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A Predictive Study of Psychological Capital and Its Relationship with Demographics Factors, Attachment Styles, Peer Relations, and Quality of Friendship among Adolescents in Islamabad

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Abstract

Objecives. The aim of the study was to explore the relationship between attachment styles, friendship quality and psychological capital in adolescents. Moreover, different demographics variables like age, birth order, number of siblings, number of close friends, time spent with friends were also studied along the study variables.

Method. A sample of 300 students (aged 12-20) were selected belonging to different schools and colleges in Islamabad. Relationship Questionnaire (Bartholomew & Horowitz, 1991), Inventory of Parent and Peer attachment (Armesdon & Greenberg, 1987), McGill Friendship Questionnaire- Friendship Functions (Mendelson & Aboud, 2014) and Psychological Capital Scale (Afzal, 2013) were employed to measure the research variables.

Results. Results of the study showed that Peer attachment, secure attachment style, fearful attachment style, age and number of close friends significantly predict psychological capital. Furthermore, friendship quality, secure attachment style, fearful attachment style, age, no of close friends significantly predict psychological capital. correlation analysis showed that peer attachment, friendship quality and psychological capital have significant positive relationship with for psychological capital and peer attachment, for psychological capital and friendship quality and for peer attachment and friendship quality. Results show that there is a statistically significant difference on attachment styles for psychological capital, peer attachment and friendship quality. However, hope showed non-significant difference.

Keywords. Attachment styles, friendship quality, psychological capital, adolescents

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Introduction

Psychological capital is defined as a meaningful and progressive change within individual by incorporating high self-efficacy, hope, resilience, and optimism (Luthans et al., 2007). The aim of psychological capital is to bring change in the lives of the general population to lead a more creative and meaningful life and acknowledge their potential abilities. It helps in channeling a dialogue within the individual about what areas are lacking in their lives and what is good about them and how much they are capable of. Specifically, it emphasizes one's strengths and wellbeing rather than looking into flaws and malfunctioning of individual.

In the process of focusing on individual strengths, friendship seems to play a significant role by assisting people to cope with unusual happenings. As children transition to adolescents, they become autonomous, self-sufficient and are more concerned with developing personality (Damon, 2008; Long & Averill, 2003). Good quality friendship provides them with companionship, support, and a sense of belonging. They encourage or reinforce healthy behaviors, push them toward academic and sports-related goals, making them more successful and as supported by literature, positive friendship provides the basis for later successful adult relationships including romantic relationships and life satisfaction. The solid network of friends provides adolescents with encouragement and social skills, teach them how to act in social situations thus bringing them up well for the future life (Hansen, 2004). Similarly early attachment styles also play a significant role in adolescent's life. Secure relationships with parent's influences personality characteristics throughout childhood and adolescence, including emotional health, self-esteem, self-confidence, positive affect, ego-resiliency, social competence and interactions with peers, teachers, romantic partners, and others. These secure attachment styles predict a more positive relationship maintenance in future which feeds into the adolescent's psychological capital (Thompson, 2000, 2006).

The present study has broadened its inquiry to study how attachment with peers and being in the company of good friends help in shaping high psychological capital and how they help in preparing them for a good future. So all the three variables used in the present study have an implied association with each other. In addition to this, the present study has used the version of psychological capital scale which was developed by Afzal (2013) specifically for adolescent's sample. The construct of psychological capital is composed of four psychological components i.e. self-efficacy, optimism, hope and resilience and is defined as one's positive psychological state of growth that is described by (1) to build confidence (self-efficacy) and determination to prosper in different situations, (2) having positive attitude (optimism) about achieving goals in present and in future, (3) focused towards aims and ambitions, and when necessary, generate alternative paths towards objectives (hope) to achieve success, and (4) sustaining and bouncing back when overwhelmed with problems and life challenges (resiliency) to achieve goals and success (Luthans et al., 2007). This is one way of classifying psychological capital. Other researchers have used different ways of measuring the psychological capital of a person. For example Snyder and Lopez (2005) classified psychological capital approaches as emotion focused (e.g., emotional comfort and well-being), intellectual focused (e.g., self-ability, aims and pathways, knowledge), self-based (e.g., reality, honesty, modesty), interpersonal (e.g., tolerance, appreciation, sympathy), biological (e.g., hardiness), and coping approaches (e.g., absurdity, thought reflection, sanctity) (see also Luthans et al., 2017).

The concept of attachment is an essential ingredient for normal human development. Papalia and Feldman (1999) explain it as mutual, persistent affiliation between child and caretaker, each of whom plays significant role in this bonding. Individual development at later stages depends upon the quality and effectiveness of attachment. According to Bowlby there are four features of attachment (i) Safe Heaven, when the child is feeling scared or frightened, he or she can

come back to the caretaker or guardian for relief and calming (ii) Secure Base, a safe, trustworthy and reliable platform is given to the child by caretaker to discover the nature and universe (iii) Proximity maintenance, the child struggles to stay close the guardian, to feel the child secure (iv) Separation distress: The child will be worried, stressed out and disturbed when taken away from the caretaker (Bowlby, 1988). Attachment theory provides a significant context regarding how development of peer bonding occurs in adolescent phase and in later stages. An increasing knowledge in recent times has revealed that peers as attachment figures may be persuasive bases of social and emotional support. While the primary and foremost attachment interactions are made with parents, individuals can also have long term relationships with the people outside their family across life span (Cassidy & Shaver, 2008).

Bartholomew and Horowitz (1991) have proposed four group attachment styles that are based on internal representation and cognitive framework of self and others as positive and negative. They are secure (positive self and others) preoccupied (negative self, positive others), dismissing (positive self, negative others) and fearful (negative self and others). Secure attachment style is characterized by feeling of safety, warmth, and friendliness as well as sooth stress by supporting calm and creating happiness. A fearful attachment style is characterized by the belief that the person is not good enough and worth important. They find it difficult to rely on others and have a negative view of themselves and of others. Preoccupied attachment style is characterized by the feeling that other people do not get as close to them as they are close to others. They seek nearness but feel a sense of not being important in their relationships. They have more positive opinions of others and view themselves as less positive. Dismissing attachment style indicates a sense of autonomy and uncomfortable with intimacy. They view themselves as self-sufficient and prefer others not to depend on them. They are invulnerable to feelings associated with being close to significant others.

One important bond for adolescents is the bond of friendship. The construct of friendship is an important facet of adolescent life where friends have more influence than parents (Mounts, 2001). Hays (1988) defines that friendship is a relationship where two people are dependent on each other over a period. Friendship facilitates each other to achieve social emotional goals and involves variety of companionship, understanding, liking and mutual assistance. Friendships also serve as foundation for intimate relationships during which the children develop social and emotional competence, experience good mutual understanding on reciprocal basis.

One of the most noticeable features of early adolescent friendship is the development of intimacy and different studies highlight that during early adolescence, affection and intimacy becomes very important aspect for friendship within similar sex (Berndt & Perry, 1990; Collins & Repinski, 1994). By adolescence stage, individual spend more time with their friends than to their parents as their friends become primary source of affection and disclosing of secrets and major source of deriving social and emotional support from their friends (Wilkinson, 2008). According to Doherty and Freeney (2004), the formation of intimate adolescent friendships can be seen as part of the developmental extension of attachment networks that culminates in the transfer of attachment functions to peers and the development of secure base romantic relationships in adulthood.

Close friendships are good sources of information for adolescents regarding their hidden potentials to utilize them efficiently, enhance self-confidence and self-worth which ultimately generates good outcomes in them across life span. Furthermore, positive friendship provides opportunities to practice skills interaction skills as well as opinions and suggestions about their particular behaviors and stay beside by them during the time of exploring of self and others (Mannarino, 1978). Frankel (1990) and Grotevant (1998) found out positive relationship between friendship support and adolescent's self-esteem, indicating close

friendship plays a significant role in adolescent development.

In 2000, Sullivan particularly focused on friendship and loneliness, giving attention to the importance of adolescents' peer relationships as a means of avoiding the feelings of isolation and dissatisfaction. Asher and Jeffrey (1993) conducted study on peer group adjustment and feelings of isolation and social displeasure on a sample of 801 elementary school going children in United States. Results of the study showed that children's friendship adjustment influences child feeling of isolation. It was found that children with high peer acceptance and best friendship were less lonely and socially dissatisfied than children with low peer acceptance.

Positive relationship with peers significantly influences on later adjustment and psychological well-being throughout life time as well as promote resilience by providing effective coping styles to manage life stressors and fostering belongingness. Graber et al. (2016) conducted a study on socio-economic at the risk British adolescents to examined whether high quality friendship promote psychological resilience in them. Findings showed that there is a positive relationship between supportive friendship and resilience. It was found that seeking social and emotional support, supportive peers group, development of effective coping skills and reduce engagement in externalizing coping may facilitate the relationship between quality of friendship and resilience.

Healthy discussion among peers group play a significant part in one's vision and beliefs about the world thus contributing in directing one's life; these exchanging of ideas and thoughts with acquaintances and group members contribute to the formation of their world views, future life plans, developed deeper insight of self with optimistic vision of the future and the belief of recognizing future goals and dreams. Being accepted by friends reduces worries and anxieties in circumstances where an adolescent is a beginner, therefore increases self-efficacy and subjective well-being (Rabagliatti & Ciaviano, 2008).

According to (Caprara et al., 2005) adolescents with greater self-efficacy for close interactive relationships have more ways of generating favorable life events as compared to those adolescents who regard themselves as inefficacious and have less positive views of their social abilities. Such close and supportive relationships, in turn, develop high self-efficacy of adolescents and prepare them to deal with life stressors as caused by unpleasant life events such as being bullied or treated unfairly. In 2014, Fitzpatrick and Bussey conducted a study to examine the role of effectiveness of perceived friendship as coping strategy against the negative effects of social victimization. A total of 1218 college students participated in the study. Findings showed that the more adolescents have confidence in their perceived friendship self-efficacy, the less they would experience depression, anxiety and other externalizing symptoms as a result of social, emotional and psychological harm. Llorca et al. (2017) conducted study on a relationship between peer relationships, academic self-efficacy and academic achievement. A total of 500 adolescents participated in the study. Result supported the hypothesis that adolescents peer attachment is positively related to academic self-efficacy.

