone.0161062.
- Tambelli, R., Fiorenza, L., Flaminia, O., & Valentina, N. (2012). Attachment relationships and Internalizing and Externalizing Problems among Italian Adolescents. *Children and youth services Review*, *34*, 1465-1471. doi:10.1016/j.childyouth.2012.04.004
- Tabachnick, B. G., & Fidell, L. S. (2006). *Using multivariate statistics* (5th ed.). Boston: Allyn & Bacon.
- Tareen, A., Mirza, I., Minhas, F., & Rahman, A. (2009). Developing a child and adolescent mental health service in low-income country: a global partnership model. *Psychiatry Bulletin*, *33* (5), 181-183. doi: 10.1192/pb.bp.108.020487
- Thapar, A., Collishaw, S., Pine, D. S., & Thapar, A. K. (2012). Depression in adolescence. *Lancet*, *379*(9820), 1056-67. doi: 10.1016/S0140-6736(11)60871-4.

- Thorbecke, W., & Grotevant, H. D. (1982). Gender differences in adolescent interpersonal identity formation. *Journal of Youth and Adolescence*, 11(6), 479-92. doi: 10.1007/BF01538808.
- Thompson, R. A. (2010). Attachment and Life History Theory: A Rejoinder. *Child Development Perspectives*, 4 (2), 106–108.
- Topolewska-Siedzik, E., & Ciecuch, J. (2018). Trajectories of Identity Formation Modes and Their Personality Context in Adolescence. *Journal of Youth and Adolescence*, 47(4), 775–792. doi: 10.1007/s10964-018-0824-7
- Tucker-Drob, E. M., Briley, D. A., & Harden, K. P. (2013). Genetic and Environmental Influences on Cognition Across Development and Context. *Current Directions in Psychological Sciences*, 22(5), 349-355. doi: 10.1177/0963721413485087
- Tourangeau, R., Rasinski, K., & D'Andrade, R. (1991). Attitude structure and belief accessibility. *Journal of Experimental Social Psychology*, 27, 48–75.
- Tucker, L. R., & Lewis, C. (1973). A reliability coefficient for maximum likelihood factor analysis. *Psychometrika*, 38(1), 1-10. <http://dx.doi.org/10.1007/BF02291170>
- Tully, I. P. J., Zajac, I. T., Venning, A. J. (2009). The structure of anxiety and depression in a normative sample of younger and older Australian adolescents. *Journal of Abnormal Child Psychology*, 37, 717. doi:10.1007/s10802-009-9306-4
- Twenge, J. M., Joiner, T.E., Rogers, M. L., & Martin, G. N. (2017). Increases in Depressive Symptoms, Suicide-Related Outcomes, and Suicide Rates Among U.S. Adolescents After 2010 and Links to Increased New Media Screen Time. *Clinical Psychological Science*, 6 (1), 3-17. <https://doi.org/10.1177/2167702617723376>
- Umemura, T., Lacinová, L., Kraus, J., Horská, E., & Lenka Pivodová, L. (2018). Adolescents' multiple versus single primary attachment figures, reorganization of attachment hierarchy, and adjustments: the important people interview approach. *Journal Attachment & Human Development*, 20 (5), 532-552. <https://doi.org/10.1080/14616734.2018.1464040>
- UNICEF. (2011). *The State of the World's Children*. Retrieved from http://www.unicef.org/adolescence/files/SOWC_2011_Main_Report_EN_02092011.pdf.
- United State Census Bureau. (2010). *US and world population clock*. Retrieved from <https://www.census.gov/popclock/>