According to the literature, adolescents who have healthy interpersonal relationships with their parents exhibit high self-confidence, have more ability of psychological adjustment, more efficiently face the problems and generate alternating ways for solution. Similarly, social support plays a vital role in feeling hopeful and confident (optimistic) about the future. Optimism, in turn, promotes wellbeing, increases life satisfaction and decreases the risk of anxiety and depression. Symister and Friend (2003) conducted a study to examine the impact of social and problematic support on optimism and depression in patients with chronic illness as facilitated by self-esteem. Results showed that social support positively related to self-esteem which in turn increases optimism and reduces depression. However problematic support was negatively related to self-esteem and optimism. The following hypothesis were generated and tested in the present research:

The present research hypothecates that psychological capital is an important indicator of future success and productivity in the life of adolescents. Individuals are more likely to report higher indices of psychological capital when they have a strong network of family and friends; and when they perceive that the amount of support, they are receiving is unconditional, genuine, and mutual. This is because adolescence is a trying period, where the young developing individual experiments with his/her personal needs and desires against an unknown future (Jia et al., 2021). The presence of trusted friends and supportive groups will allow adolescents to explore their environments, their potential and not be afraid to make mistakes. With the understanding that they are accepted and lovable even if they fail or even if they are not perfect. The kind of self-acceptance and self-confidence that comes with such unconditional support is the very basic of positive mental health indices. This holds true even when adolescents get involved with cultic behaviors like goths, hippies etc.; a sense of identity is needed for them to develop and function as independent individuals in the world. The need for a strong launch pad is undeniable. Thus, a child reporting good quality and of friendship and high peer attachment is more likely to have hope and optimism about the future, a belief in the self, and a sense of being able to survive in all types of social situations (Wang et al., 2022).

Previous research on peer attachment and peer attachment styles indicates that attachment is a complex process that is a carry-over of the attachment styles that adolescents might have with their parents. Therefore, instead of temperaments and personality, the way that adolescents learn to develop attachments and the way they relate to friends appeared to be a better assessment of the attachment to peers. Just asking for self-report of perceptions about quality of relationship presents a one-sided picture of what a person's friend means to them. Therefore, if a person has a secure style of attachment and reports high quality of friendship, then that person will be different from a person who reports insecure attachment and still reports high quality of friendships. Similarly with the other types of attachments (Thompson, 2000, 2006).

The present research is a survey design that measures each of the variables through questionnaires and instruments. The outcome of the present research can help teachers, parents, and coaching psychologists to improve attachment and peer bonding in children.

Hypotheses

1. There will be a positive relationship between Psychological Capital and Friendship Quality.

2. There will be a positive relationship between Psychological Capital and Peer Attachment.

3. There will be a positive relationship between Peer Attachment and Friendship Quality.

4. There will be a significant difference in Psychological Capital, Peer Attachment and Friendship Quality across different Attachment styles.

5. Peer Attachment and Attachment styles will significantly predict Psychological.

   Capital

6. Friendship Quality and Attachment styles will significantly predict Psychological Capital.

Method

Sample

A sample of 300 students were contacted belonging to different schools and colleges of Islamabad and Rawalpindi on voluntary basis. 138 (51.5%) boys 131 (48.5%) females participated, of age ranged between 12-20 years. Sample was further categorized on the basis of number of close friends as acquaintance (n = 76, 24.8%), casual friends(n = 93, 34.4%) and best friends(n = 108, 40%), birth order as first born(n = 70, 25.9%), the middle born (n = 78, 28.9%), the last born (n = 56, 20.7), the only child (n = 65, 22.8%) and time spent together by respondents as less time, average time and maximum time respectively. The sampling techniques were non purposive and on convenience. There was no inclusion or exclusion criteria set for the present research.

Assessment Measures

The following instruments were used for the collection of data. The demographic data sheet inquired about number of close friends as acquaintance, casual friends, birth order, and time spent together with friends. Description of the scale used in the study is given below.

The Relationship Questionnaire (RQ). The Relationship Questionnaire was developed by Bartholomew and Horowitz (1991). It is a self-report measure made up of short paragraphs, each describing a different attachment pattern. Participants were asked to select one of four styles that best described them as secure, preoccupied, fearful-avoidant and dismissing avoidant attachment styles respectively. This helps in providing a profile of an individual's attachment feelings and insight of oneself. Previous research has reported a range of .74 – .88 (Ligiéro & Gelso, 2002).

Inventory of Parent and Peer Attachment. The current study has used the revised version of IPPA in which measure of peer attachment has been used. The scale has three measures i.e. father, mother and peer. Each measure or questionnaire has three subscales i.e. trust, communication and alienation comprised of 25 items in which 10 items of trust, 8 items of communication and 7 items of alienation included. Inventory of parent and peer attachment (IPPA) was developed by Armesdon and Greenberg (1987). It is a self-report questionnaire. The scale is a 5-point Likert scale and responses were almost never or never true = 1, Not very often true = 2, Sometimes true = 3, Often true = 4 and Almost always or always true = 5. There are 7 negative items in total. Alpha reliability of peer attachment is .92, for peer trust α = .90, peer communication α = .84 and for peer alienation α = .81 respectively. The current study used peer attachment scale to measure the adolescent's quality of attachment, they have with their peers.

Friendship Quality Questionnaire-Friends Function. The friendship quality questionnaire developed by Mendelson and Abound (2014). It is self-report questionnaire and measures the extent to which friends fulfill certain friendship functions. It has 6 subscales which include stimulating companionship, intimacy, reliable alliance, help, self-validation and emotional security. The current study has used 4 subscales i.e. stimulating companionship, intimacy, reliable alliance and emotional security. The scale is a 5- point Likert scale and responses were never = 0, rarely = 1, once in a while = 3, fairly often = 4 and always = 5. There are no reverse items. Alpha reliability of friendship quality questionnaires is .92, for stimulating companionship α = .91, intimacy α = .94, reliable alliance α = .95, and emotional security α = .92. High scores on the scale indicate high quality of friendship and low scores on scale indicate low quality of friendship.

Psychological Capital Scale. Psychological capital scale was developed by Afzal (2013) and used to measure PsyCap among adolescents. The scale has 34 items which is divided into four subscales i.e. resilience, self-efficacy, hope and optimism. There are 13 items in resilience, 7 items in self-efficacy, 8 items in hope and 6 items in optimism. The scale is 4-point Likert scale and responses were strongly disagree = 1, disagree = 2, agree = 3 and strongly agree = 4. Alpha reliability of PsyCap is .87, for resilience α = .84, self-efficacy α = .74, hope α = .67 and for optimism α = .68. High scores on the scale means individual is high on PsyCap and low scores on scale means that individual is low on the specific construct.

Procedure

The data for the present research was collected from schools, colleges, and universities of twin cities of Islamabad and Rawalpindi. At first step, consent was obtained from principals and directors of different institutions. Also informed consent was obtained from the participants. Consent form was given to the participants to be signed before participated in the study and they were assured that their given information would be used only for academic purposes and that it would be kept confidential and anonymity would be maintained. The students were requested to respond to each item honestly and not to skip any item. No time limit was mentioned and questionnaires were completed and collected at the spot. a total sample of 500 questionnaires were distributed and on the collection of 300 questionnaires, data

collection was stopped. The response rate for the present research was thus 60%. The data was collected over a period of three months. The duration for each booklet was around 15 – 20 minutes. The research was approved by the ethical committee of grade research at National Institute of Psychology, Quaid-i-Azam university, Islamabad. No funding was procured for the current research. It is an outcome of a graduate research project. At present authors do not have a of interest for the present research.

Results

After data collection procedure was over, the whole data was organized, summarized and analyzed with the help of software i.e. SPSS; the data was analyzed using parametric techniques like Pearson, t-test analysis, ANOVA, and regression. Pearson product moment correlation was calculated between the study variables and results are presented in Table 1.

Table 1 shows the correlation matrix computed for all variables and their subscales. Results indicated that past researches have focused on problematic behaviors, academic problems, negative thoughts, malfunctioning, psychopathology as well as effect of negative life events on later development; psychological capital has been studied with stress, burnout rate and employee's work productivity in organizational settings. So the current study will try to understand how this multiple construct, incorporated of hope, resilience optimism and self-efficacy gives better insight into one's strengths and their capabilities and leads to greater life satisfaction when studied with attachment styles, along with peer attachment and friendship quality in Pakistani context. The major objective of the study was to explore the construct of psychological capital in the life of adolescents. It was also intended to study attachment styles on psychological capital, peer attachment and friendship quality. The present study also attempted to study the predicting role of peer attachment, friendship quality, attachment styles and demographic variables on psychological capital.

Table 1

Pearson Correlation between Psychological Capital, Peer Attachment and Friendship Quality and Their Subscales (N=270)

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1.PsyCap		.57**	.53**	.49**	.37**	.26**	.21**	.29**	.17**	.20**	.25**	.19**	.28**	.21**
2.Hope			.36**	.43**	.55**	.14*	.13*	.17**	.12*	.15*	.17**	.15*	.15*	.16**
3.Optimism				.56**	.45**	.34**	.31**	.34**	.20**	.26**	.15*	.26**	.14*	.22**
4.Resilience					.55**	.19**	.14*	.25**	.19*	.15*	.14*	.14*	.16**	.18**
5.S-efficacy						.17**	.14*	.18**	.15**	.17**	.13*	.14*	.15*	.13*
6.PeerAtt							.43**	.38**	.47**	.71**	.53**	.59**	.54**	.43**
7.PeerTr								.55**	.30**	.38**	.52**	.55**	.53**	.58**
8.PeerCom									.47**	.45**	.43**	.51**	.43**	.48**
9.PeerAln										.43**	.39**	.24**	.39**	.39**
10.FrienshipQ											.59**	.59**	.41**	.53**
11.Stim.Com												.45**	.59**	.58**
12.Intimacy													.48**	.56**
13.Reliable.A														.56**
14.Emo.Sec														

Note. PsyCap=psychological capital; S-efficacy=self-efficacy; PeerAtt= Peer Attachment Scale; PeerTr= peer trust; PeerCom=peer communication; PeerAln=peer alienation; FriendshipQ=Friendship Quality Questionnaire; Stim.Com=stimulating companionship; Reliable.A=reliable alliance; Emo. Sec=emotional security. *p <.05; **p <.01.*

Tables 2-5 are based on regression analysis which were conducted to check the role of peer attachment, friendship quality, attachment styles (secure, fearful, preoccupied, dismissing) and socio-demographic variables (age, birth order, number of close friends, number of siblings ant time spent together) in predicting psychological capital. Hierarchical regression analysis was conducted to check whether different attachment styles and socio-demographic variables when added with peer attachment and friendship quality in steps accounted for more significant prediction in psychological capital. However, only significant results have been shown. Analysis on pre-occupied attachment style and dismissing attachment style with peer attachment and friendship quality were non-significant, thus it has not been reported.

Table 2

Hierarchical Regression Analysis of Peer Attachment, Secure Attachment Style on Psychological Capital (N=270)

Model	B	SE	β	p	R^2	ΔR^2	F
Step I							
Constant	80.41	5.05		.000			
Peer Attachment	.242	.052	.273	.000	.074	.071	21.50**
Step II							
Constant	81.14	5.12		.000			
Peer Attachment	.229	.054	.258	.000			
Secure Attachment	3.82	1.50	1.48	.012	.096	.089	14.20**
Step III							
Constant	50.18	11.39		.000			
Peer Attachment	.217	.049	.248	.000			
Secure Attachment	3.17	1.48	.124	.033			
Age	1.14	.584	.146	.012			
Birth order	.032	.534	.005	.952			
No. of close friends	1.36	.506	.210	.008			
No. of siblings	.023	.091	.015	.802			
Time spent Together	.064	.176	.022	.71	.166	.146	7.30**

*$p<.05$; **$p<.01$

Table 8 indicated significant prediction accounting for total 16.6% of variance in psychological capital by peer attachment, secure attachment style, age and number of close friends.

Results showed that in step 1 Peer Attachment is statistically significant predictor and explained 7% of variance in psychological capital. In step 2, peer attachment and secure attachment style both were entered and model was found statistically significant predictors and explained 9.6% of variance in psychological capital. In step 3, peer attachment, secure attachment style, age, birth order, number of close friends, number of siblings and time spent together were entered, in which

peer attachment, secure attachment style, number of close friends and age was found statistically significant predictors and explained 16.6% of variance in psychological capital. However, birth order, no. of siblings and time spent together were the non-significant predictors of psychological capital.

Table 3 indicated significant prediction accounting for total 16.8% of variance in psychological capital by peer attachment, fearful attachment style, age and number of close friends. Results also showed that in step 1 peer attachment is statistically significant predictor and explained 7.1% of variance in psychological capital. In step 2, peer attachment and fearful attachment style both were entered and model was found statistically significant predictors and explained 8.9% of variance in psychological capital. In step 3, peer attachment, fearful attachment style, age, birth order, number of close friends, number of siblings and time spent together were entered, in which peer attachment, fearful attachment style, no. of close friends and age was found statistically significant predictors and explained 16.8% of variance in psychological capital. However, birth order, no. of siblings and time spent together were the non-significant predictors of psychological capital.

Table 3

Hierarchical Regression Analysis of Peer Attachment, Fearful Attachment Style on Psychological Capital (N=270)

Model	B	SE	β	p	R^2	ΔR^2	F
Step I							
Constant	80.41	5.05		.000			
Peer Attachment	.242	.052	.273	.000	.074	.071	21.50**
Step II							
Constant	81.14	5.12		.000			
Peer Attachment	.216	.053	.243	.000			
Fearful attachment	-3.36	1.64	-1.23	.042	.089	.082	12.96**
Step III							
Constant	52.24	11.32		.000			
Peer Attachment	.213	.052	.243	.000			
Fearful attachment	-3.67	1.60	-.135	.023			
Age	1.51	.579	.151	.009			
Birth order	.025	.529	.003	.963			
No. of close friends	1.37	.502	.213	.007			
No. of siblings	.026	.090	.017	.772			
Time spent Together	.097	.175	.033	.580	.168	.145	7.41**

*$p<.05$; **$p<.01$*

Table 4 indicated significant prediction accounting for total 13.3% of variance in psychological capital by friendship quality, secure attachment style, age and number of close friends.

Results also showed that in step 1 friendship quality is statistically significant predictor and explained 3.5% of variance in psychological capital. In step 2, friendship quality and secure attachment style both were entered and model was found statistically significant predictors and explained 5.5% of variance in psychological capital. In step 3, friendship quality, secure attachment style, age, birth order, number of close friends, number of siblings and time spent together were entered, in which friendship quality, secure attachment style, number of close friends and age was found statistically significant predictors and explained 13.3% of variance in psychological capital. However, birth order, number of siblings and time spent together were the non-significant predictors of psychological capital.

Table 4

Hierarchical Regression Analysis of Friendship Quality, Secure Attachment Style on Psychological Capital (N=270)

Model	B	SE	β	p	R^2	ΔR^2	F
Step I							
Constant	89.17	4.68		.000			
Friendship Quality	.219	.070	.188	.002	.035	.032	12.7**
Step II							
Constant	90.10	4.73		.000			
Friendship Quality	.227	.069	.195	.001			
Secure attachment	3.60	1.59	1.39	.020	.055	.048	9.73**
Step III							
Constant	57.81	11.39		.000			
Friendship Quality	.226	.069	.196	.001			
Secure attachment	2.87	1.51	.112	.040			
Age	1.44	.594	.144	.016			
Birth order	.063	.543	.009	.908			
No. of close friends	1.35	.515	.209	.009			
No. of siblings	.017	.093	.011	.851			
Time spent Together	.090	.180	.030	.620	.133	.130	6.16**

*p<.05; **p<.01.

Table 5 indicated significant prediction accounting for total 14.2% of variance in psychological capital by friendship quality, fearful attachment style, age and number of close friends.

Results also showed that in step 1 friendship quality is statistically significant predictor and explained 3.5% of variance in psychological capital. In step 2, friendship quality and fearful attachment style both were entered and model was found statistically significant predictors and explained 6.2% of variance in psychological capital. In step 3, friendship quality, fearful attachment style, age, birth order, number of close friends, number of siblings and time spent together were entered, in which friendship quality, secure attachment style, number of close friends and age was found statistically significant predictors and explained 14.2% of variance in psychological capital. However, birth order, no. of siblings and time spent together were the non-significant predictors of psychological capital.

Table 5

Hierarchical Regression Analysis of Friendship Quality, Fearful Attachment Style on Psychological Capital (N=270)

Model	B	SE	β	p	R^2	ΔR^2	F
Step I							
Constant	89.17	4.68		.000			
Friendship Quality	.219	.070	.188	.002	.035	.032	12.7**
Step II							
Constant	91.17	4.68		.000			
Friendship Quality	.202	.069	.173	.004			
Fearful attachment	-4.53	1.62	-1.66	.006	.062	.055	8.89**
Step III							
Constant	59.22	11.28		.000			
Friendship Quality	.200	.068	.174	.004			
Fearful attachment	-4.85	1.58	-.179	.002			
Age	1.55	.588	.155	.009			
Birth order	.061	.537	.009	.910			
No. of close friends	1.38	.509	.214	.007			
No. of siblings	.042	.091	.027	.649			
Time spent Together	.143	.179	.045	.458	.142	.119	6.10**

*$p<.05$; **$p<.01$.

Discussion

The current study examines the relationship between Attachment styles, Friendship Quality and Psychological Capital in life of adolescents. The study also examined the role of demographic variables such as gender, age, birth order, no of close friends, no of siblings and time spent together on psychological capital. A sample of 300 adolescents was contacted from different schools and colleges of Islamabad and Rawalpindi, out of which 270 individuals were left behind for analysis after cleaning of the data. A scale of Relationship Questionnaire (Bartholomew & Horowitz, 1991), Inventory of Parent and Peer attachment (Armesdon & Greenberg, 1987), McGill Friendship Questionnaire- Friendship Function (Mendelson & Abound, 2014) and Psychological Capital scale (Afzal, 2013) was applied in the current study.

The research hypothesized a strong relationship between psychological capital and peer attachment and friendship quality.

Psychological capital develops with the type of relationships. In this case we study peer attachment and friendship quality which are positively correlated with psychological capital. It is to mention that although peer attachment and friendship quality are overlapping concepts, though they are attaching to different pathways. Friendship taps quality of relationship between peers whereas peer attachment is more focused on measuring individual dependency on their peers. However, keeping in view the findings, which are supported by past literature, it is suggested that children who experienced high positive quality friendships tend to have more self-confidence and better understanding of their self (Bagwell, 2005; Way & Greene, 2006). It is because our interactions with peers is meaningful that contributes a sense of believing self in individual. Also through different psychological pathways (including more intimacy, trust, sharing and revealing secrets, social buck up) individual experience many aspects of their personality which enhances their self-worth.

Is it suggested that attachment with peers is consistently related to self-efficacy and sociability, which can contribute to high positive psychology and successful college adaption (Ford, 1990, as cited in Carey & Borsari, 2006). Having reliable alliance and more communicative peers contributes in self-exploring and ability of adjusting in any situation. Furthermore a number of positive outcomes (less alienation and depression, more trust and higher level of emotional security) is positively linked to attachment with peers with whom to confide, receive validation and interact positively (Wentzel et al., 2004). Having a strong connection with friends increases one's satisfaction with their peers and availability of emotional support from them (Bagwell, 2005).

Further it was hypothesized that peer attachment, attachment styles, age, birth order, no. of close friends and time spent together significantly will predict psychological capital. The result showed that peer attachment, secure attachment style, fearful attachment style, number of close friends and age significantly predict psychological capital.

These findings are consistent with the previous literature. Several studies have suggested positive relations between peer support and individual competency within and across settings. High level of attachment to peers enhances competent functioning among adolescents, including general psychological well-being and ability to cope skillfully with challenges (Fass & Tubman, 2002). Similarly teens with secure attachment style are more confident about the future, engage in more positive learning experiences and involved with the problems and try to find the right solution (Bartholomew, 1991, as cited in Perrone & Wright, 2010).

Results further showed that fearful attachment style negatively predicts psychological capital. The findings are consistent with previous literature. Alonso-Arbiol and Lavy (2010) found out negative association between individual with anxious attachment style and positive developmental states. In addition, Mikulincer (2003) found that fearful style was associated with fewer positive reactions during group interactions and Gentzler and Kerns (2006) found that both anxiety and avoidance were associated with lower levels of efficiency beliefs and critical thinking abilities to face the adversities.

Analysis with regard to age showed significant results in predicting psychological capital. Few studies have addressed the effect of age on individual psychological capital indicating mixed findings. One such study (Isaacowitz, 2005) showed that older adults had a more positive states when explaining life events whereas (Lachman et al., 2008) found out that younger, rather than older, adults had a more optimistic outlook about the future, more flexibility to bounce back from adversities and are more self-confident.

Analysis with regard to number of close friends showed significant results in predicting psychological capital. The present study has taken number of friends as best friends, causal friends and acquaintances. Miething et al. (2016) found out a positive relationship between quality of friendship and increased efficacy. Adolescents with large network of friends are likely to have positive outlook towards their future than peers with fewer connections. Biggs et al. (2010) suggested that having less friends and lack of positive interaction may elicit anxiety which in turn provoke more isolations from peers, thus worsening well-being and effects the adolescent's social skills and positive beliefs about future over time.