- Van Eijck, F. A.M., Branje, S. T., Hale-III, W. & Meeus, W.J. (2012). Longitudinal associations between perceived parent-adolescent attachment relationship quality and generalized anxiety disorder symptoms in adolescence. *Journal of Abnormal Child Psychology*, 40(6), 871-83. Doi. 10.1007/s108020-012-9613-z
- Véronneau, M., Sophie-Caroline Trempe, A., & Alexandra Oliveira Paiva, A. O. (2014). Risk and protection factors in the peer context: how do other children contribute to the psychosocial adjustment of the adolescent? *Ciênc. saúde coletiva*. 19 (3). <http://dx.doi.org/10.1590/1413-81232014193.17972013>
- Valika, R., & Jalbani, A. A. (2004). Suicide Trends: Incidences from Pakistan. *Journal of Independent Studies and Research*, 2(1), jivr.szabist.edu.pk/JISR-MSSE/Publication/2004/2/1/040103SuicideTrends.pdf
- Vaughn, B. E., Waters, T. E. A., Steele, R. D., Roisman, G. I., Bost, K. K., Truitt, W. T., Waters, H. S., & Booth-Laforce, C. (2016). Multiple domains of parental secure base support during childhood and adolescence contribute to adolescents' representations of attachment as a secure base script. *Journal of Attachment & Development*, 317-336. doi: 10.1080/14616734.2016.1162180
- Waghachavare, V. B., Chavan, M. S., Gore, A. D., Kadam, J. H., Chavan, V.M., Dhumale, G. B. (2016). Magnitude of health problems among late adolescents: a cross sectional study. *International Journal of Community and Medical Public Health*, 3(5), 1027-1032. doi: 10.18203/2394-6040.ijcmph20160992.
- Wang, Y., Wang, X., Liu, F., Jiang, X., Xiao, Y., Dong, X.,... Qu, Z. (2016). Negative life events and antenatal depression among pregnant women in rural China: The role of negative automatic thoughts. *PLOS ONE*, Retrieved from <http://dx.doi.org/10.1371/journal.pone.0167597>
- Ward, M.J., Lee, S. S., & Polan, H. J. (2006) Attachment and psychopathology in a community sample, *Attachment & Human Development*, 8 (4), 327-340, DOI: 10.1080/14616730601048241
- Weinfield, N. S., Sroufe, L. A., Egeland, B., Carlson, E. A. (2008) *Individual differences in infant-caregiver attachment: Conceptual and empirical aspects of security*. In Cassidy J, Shaver PR (Eds), *Handbook of Attachment: Theory, Research, and Clinical Applications*. The Guilford Press, New York, USA.
- Westland, J.C. (2010). Lower bounds on sample size in structural equation modeling. *Electronic Commerce Research and Applications*, 9(6), 476-487.

- Wilson, C., Budd, B., Chernin, R., King, H., Leddy, A., Maclennan, F., & Ian, M. (2011). The role of meta-cognition and parenting in adolescent worry. *Journal of Anxiety Disorders*, 25 (1), 71–79. <http://dx.doi.org/10.1016/j.janxdis.2010.08.005>.
- Winston, R. & Chicot, R. (2016). The importance of early bonding on the long-term mental health and resilience of children. *London Journal of Primary Care*, 8(1), 12–14. doi: 10.1080/17571472.2015.1133012.
- Wong, M., Bost, K. K., Shin, N., Veríssomo, M., Maia, J., Monteiro, L.,... Vaughn, B. E. (2011). Preschool children's mental representations of attachment: antecedents in their secure base behaviors and maternal attachment scripts, *Attachment & Human Development*, 13 (5), 489-502, DOI: 10.1080/14616734.2011.602256.
- World Health Organization (2012). Mental health: Child and adolescent mental health. Retrieved from https://www.who.int/mental_health/maternal-child/child_adolescent/en/
- World Health Organization (2014). *The first manifestation of most these psychological problems are mainly in adolescence*. Retrieved on 30 September from http://apps.who.int/iris/bitstream/10665/89966/1/9789241506021_eng.pdf
- World Health Organization (2016). *Adolescent health mortality and DALYs in adolescents by WHO region, 2000 and 2012, aged 10-19 years*. Retrieved from <http://apps.who.int/gho/data/view.wrapper.MortAdov?lang=en>
- WHO (2017). *Mental Health Status of Adolescents in South-East Asia: Evidence for Action*. <http://apps.who.int/iris/bitstream/handle/10665/254982/9789290225737-eng.pdf?sequence=1&isAllowed=y>
- World Bank. (2018). *Data for lower middle income, Pakistan*. Retrieved from <https://data.worldbank.org/?locations=XN-PK>
- World Health Organization Mental Health Atlas. (2014). *WHO mental health atlas country profile*. Retrieved from http://www.who.int/mental_health/evidence/atlas/profiles-2014/pak.pdf
- Yap, M. B. H, Pilkington, P. D., Ryana, S. M., & Jorma, A.F. (2014). Parental factors associated with depression and anxiety in young people: A systematic review and meta-analysis. *Journal of Affective Disorders*, 23, 8-23.