The study also hypothesized that friendship quality, attachment styles, age, birth order, no. of close friends and time spent together significantly will predict psychological capital. The result showed that friendship quality, secure attachment style, fearful attachment style, no. of close friends and age significantly predict psychological capital. Findings are consistent with the previous literature. According to Bagwell (2005), adolescents with positive peer support have greater ability to deal with challenges as well to adjust to new social interactions. Moreover, social network reduces fear of failure and enhances the peer's individual capital. According to Baker (2006), secure attach individual reported more resilience which results

in greater ability to cope with unpleasant happenings. High scores in attachment security is associated with more effective skills and actively taking steps to solve the problems. Moreover, their internal security is related to the confidence and assertiveness they demonstrate in social situations (Park et al., 2004).

Results further showed that fearful attachment style negatively predicts psychological capital. The findings are consistent with previous literature. Leclerc (2007) reported that insecure attachment style is associated with fewer social and individual skills, community behavior and quality of life. Research has indicated that individual with avoidant attachment style reported lower level of hope and resilience as well as less ability to perceive positive future and positive attributes in themselves (as cited in Lysaker et al., 2014). According to Sroufe (2005), those with history of avoidant attachment style reported less self-confidence, lower self-worth and ego-resilient. In addition, individuals with insecure working model are linked with less flexibility to bounce back after stressful events and difficulties.

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positive interaction may elicit anxiety which in turn provoke more isolations from peers, thus worsening well-being and effects the adolescent's social skills and positive beliefs about future over time.

Limitations and Suggestions

First limitation is the use of self-report measure in the current study. It could be hindrance in accurate results due to response bias. The participants can response as faking good and faking bad. For resolving this, it is recommended to the researcher to use qualitative methods along with questionnaire. Secondly, the present study has been conducted in only one city of Pakistan. So constrains of generalization can occur. As the sample has not been taken from diverse cultures and cities of Pakistan, there would be no generalizability of present research, so it is suggested to include other cities as a sample as well. Further, it has been suggested to explore psychological capital in different educational settings alike present research. However, keeping the limitation of the present study in mind, it has been recommended to future scholars to avoid exploring overlapping constructs that could contaminate result of the study. Also recommended to apply longitudinal research method to examine how the relationships among these constructs behave over time among adolescents produce some interesting insights

Implications

This research is helpful in knowing the strengths and potentials of adolescents and how early attachment styles and quality of friendship to their peers play their role. As PsyCap is the capital of the people with which they can make their future brighter. The four constructs of PsyCap (hope, optimism. resilience and self-efficacy) can definitely help adolescents to get god grades, to cope with life stressors smoothly and above all to develop a positive outlook towards their future. The result of the present study will help school psychologist to tackle and resolve the problems of adolescents by enhancing their psychological capital and increase positivity in them. Furthermore, this study also provides insight for parents in order to understand the importance of early parent-child

relationship for later positive development as well as to friends that how their closeness and social-emotional support could up bring their peer fellows in positive ways.

Conclusion

The present study indicates that there is a significant positive relationship between psychological capital, peer attachment and friendship quality. It has been shown in the research that among different attachment styles, secure attachment style and fearful attachment style significantly predicts psychological capital along with peer attachment, friendship quality and demographic variables (age, no. of close friends) which was also supported by previous literature. Similarly, gender difference was also examined which showed that boys have high psychological capital than girls. However, there was no significant prediction by dismissing attachment and preoccupied attachment style on psychological capital.

Declaration
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No funding was procured for the current research. It is an outcome of a graduate research project.
Conflict of interest
The authors report no conflict of interest for the present research.
Availability of data
The data is available in the data repository of National Institute of Psychology, Quaid-i-Azam university, Islamabad.
Ethical Approval.
The research was approved by the ethical committee of grade research at National Institute of Psychology, Quaid-i-Azam university, Islamabad.

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Bullying in School Children: Implementation of an Anti bullying Intervention

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Abstract

Background. The present research aims to develop and test a short-term anti-bullying intervention plan to reduce and control bullying behaviors in Government school students.

Method. Taking insight from the literature, an initial intervention plan was developed. Later on, the finalized intervention plan was analyzed through its implementation. For that purpose, teachers from one public sector boys school provided a pre-assessment of fifth graders on the Aggression scale (Orpians & Frankowski, 2001). The cutoff point was used to generate the experimental and control group. It was hypothesized that the experimental group is likely to have a lower score on bullying behavior as compared to the control group after intervention. The final sample consisted of 40 students ($n = 20$ experimental group; $n = 20$ control group) who were selected from a government sector school in Lahore, Pakistan.

Result. The experimental group received three intervention sessions. Post-assessment was done by the teachers of the respective students. Mixed measure ANOVA revealed that post-assessment of the experimental group on aggression scale significantly decreased than the control group.

Conclusion. This research has important implications in the educational setting for the awareness of teachers to control bullying behavior and maintain discipline in schools.

Keywords. Intervention, bullying behavior, aggression, government school, students

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Introduction

Bullying behavior is common in schools, play areas, neighboring localities, family units and circles all over the world (Garrett, 2003; Rivers, 2011). Bullying in schools is a major concern of parents, educationists, and teachers. Bullying among children at school is quite intolerable. It is a social evil because it is cruel and repeated oppression by the powerful over the powerless, without any justification (Mishna, 2012; Rigby, 2007). Bullying behavior is the kind of abusing, exploiting, and raging among students and kids (Rigby, 2003). School bullying has come under strong examination by the public and media (Garrett, 2003). Bullying in school can be defined as the repetitive exposure of a student to the negative actions of another student or a group of students (Olweus, 1994). Children can get involved in bullying in multiple roles. In 2001, Marsh utilized the terms troublemaker and victims. The troublemaker was portrayed as the one breaking the rules, getting into physical battles, and nagging others. The victim is portrayed as a kid who feels vulnerable at school due to threats or physical mischief by somebody at his or her school (Eisenberg & Sztainer, 2007; Halaman, 2012). Unlike other behavioral problems, bullying is not necessarily increased in frequency but the attention given to bullying behavior has increased (Ming & Shing, 2008). Bullying behaviors can be categorized as relational, physical, and verbal. More recently, another form of school bullying was observed due to the use of media for educational purposes named cyberbullying which is not considered in the scope of the present research.

The worldwide prevalence rate of school bullying as per the United Nations Educational, Scientific, and Cultural Organization (UNESCO, 2018) is about one-third of the children which may vary concerning countries and regions. The prevalence rate of school bullying in Pakistan has been explored by a number of researchers. For instance, Shujja et al. (2014) found that the prevalence rate of school bullying was 19.6% - 24.1% among the 16 private and public sector schools. Shahzadi et al. (2019) explored the prevalence and gender difference of school bullying in rural areas of Gujrat and found that around half of the sample experienced a moderate level of victimization. Further, boys showed a higher level of school bullying than girls. More recently, Naveed et al. (2020) explored the prevalence of bullying behaviors among students in five districts. They found that 27% of the respondents were bullied at school. Among the respondents 56 % were boys.

The prevalence rate of school bullying is alarming because of the associated serious consequences. According to teachers and specialists, bullying is recognized as a bifurcate problem including one bully and one victim (Evertson & Weinstein, 2006; Oliver & Candappa, 2003). Victimization experiences of children and adolescents can make them more vulnerable to problematic psychosocial function. Naveed et al. (2019) found that both the victim and perpetrator reported that they experienced depressive symptoms due to bullying.

The prevalence and impact of school bullying call for effective intervention programs and prevention plans to curb the ills of the problem. In 1983 first major anti-bullying intervention for schools was established and its reports for an evaluation with the development of the Olweus Bullying Prevention program indicated a reduction in bullying. This program alerted many educationists to consider that interventions could be effective in reducing bullying and intervention programs always results in significant reductions in bullying behavior (Smith et al., 2004).

A large body of research indicated the effectiveness of intervention programs to reduce the level of bullying (Bauer et al., 2007; Besag, 1989; Frey et al., 2005; Hanif et al., 2011; Nau et al., 2009; Peng et al., 2022; Ttofi & Farrington, 2011; Yaakub et al., 2010). This claim was also supported by a meta-analysis of

individual participants' data by Hensums et al. (2022). Moreover, another meta-analysis was done to see the effectiveness of bullying intervention and found that all of the selected 100 programs contributed to the reduction of school bullying (Gaffey et al., 2019). In conclusion, bullying can be reduced by applying a proper, positive, and validated intervention. The application of bullying behavior reduction interventions at an early age enables students to avoid bullying and being bullied (Bashir & Bashir, 2011).

Rationale

Bullying is an intolerable social evil because it results in many destructive and hurting behaviors (Rigby, 2007). Overall school environment and teachers are responsible for the reduction or prevention of bullying by creating a positive environment to enhance students' capability to avoid or face bullying behavior (Tangent & Campbell, 2010). However, bullying behavior is a major issue especially in government schools due to less attention from teachers (Rigby, 2007).

Global literature highlighted the importance and effectiveness of intervention plans to reduce bullying behaviors in school (Peng et al., 2022; Suhendar & Halimi, 2023; Wulandari et al., 2022). Over time, several Pakistani researchers also explored this phenomenon, however, it is overlooked in terms of applied solutions to reduce and prevent bullying behaviors in schools. Most of the research in Pakistan focused on exploring the prevalence of bullying behaviors and the impacts of bullying behaviors. To the best of our knowledge and a review of Srinivasan et al. (2022), three longitudinal studies were conducted using randomized controlled trials (Asad et al., 2017; Karmaliani et al., 2020; McFarlane et al., 2017) which highlighted the need for a short term intervention to control the immediate consequences. A short-term intervention program can help the school to take

Procedure

a stand against bullying (Smith et al., 2004). Therefore, the present study aimed to develop an intervention for bullying behavior as well as to check its efficacy among Government sector students. Through this short-term intervention program, students learn about bullying, its effects on self and others, and strategies to overcome the problem to maintain a positive environment. The following hypothesis was formulated in this regard.

Hypothesis: The experimental group is likely to have a lower score on bullying behavior as compared to the control group after intervention (interaction effect).

Method

Research Design and Sample

This quasi-experimental research utilized a pre-test and post-test control group design without random assignment. The Sample consisted of 40 students ($n = 20$ experimental group; $n = 20$ control group), with an age range of 8-11 ($M = 9.5$ years, $SD = 0.8$) selected from one public sector school in Lahore, Pakistan. Only boys in fifth grade were included in the research to reduce gender bias. Students who scored high on the aggression scale were selected for the experimental group and others who scored low on the scale were taken for the control group. The respective class teachers filled in a bullying behavior scale for their students.

Assessment Measures

Aggression scale. The aggression scale (Orpinas & Frankowski, 2001) is an 11-item measure used to assess the level of bullying behavior. The scale includes mainly overt aggressive behaviors, including verbal aggression in which teasing, name-calling, encouraging students to fight, and threatening to hurt or hit are included. Physical aggression includes pushing, slapping, kicking, and hitting. Bullying is the total score of the participant on the aggression scale. The Aggression scale scores range from 0 - 66.

The present study follows a systematic process to check the efficacy of the newly

developed intervention (i.e., anti-bullying intervention). The study started with the development of the intervention and ended up by analyzing its efficacy. The detailed process is as follows.

1. Development of Intervention

The first step of the study was the development of the intervention protocol. For this purpose, relevant literature was explored which indicated the importance of media in bullying behaviors (such as social learning theory). Therefore, movie clips, stories, and presentations containing images regarding bullying behavior and its negative effects were used as the intervention. These Urdu clips and stories were browsed on online visual content sites (such as YouTube). Only those video clips and stories were selected that contained bullying behavior (verbal and non-verbal) and strategies to restrain and stop the bullying behaviors. The selected content was rated by three experts for its relevance to bullying behaviors. It was ensured that only selected material that was approved by all three experts was utilized further. Considering the experts' opinions and suggestions, the explanation of each movie clip, story, and image was narrated in easy and clear language to ensure understanding by the intervention participants. The whole content was then divided into three sessions of approximately 40-50 minutes. The brief overview of the sessions is as follows.

Table 1

Summary of Sessions

Session 1	• Rapport building
	• Movie clips and stories depicting bullying behavior, particularly verbal bullying.
	• PowerPoint presentation about the defining aspects of bullying behaviors, the nature of bullying behaviors, verbal bullying, and its effects.
Session 2	• Movie clips and stories containing non-verbal bullying behavior.
	• PowerPoints presentation about the causes and effects of non-verbal bullying
Session 3	• Movies, clips, and stories about handling bullying behavior.
	• PowerPoint presentation about the effect of bullying behaviors on the victim and others in the surrounding.
	• Strategies to handle and stop bullying behaviors: coping mechanisms and development of a positive attitude of students

In the first session, clips and stories related to verbal bullying behavior and name-calling were shown in order to guide about verbal bullying, its nature, and its effects. The second session was about non-verbal bullying and its causes and effects. In the third session stories, a PowerPoint presentation, and movie clips were shown about bye-bye bullying and what to do when someone gets bullied. It includes some ways to cope with a certain situation. It was about creating a positive attitude among students toward everyone.

2. Pilot Testing

After the development of the intervention, the pilot testing of the whole material was done to see if the researcher can communicate the information to the prospective participants. It was also done to analyze any difficulty related to the understanding of the material by the participants. Pilot testing was done on two students and the issues raised during the process were resolved for the finalization of the intervention content.

3. Ethical Consent

After the finalization, the whole material was presented before the ethical committee for ethical approval. Moreover, permission was sorted from the head of the school as well as from the parents of the participants as the intervention was developed for children. Parents were informed about the aim and importance of the research, confidentiality, and the right to withdraw their children from the experiment.

4. Data collection

For the implementation of the intervention, one public sector school was approached. With the approval of the school authority, they were requested to schedule the meeting researcher with teachers of the fifth grade. Teachers provided ratings of their respective students on the aggression scale before and after the implementation of the intervention. Testing was scheduled during the free time of the teachers and they were informed about the purpose and importance of the research.

5. Groups

Based on the pre-assessment scorers, the students were clustered into two groups. *The experimental group* consisted of the students who scored high on the aggression scale while the *control group* consisted of the students who scored lower on the aggression scale based on the cutoff point of the scale. Three sessions of intervention with a gap of two days were provided to the experimental group. During the first meeting, the researcher introduced herself to the experimental group participants and also gave a brief view of the experiment. During all three sessions, students have been explained the purpose and detail of each movie clip, story, and image in the presentation before and after showing them in easy and understandable language and ensuring they understand what message was given in it.

The sample initially consisted of 89 participants. On the basis of cutoff scores on the aggression scale, the control group consisted of 40 participants while the experimental group consisted of 49 participants. More than half of the participants were absent during one of the three sessions which were excluded. This reduced the final data set of the experimental group to 20 participants. To make both groups more comparable, 20 participants from the control group were randomly selected.

6. Post Assessment

Post-assessment was conducted after one week after the last session of the intervention. The same teacher of the finalized set of students provided post-assessment. After that, the participants and teachers were warmly thanked for their cooperation.

Results

Before conducting the main analysis, the reliability and descriptive statistics of the scale were analyzed. This was done to see the internal consistency as well as to see the cutoff point for the experimental and control group. Table 2 provides an overview of descriptive statistics and reliability.

Table 2

Internal Consistencies and Descriptive Statistics of Aggression Scale

Scale	k	α	Median	SD	Min-Max	Skewness	Kurtosis
Pre Testing	11	.88	42.00	7.99	0-66	-0.03	-0.30
Post Testing	11	.94	25.00	11.34	0-66	-0.30	-1.50

Table 2 presents that the scale showed excellent internal consistency in general. Moreover, all the data were normally distributed as indicated by the normality parameters of skewness and kurtosis. The median value of the scale during pre-testing was 42. So the participants with a score of 42 and higher were grouped as experimental participants and those lower than the cutoff point were grouped as control participants.

Participants in both groups were boys in fifth grade to avoid biases in the findings. Before conducting the main analysis, both groups were compared on the basis of age and found no differences. Further to assess the effectiveness of the intervention, mixed measure ANOVA was conducted considering two levels of assessment (i.e., pre and post-assessment) and two groups (experimental and control group). Table 3 provides an overview of mixed-measure ANOVA .

Table 3

Mixed Measure ANOVA of Pre and Post Assessment Considering Experimental and Control Group

Variables	Experimental Group				Control Group				
	Pre		Post		Pre		Post		
	M	SD	M	SD	M	SD	M	SD	F
Main Effect	47.05	7.66	18.05	2.56	38.65	5.93	38.50	6.12	267.18***
Interaction Effect									261.70***

Mixed Measure ANOVA revealed a significant difference in the main effect of pre and post-assessment which means that the overall sample significantly improved on the post-assessment of aggression with respect to the pre-assessment of aggression. Moreover, the table indicated that the interaction of assessment with the groups was also significant which means that pre and post-assessment changed with respect to the experimental and control group. Figure 1 provides an overview of the significant interaction effect.
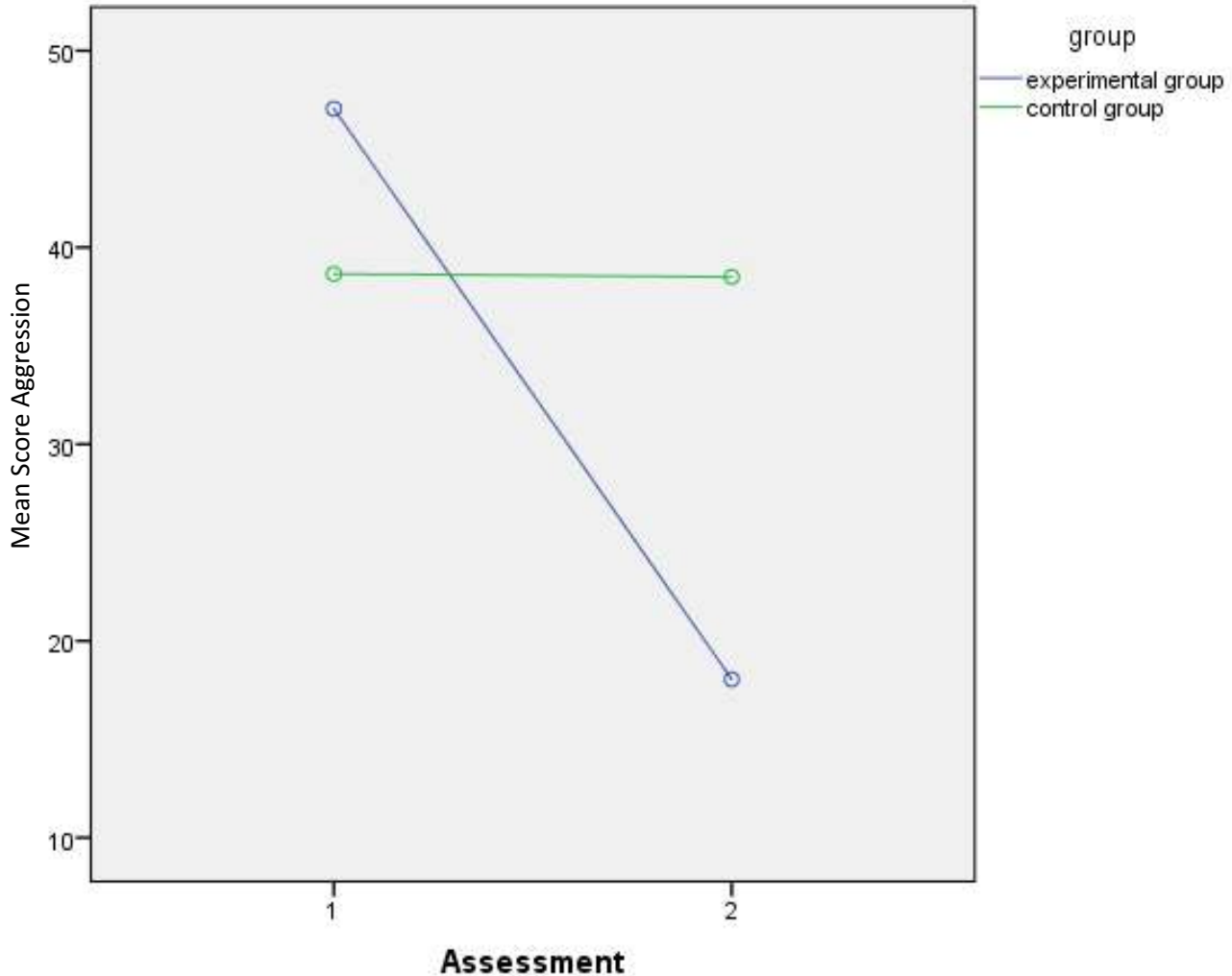
Figure 1. *N* = 40. Graph Showing Main and Interaction Effects of Assessment (Pre and Post) concerning Groups (i.e., experimental and control group). 1 = pre-assessment, 2 = post assessment

The figure indicated that at the time of pre-assessment, the experimental group scored higher than the control group. However, after the intervention, the experimental group significantly scored lower than the control group whereas no differences were found between pre and post-assessment of the control group.