- Yap, M.B.H., Morgan, A. J., Cairns, K., Jorm, A. F., Hetrick, S. E., & Merry, S. (2016). Parents in prevention: A meta-analysis of randomized controlled trials of parenting interventions to prevent internalizing problems in children from birth to age 18. *Clinical Psychology Review*, 50, 138–158. <http://dx.doi.org/10.1016/j.cpr.2016.10>.
- Yeh, C. J., Liao, H.-Y., Ma, P.-W. W., Shea, M., Okubo, Y., Kim, A. B., & Atkins, M. S. (2014). Ecological risk and protective factors of depressive and anxiety symptoms among low-income, Chinese immigrant youth. *Asian American Journal of Psychology*, 5(3), 190–199. doi:10.1037/a0034105
- Young, E. S., Simpson, J. A., Griskevicius, V., Huelsnitz, C. O., & Fleck, C. (2017). Childhood attachment and adult personality: A life history perspective. *Self and Identity*. <http://dx.doi.org/10.1080/15298868.2017.1353540>
- Yu, X., & Fan, G. (2014). Direct and indirect relationship between locus of control and depression. *Journal of Health Psychology*. 1–6. doi:10.1177/1359105314551624
- Zafar, H. (2009). *Emotional autonomy, self-efficacy and attachment among adolescent*. Unpublished (M.Phil's thesis). National Institute of Psychology, Quaid-i-Azam, Islamabad, Pakistan.
- Zafar, H., & Khalily, T. (2014). *Urdu translations of the DASS*. Retrieved from <http://www2.psy.unsw.edu.au/dass/Urdu/Urdu.htm>
- Zahn, R., Lythe, K. E., Gethin, J. A., Green, S., Deakin, J. F.W., Young, A. H., & Moll, J. (2015). The role of self-blame and worthlessness in the psychopathology of major depressive disorder. *Journal of Affective Disorder*, 186, 337–341. doi: 10.1016/j.jad.2015.08.001
- Zhao, Lynch JR., J. G., & Chen, Q. (2009). Reconsidering Baron and Kenny: Myths and Truths about Mediation Analysis. *Journal of Consumer Research*, 37, doi: 10.1086/651257
- Zheng, Y., Rijdsdijk, F., Pingault, J.B., McMahon, R.J. & Unger, J.B. (2016). Developmental changes in genetic and environmental influences on Chinese child and adolescent anxiety and depression. *Psychological Medicine*, 46(9), 1829-1838. doi: 10.1017/S0033291716000313.
- Zimmer-Gembeck, M. J., Webb, H. J., Pepping, C. A., Swan, K., Merlo, O., Skinner, E. A., Avdagic, E., & Dunbar, M. (2015). Review: Is parent–child attachment a correlate of children's emotion regulation and coping? *International Journal of Behavioral Development*, 1–20. doi: 10.1177/0165025415618276

Zubair, U. B. & Ali, U. (2015). Prevalence of depressive symptoms and associated socio demographic factors among intermediate college boys. *Austin Journal of Psychiatry and Behavioral Sciences*, 2(2), Retrieved from. www.austinpublishinggroup.com.

Zulkefly, N.S., & Wilkinson, R.B. (2015). Measuring specific attachment relationships of mothers, fathers and peer in Malaysian adolescents. *Child Indicator Research*, 8, 767–788. doi: 10.1007/s12187-014-9271-5.