Discussion

This research developed an anti-bullying intervention plan and examined its efficacy to ensure the immediate impact of the intervention on fifth-grade students. The research contributed to international literature as another intervention program to control and handle bullying behavior. Moreover, it also adds to the indigenous Pakistani literature by developing a short-term intervention for fifth-grade students in public sector schools. The intervention plan was culture-specific as well as cost-effective. The findings of this research indicated the efficacy of the program and are supported by the existing literature.

The results showed that intervention brought considerable change in the bullying behavior of students. Scores of pre-assessing bullying behavior of the experimental group were higher, but after receiving intervention in post-assessment score was considerably low.

Moreover, the pre and post-assessment of the control group showed marginal non-significant changes. Precisely, there was a decrease in bullying behavior in the experimental group of students due to anti-bullying intervention. The huge differences in the pre and post-assessment of the intervention group can be supported by Hensums et al. (2022) who found that bullying of victims reduced more strongly among participants under 12 years as a consequence of anti-bullying intervention. The results of the current study are consistent with previous literature (Bauer et al., 2007; Besag, 1989; Frey et al., 2005; Hanif et al., 2011; Nau et al., 2009; Ttofi & Farrington, 2011) that aggressive and bullying behavior can be reduced with training and intervention program. A recent meta-analysis study by Gaffey et al. (2019) indicated that any kind of intervention programs and training plans contribute to the reduction of school bullying. The same finding was found in another meta-analysis done by Ttofi and Farrington (2001) on the effectiveness of school-based programs to reduce bullying. Results showed that overall, school-based anti-bullying programs are effective and bullying or victimization decreased. The intervention used in the present research was also effective in reducing bullying as it included awareness of bullied or bullying about their or others' behavior.

The present findings of the short-term anti-bullying intervention can be supported by the three existing indigenous studies which were conducted using randomized controlled trials (Asad et al., 2017; Karmaliani et al., 2020; McFarlane et al., 2017). These longitudinal studies concluded that the intervention can positively influence the school environment as a whole and may contribute to controlling bullying behaviors. The negative association between mindfulness and bullying behaviors was also found in another study (Abid et al., 2017). All of these studies also supported the efficacy of the anti-bullying intervention in the cultural context of Pakistan. Moreover, the present findings are in line with the idea that it is very easy to reduce the level of bullying in school children as their minds are in a growing phase and they can adapt to positive things easily as compared to adolescents (Rivers, 2011; Roland & Galloway, 2002). For instance, previous research by Stevens et al. (2000) on bullying in Flemish schools proved that aggression is reduced easily in primary school children as compared to older ones. It is consistent with the result of the current study as being primary class they showed a noticeable reduction in their bullying behavior after receiving the intervention. In light of the discussion, it is concluded that bullying behavior can be prevented by implementing probable intervention programs, regarding awareness about bullying behavior, and bullying or bullied students' behavior.

Limitations and Recommendations

The main limitation of the study was that video clips that were shown to the students were visually understandable by them but had average difficulty due to language. It is suggested that live video clips should be captured, regarding the bullying behavior of students in playgrounds, and classrooms, and used in future intervention programs. The research sample was limited to boys of a particular age range (fifth grade only) and small in size. Therefore, the research findings have low generalizability in general. Lastly, the intervention was particularly utilized for public sector students but private sector students also face school bullying. This also limits the scope of the study and its generalizability.

Future research may test this intervention for students of different grade levels and from different socioeconomic backgrounds and on a sample of girls.

Implications

Schools play an important role in its prevention, early intervention with students who display aggressive behavior is important because they are at risk for future violent behavior, delinquency, and school withdrawal

(McPherson & Macfarlane, 2004; Orpinas & Frankowski, 2001). Bullying is pervasive and perhaps the most underreported problem in government schools (Nau et al., 2010; Pamela & Raczynski, 2012). The research has strong implications in educational settings and especially for elementary or primary students who are in a phase of understanding and analyzing complex things and behaviors. In the future, the intervention can be utilized by primary students in the private sector too.

Research would increase the level of awareness for teachers and parents to lower the level of bullying behavior. It is evident that parental involvement in anti-bullying programs increases empathy and reduces bullying behaviors (Cunha et al., 2023). Moreover, as the teacher is responsible for maintaining a positive classroom environment it causes bullying to reduce. The effectiveness of the intervention implies that anti-bullying programs should be introduced to train teachers for reducing bullying (Smith et al., 2004). Findings are also fruitful for future researchers to develop intervention programs to reduce the level of bullying in school students. Moreover, the findings can be utilized by the stakeholders for the adoption of effective new policies which can help the children to attain psychological health and balanced functioning.

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Conflict of interest
The authors report no conflict of interest for the present research.
Availability of data
The data that support the findings of this study are available from the corresponding author upon reasonable request.
Ethical Approval.
The research was approved by the ethical committee of Institute of Applied Psychology, University of the Punjab, Pakistan

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Research Article

Associations between Behavioral, Emotional, Cognitive Self-Regulation and Adolescent Mental Health and Psychosocial Strengths

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Abstract

Background. Self-regulation is an essential developmental asset during adolescence related to the prevention and promotion of mental health. This research aimed to analyze how various domains of self-regulation (behavioral, emotional and cognitive) were associated with mental health (internalizing and externalizing problems) and psychosocial strengths (interpersonal strengths, intrapersonal strengths and family involvement) among adolescents. A secondary aim was to analyze gender differences in these effects and in self-regulation.

Method. A cross-sectional survey research design was used to collect data from 373 adolescents (age range = 10 – 18 years; 188 boys, 215 girls) through a convenient sampling technique from the five provinces of Pakistan. Behavior Rating Inventory of Executive Functions (BRIEF-2), Strength and Difficulty Questionnaire (SDQ), and Behavior and Emotional Rating Scale (BERS-2) were used to measure the study variables.

Results. Results indicated that ineffective behavioral, emotional, and cognitive regulation were significant predictors of externalizing problems while ineffective emotional and cognitive regulation significantly predicted internalizing problems. Ineffective behavioral and cognitive regulation significantly negatively predicted interpersonal strengths. Only cognitive regulation appeared as a significant predictor for intrapersonal strengths and family involvement. Multigroup analyses revealed no significant gender differences.

Conclusion. The findings highlight the differential relationship of self-regulation with mental health and psychosocial strengths which can inform practices in the prevention and promotion of mental health in adolescents.

Keywords. Emotion regulation, behavior regulation, cognitive regulation, psychosocial, strengths, mental health

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Introduction

According to World Health Organization, mental health is not the absence of mental illness; rather it is a "state of wellbeing in which the individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community" (World Health Organization, 2004). This definition emphasizes taking a holistic approach in conceptualizing mental health not just focusing on mental health related problems or strengths alone. Research in children and adolescents' mental health from lower and middle incomes countries (LMICs) indicated that embracing a multicomponent mental health promotion is effective rather than a disease driven model (Zhou et al., 2020). Adolescents are suffering from mental health related problems with a worldwide prevalence of common mental disorders at 25% (Silva et al., 2020), with even high prevalence rates in LMICs, necessitating to utilize a holistic approach to promote prevention and promotion of mental health. Self-regulatory skills are one of these stage salient malleable risk factors during adolescents that can be targeted.

Self-regulation can be defined as 'the ability to flexibly activate, monitor, inhibit, persevere and/or adapt one's behavior, attention, emotions and cognitive strategies in response to direction from internal cues, environmental stimuli and feedback from others, in an attempt to attain personally-relevant goals' (Moilanen, 2007, p.1). Self-regulation is a meta-cognitive multidimensional skill that requires executive functions like working memory, planning, organization, and self-control (Hofmann et al., 2012; Nigg, 2017). Broadly speaking executives functions are categorized in three distinct yet related areas which are working memory, inhibitory control and cognitive flexibility (Nyongesa et al., 2019) which also underlie three broad distinct yet related dimensions of self-regulation i.e. cognitive , emotional and behavioral.

Adolescence is a unique and formative phase of life where many physical, emotional, behavioral, cognitive, and neurobiological changes are taking place amid a challenging and demanding social world which require effective self-regulatory skills (te Brinke et al., 2021; Verzeletti et al., 2016; Zafar et al., 2021). These neurobiological changes create a window of opportunity to develop and practice effective executive functions underlying self-regulation to promote mental health and psychosocial strengths in adolescence (Williams et al., 2023). Effective self-regulation has been linked with positive outcomes in various domains including academic, intrapersonal, and interpersonal (Farley, Julee & Kim-Spoon, 2014; Gestsdottir et al., 2011; Murray & Rosanbalm, 2017). Adolescents are expected to manage their emotions and behavior in an ever changing social context, to develop and maintain appropriate social ties with family, friends and others, and to perform well in academic and other areas of life within the boundaries of social norms and expectations. All of these psychosocial strengths require effective self-regulatory skills (Bowers et al., 2015; Lerner et al., 2021; Stefansson et al., 2018). For example adolescents having appropriate self-control will benefit from forming and maintaining interpersonal relationship with parents, peers and significant others (Rawn & Vohs, 2006) .

Similarly, ineffective self-regulation is correlated with poor developmental outcomes (Perry et al., 2018; Robson et al., 2020), becoming more vulnerable to cumulative stress, unresolved problems, and a higher chance of mental health problems (Essau, Cecilia et al., 2017; Genugten, Dusseldorp, Massey, & Van, 2016; Lerner et al., 2011). A meta-analysis on the effectiveness of self-regulation based interventions for mental health problems indicated that primary interventions had small to medium effect size for internalizing problems, and secondary interventions had medium to large short-term effect for internalizing problems (Genugten, Dusseldorp, Massey, & Van, 2016) signifying the causal linkage of self-regulation with mental health problems. Different domains of self-regulation are linked differently with specific mental health problems for example,

emotional regulation is related to internalizing and externalizing disorders (Hagler et al., 2016; Loevaas et al., 2018; Sackl-Pammer et al., 2019); while working memory, which is a process of cognitive regulation, is studied extensively in relation to internalizing disorders (Moran, 2016). Another study on differential linkages of emotion regulation to mental health indicated that adolescents having internalizing problems used cognitive regulation significantly and adolescents with externalizing problems used more behavioral regulation (te Brinke et al., 2021) thus signifying the specific linkages of self-regulatory domains.

Behavioral Regulation, Mental Health Problems and Psychosocial Strengths

Behavioral regulation is defined as modulating and directing one's behavior (Ilkowska & Engle, 2010). The executive functions underlying behavioral self-regulations are self-monitor and inhibit/self-control. Self-monitoring is defined as the awareness of the impact of one's behavior on other people and outcomes. Inhibit/self-control is defined as ability to inhibit, resist and not act on an impulse and the ability to stop one's behavior at the right time (Gerard & Peter, 2013). Self-control is regarded as a "cool" executive function because it requires conscious efforts to inhibit one's behavior (Fernández García et al., 2021). A retrospective study on adolescent self-control indicated that self-control remains stable from adolescence to adulthood, and better self-control was linked with good mental health and physical health in adulthood (Yang & Jiang, 2022). A longitudinal study on adolescent self-control, mental health problems and family functioning indicated that self-control and both internalizing and externalizing problems had moderate concurrent association (Kim et al., 2022). A meta-analysis on self-control indicated that there is a medium effect size of self-control on wellbeing indictors including interpersonal relationship (de Ridder et al., 2012). Better self-control helps in interpersonal relationship directly by refraining from behaviors due to impulsivity and indirectly by helping adolescence to resist temptation to involve in undesirable behaviors (Tangney et al., 2018).

Self-control is also linked with trust which is an important element in establishing and maintaining interpersonal relationship. An experimental study indicated that people perceived about the self-control of other peoples and then use that perception to form judgment about their trustworthiness. Those people who were perceived to have higher self-control were judged as more trustworthy in interpersonal relationships (Righetti & Finkenauer, 2011).

The second executive function underlying behavioral self-regulation is self-monitoring which is often studied in intervention based studies to reduce mental health problems. Studies have indicated that ineffective self-monitoring is linked with ADHD and autism but it can be improved through interventions thereby reducing symptoms of ADHD and autism(Mahmoud Mirnasab et al., 2011; McKenna, 2020). A study on Chinese adolescents indicated that self-monitoring was a significant predictor of internalizing and externalizing problems (Nie et al., 2014). A review of self-monitoring in behavioral management indicated that self-monitoring is an essential component of various interventions including cognitive behavior therapy, motivational interviewing(J. A. Chen et al., 2017). Historically, self-monitoring has been studied extensively for formation and maintenance of interpersonal relationships including friends, romantic partners, and marriage. Those who have a tendency to self-monitor are able to adapt their behavior pragmatically thus enhancing interpersonal effectiveness while those having low self-monitoring follow their internal values and act according to their disposition rather than situational demands(Leone & Hawkins, 2006). The social cognitive model accounts self-monitoring as an important step for realistic goal setting and evaluation of one's progress towards the goal (Bandura, 1991). Thus, who are high in self-monitoring will be able to set realistic goals in various domains of life and works toward achieving them.

Emotional-Regulation, Mental Health Problems and Psychosocial Strengths

Emotional regulation is defined as a set of processes that serve to modulate, maintain, or enhance the intensity and valence of emotional experiences (Eisenberg et al., 2010). Executive functions related to emotional regulation are shift and emotional control. Shift is defined as ability to move freely from one situation to another, or from activity to another as the circumstances demands. The ability to shift require flexibility in problem solving, and switching attention as required (Gerard & Peter, 2013). For example the ability to shift one's attention easily as compared to inflexibility or rumination (McRae & Gross, 2020; te Brinke et al., 2021). Emotional control is defined as the ability to modulate emotional responses. For example those children who have less emotional control will have extreme emotional reactions to minor events, may have anger outbursts and frequent mood fluctuations(Gerard & Peter, 2013). Emotional regulation has been regarded as a trans-diagnostic risk factor for externalizing as well as internalizing problems including conduct related disorders, anxiety related disorders and depression (Aldao, 2016). A recent meta-analysis on self-regulation interventions effectiveness in early adolescents indicated emotional regulation as the most critical component for improving emotional and behavioral outcomes (Murray et al., 2022). Reduced cognitive reappraisal and increased use of negative rumination are particularly present across disorders (Cludius et al., 2020) including ADHD, Depression, Mood disorders, and suicidality (Paulus et al., 2021). Similarly, the use of effective emotional regulation is linked with psychosocial strengths in adolescents. Emotion regulation is an important regulatory skills necessary for effective interactions by shifting the attention to relevant subject matter/action, and having sufficient emotional control on one's feelings (Junge et al., 2020; Verzeletti et al., 2016; Young et al., 2019) . Longitudinal studies have indicated that suppression was predictor of weaker social connection for example less close relationships while reappraisal predicted stronger social connections (English et al., 2012). Another study indicated that emotional suppression predicted lower friendship satisfaction in adolescent males (Chervonsky & Hunt, 2019). Effective emotional regulation is linked with interpersonal effectiveness in close relationships (W. L. Chen & Liao, 2021) and prosocial behavior (Teuber et al., 2022). A study on emotional dysregulation and psychopathology in Pakistani adolescents indicated that emotional dysregulation explained significant variance in a range of mental health problems including anxiety, depression, anger, and borderline personality features and these effects more pronounced and statistically significant for girls as compared to boys (Zafar et al., 2021).

Cognitive-Regulation, Mental Health Problems and Psychosocial Strengths

Cognitive regulation is defined as regulation of one's own thinking processes and focusing one's attention on desirable goal (Santosh et al., 2015). The executive functions underlying cognitive regulations are task completion, working memory and planning/organizing tasks. These executive functions are regarded as "cool" executive functions because they require more logic and involve conscious control of thoughts and actions without an affective component (Poon, 2017). These skills are widely studied as predictor of academic performance indicating that effective cognitive regulation predict good academic performance as compared to other dimensions of self-regulation (Poon, 2017) A study on preschoolers executive functions indicated that deficits in working memory were related positively to in-attention problems, and negatively to adaptability and social skills (Romero-López et al., 2018). Working memory is found to be interfered by anxiety (Lukasik et al., 2019; Moran, 2016; Ward et al., 2020).Working memory deficits are regarded as common cognitive liability for mental health problems but particularly for externalizing disorders (Endres et al., 2011; Huang-Pollock et al., 2017).

Individual Differences in Self-regulation

Research has supported significant gender and age differences in self-regulation domains.

Girls are reported to have better regulatory skills compared to boys; female adolescents reported higher self-control, attention, and self-monitoring as compared to boys (Hagler et al., 2016; Shulman, Elizabeth et al., 2015; Tetering et al., 2020). A study on preadolescents reported that boys with high intelligence had better working memory and inhibition as compared to girls (Gómez-Pérez et al., 2020). A study on Dutch adolescents reported that early adolescents have better self-control, self-monitoring, and attention skills than middle adolescents. A systematic review on individual differences in hot and cool executive functions indicated that ability to inhibit a prepotent response, and set-shifting was developed by the age of twelve equal to an adult performance but the ability to inhibit that involve a higher cognitive load kept on developing after twelve years of age; similarly hot executive functions like impulse control and decision making continue to develop throughout adolescence (Fernández García et al., 2021). A meta-analysis on self-control indicated that age moderate the relationship between self-control and other outcomes variables such that there is stronger effect of self-control in younger samples. The study also reported that effects of self-control on desirable behavior was equal in boys and girls but for undesirable behaviors like eating disorder, school and work performance the effect in girls was smaller as compared to boys (de Ridder et al., 2012).

Rationale of Present Research

The present study attempts to address the existing gap in the literature by taking into account the multidimensional nature of self-regulation (behavioral, emotional, and cognitive) and linking these with mental health problems and psychosocial strengths simultaneously (internalizing problems, externalizing problems, interpersonal strength, intrapersonal strength, and family involvement). Exploring the relationship of several domains of self-regulation with mental health and psychosocial strengths can aid in designing strength-based curative and preventive interventions for adolescents (Genugten, Dusseldorp, Massey, & Empelen, 2016). Because

significant gender and age related differences are reported in the development of self-regulation (Zelazo & Carlson, 2012) therefore, the present research aims to explore age and gender differences in the relationship of self-regulation and outcomes variables. There is scarcity of literature on the relationship of self-regulation, mental health and psychosocial strengths in Pakistan and mental health problems are higher in adolescents in Pakistan (Khalid et al., 2019). Based upon existing literature it is hypothesized that the three types of self-regulation (behavioral, emotional and cognitive) would significantly predict mental health problems and psychosocial strengths in such a way that ineffective self-regulation will be a positive predictor of mental health problems and negative predictor of psychosocial strengths(Eisenberg et al., 2017; te Brinke et al., 2021). Emotional regulation will be a strong predictor of internalizing problems and behavioral regulation will be a stronger predictor for externalizing problems (Desiree W. Murray et al., 2022; Zelazo & Carlson, 2012).

Method

Participants

The inclusion criteria for present research were age range from 11 to 18 years of age, no disability and diagnosed mental health problems, and living with parents. The sample consisted of 407 school-going adolescents (188 boys, 215 girls) ranging in age from 10 to 18 years (M= 15.08; SD= 2.03). The participants were further grouped into early (10 to 14 years old; n=137), middle (15 to 16 years old; n=158) and late (17 to 18 years, n=105) adolescents. Majority of the participants were from private schools (n=219, 53.8%). Participants lived in different provinces of Pakistan (Punjab= 170,41.8%; Balochistan = 17, 4.2%; Khyber Pakhtunkhwa=21, 10.1%; Gilgit Baltistan=28, 6.9%; Sindh= 21, 5.2%; Azad Jammu Kashmir= 50, 12.3%; Islamabad= 69, 17%). All participants were fluent in reading and speaking the Urdu language. Because data collection was carried out from December 2020 to September 2021, participants were also asked about whether they or any family member suffered from COVID-19

because it may impact mental health outcomes. Most (72.5%) participants reported that neither they nor their families had experienced COVID-19.

Assessment Measures

For the present research, scales were translated and adapted in Urdu language by following WHO guidelines (World Health Organization, 2010). Permissions to translate, adapt and using the questionnaire in study was taken from authors. Three forward translations were acquired by three independent persons, followed by a committee approach with psychology postgraduates to finalize the translations. Then, one back translation of the final version was acquired and compared with the original scale. Lastly, cognitive interviewing was carried out with ten participants to check their understanding and ease to complete the questionnaire.

Behavior Rating Inventory of Executive Function (BRIEF) (Gerard & Peter, 2013). The 55 items self-report version was used to measure self-regulation and its three subdomains i.e. Behavior Regulation Index (BRI), Emotional Regulation Index (ERI) and Cognitive Regulation Index (CRI). This scale can be used for children from 5 years to 18 years of age group. There are seven clinical subscales, namely inhibit and, self-monitor comprising BRI; shift and emotional control comprising ERI, and; task completion, working memory and plan/organize making CRI. The scale had good reliability estimates for subscales and overall scale ranging from .79 to .97 in the present study. High scores mean ineffective self-regulation, and lower score means effective self-regulation.

Behavior and Emotional Rating Scale (BERS-2) (Buckley & Epstein, 2004). This scale assesses behavioral and emotional strengths of children from 11 to 18 years of age. There are 57 items that measure five domains including interpersonal strengths (IS), intrapersonal strengths (IP), school functioning (SF), family involvement (FI), and career strength (CS). BERS has adequate test-retest reliability (.94) and internal consistency

(α=.96). Scores are summed to generate subscale and total score where high score indicates more strengths and vice versa. For the present research IS,IP, and FI subscales were used. Interpersonal strength (IS) includes the ability of active listening, admitting mistakes, sharing, emotional maturity, and accepting consequences of one's behavior. Intrapersonal strength (IP) includes taking good care of self, asking for help when needed, having certain hobbies, self-awareness, belief in self, and positive affect. Family involvement (FI) includes following family rules, doing things with family, getting well along parents and siblings, and sense of connectedness with family and community.

Strengths and Difficulties Questionnaire (SDQ) (Goodman et al., 1998). The SDQ is a brief self-reported 25-item screening instrument for problematic behavior and prosocial behavior from 11 to 16 years of age group. There are five subscales each comprising of 5 items i.e., emotional symptoms, peer relationship problems (making up internalizing disorders) conduct problems, hyperactivity (making up externalizing disorders), and prosocial behavior. Each item is scored from 0 to 2 on a three-point scale. In the present research, Cronbach alpha estimate of internalizing subscale was .66 and .68 for externalizing subscale.

Procedure

Ethical approval was taken from the ethical board of the university of first and second author. For sampling, seven strata were made according to the provinces of Pakistan. Non-equal sample size was taken from each stratum, depending on the population size in each strata. The data of present study was collected via convenience sampling technique, as it was done during 2020 and 2021 lockdown when schools were closed; so participants were approached in their home. Written informed consent was taken from parents and assent was taken from participants separately. Participants read the questionnaire and filled it.

Statistical Analysis Plan. SPSS version 23 and AMOS version 24 was used for data analyses. Normality assumptions were checked by

histogram, normality probability plots, skewness and kurtosis. Box's M test, and Levene's test of equality of error variance were used to check equality of covariance matrices. Reliability analyses were used for measuring internal consistency of scales and subscales. Two way MANOVA was used to check age (early, middle, late adolescent groups), and gender (male, female) differences in self-regulation domains (BRI, ERI, CRI). Pillai's Trace was used to estimate the significant value because of homogenous variance in groups in multivariate testing. A p value of $\leq .05$ was used as statistically significant. Partial eta squared (η^2) was used as a measure of effect-size for the significant outcomes. Post-hoc analysis was used to check age differences in sub-domains separately with Bonferroni analysis using Scheffe correction because of unequal sample size in different groups.

Maximum likelihood method estimation was used in the path analyses. The absolute value of the skewness (±2), kurtosis (±7) and multivariate (≤8) was checked for normality assumption in path analyses and for the appropriateness of maximum likelihood estimation. Coefficient (Finney & DiStefano, 2006) . For checking model fit comparative fit index (CFI), Tucker-Lewis index (TLI), and approximate root mean square error of approximation (RMSEA) were used. A good model fit is achieved if the CFI and TLI values are above 0.90 and the RMSEA value ranges from 0.05 to 0.08, providing a reasonable and appropriate fit(Kline, 2015). For multiple group analysis chi-square values and p value was used to decide for the best model fit. Parameter constraint were used to check for group differences in the model using Chi-square significance test.

Results

Missing Data

There was 2% missing data in internalizing and externalizing scores and interpersonal strength scores. There was less than 1% missing in family involvement, BRI, ERI, and CRI composite scores. 1.7% data was missing in age, and 1% in the gender variable. Missing cases were excluded list wise in the analyses. The composite score of all subscales of every participant was computed if 80% data was filled per subscale. Missing data was pairwise excluded in the analyses. All analyses were performed excluding missing values (n=373).

Descriptive Statistics

Alpha reliability estimates of BRIEF subscales were good while reliability estimates of SDQ subscales was adequate. Previous studies on SDQ reliability and factor structure in Pakistan indicated similar reliability estimates in adolescents indicating that the negative items particularly lower downs the alpha level (Cecilia A Essau et al., 2017). Reliability estimates of BERS also falls in acceptable to good range The heterogeneity of present sample and high number of items in present survey could also be the reasons for some slightly low reliability estimates (Ursachi et al., 2015). Value of skewness and kurtosis were within range and indicating normal distribution of data (Table 1).

Table 1

Psychometric Properties of Study Scales and Subscales (N=373)

Scale	α	No. of Items	M	SD	Range		Skew	Kurtosis
					Possible	Actual		
BRI	.72	13	22.45	4.59	13-36	12-35	0.10	-0.69
ERI	.75	14	24.79	4.85	14-44	14-36	-0.08	-0.45
CRI	.86	23	38.52	7.90	23-69	20-59	0.08	-0.46
SDQ Internalizing	.64	10	6.01	3.35	0-20	0-16	0.40	-0.44
SDQ Externalizing	.68	10	6.22	3.41	0-20	0-15	0.25	-0.72
IS	.78	15	21.76	4.33	0-45	9-45	-0.31	0.14
IP strength	.59	07	12.41	3.70	0-33	6-33	-0.73	0.54
FI strength	.65	10	21.72	4.32	0-30	8-30	-0.48	-0.02

Note. BRI= Behavior Regulation Index; ERI= Emotional Regulation Index; CRI= Cognitive Regulation Index; IS= Interpersonal Strengths; IP= Intrapersonal Strengths; FI= Family Involvement. Actual range is lower than potential range because of missing data

Table 2 presents Pearson correlations among study variables. Results indicated that ineffective BRI, ERI, and CRI were significantly positively associated with internalizing and externalizing problems. It also indicated that ineffective BRI, ERI, and CRI were significantly negatively associated with interpersonal strengths and family involvement related strengths. Only ineffective CRI was significantly associated with intrapersonal strengths and BRI and ERI were not significantly associated with intrapersonal strengths.

Table 2

Correlations for Study Variables (N=373)

Variables	1	2	3	4	5	6	7	8
1. BRI	1	.67**	.64**	.22**	.45**	-.32**	-.02	-.16**
2. ERI		1	.71**	.33**	.48**	-.25**	-.06	-.21**
3. CRI			1	.32**	.50**	-.31**	-.15*	-.26**
4. Internalizing				1	.63**	-.17**	-.20**	-.27**
5. Externalizing					1	-.32**	-.21**	-.30**
6. IS strengths						1	.57**	.54**
7. IP strengths							1	.56**
8. FI strengths								1

Note. BRI= Behavior Regulation Index; ERI= Emotional Regulation Index; CRI= Cognitive Regulation Index; IS= Interpersonal Strengths; IP= intrapersonal Strengths; FI= Family Involvement. *$p < .05$. **$p < .01$.

A two-way Multivariate Analysis of Variance (MANOVA) was conducted to check main and interaction effects of age (3 categories: 129 early adolescents, 144 middle adolescents, 93 late adolescents) and gender (2 categories: 168 boys, 198 girls) in BRI, ERI, and CRI. Results indicated significant gender and age differences in self-regulation. There was no significant interaction effect of age and gender in self-regulation (Table 3).

Table 3

Main and Interaction Effects of Gender and Age in Self-Regulation (n=373)

Variable	Pillai's Trace	F (df)	p	η²
Gender	.04	5.24 (3,358)	.001	.04
BRI		4.24	.041	.01
ERI		9.51	.002	.03
CRI		.23	.634	.00
Age	.05	2.81 (6,718)	.010	.01
BRI		2.53	.080	.01
ERI		2.21	.111	.01
CRI		5.98	.003	.03
Gender*Age	.01	.72 (6,718)	.631	.00
BRI		.41	.665	.00
ERI		1.48	.229	.00
CRI		1.79	.168	.01

Note. BRI= Behavior Regulation Index; ERI= Emotional Regulation Index; CRI= Cognitive Regulation Index.

Test of between subject effects ndicated significant gender differences in BRI and ERI and non-significant gender differences in CRI. T–tests indicated that boys had better BRI than girls (girls *M*=23.02, *SD*= 4.34, boys *M*= 21.97, *SD*=4.79, *t*= -2.30, *p*=0.02, CI= -1.94- -0.15, Cohen's *d*=0.23). Similarly, boys had better ERI than girls (boys *M*=23.91, *SD*=5.05, girls *M*=25.68, *SD*= 4.48, *t*=-3.72, *p*<.001, CI= -2.71- -0.84, Cohen's *d*= 0.37). There were no significant gender differences in CRI (boys *M*= 38.08, *SD*=8.21, girls *M*=39.05, *SD*=7.44, *t*= -1.25, *p*=0.21). Tests of between subject effects indicated that there was a significant age difference in CRI, while there was no significant age difference in BRI, and ERI. Post hoc analysis revealed that early adolescents have more effective CRI as compared to late adolescents (*i-j*= -3.51, *p*=0.004, CI= -6.10 - -0.91). The effect size is small accounting for 2% difference in CRI. There was no effect of age in middle and late adolescents in CRI.

Path Analysis

Path analysis was used to analyze how BRI, ERI, and CRI predicts internalizing, externalizing problems and interpersonal, intrapersonal and family involvement related strengths in adolescents. A full model was tested which was then improved by removing non-significant regression pathways one by one and comparing model fit. The final model showed adequate fit indices χ^2=37.23 (df=12, χ^2/df =3.10, p<0.001) , CFI=0.980, TLI=0.953, GFI= .976 and RMSEA=0.07 BRI had a significant direct effect on internalizing problems and externalizing problems and interpersonal strengths. ERI also had a significant direct effect on internalizing and externalizing problems. CRI had a significant direct effect on internalizing and externalizing problems, interpersonal strengths, intrapersonal strengths and family involvement related strengths (Figure 1). This model was then used for multigroup analysis.

Multigroup SEM

The gender differences in the relationship of BRI, ERI, and CRI and outcome variables were analyzed using multigroup analysis in SEM. First of all an unconstrained model (Model 1) which all regression pathways were free of constraints was

compared against a fully constraint model (Model 2) for both boys and girls. Model 1 was a configural model with free paths between boys and girls. The model fit indices indicated an adequate fit, $\chi^2=42.12$, $df=20$, CFI=0.982, TLI=0.950, RMSEA=0.055 (CI$_{90}$=0.031, 0.078), AIC=146.119, and ECVI=0.394. Model 2 fit indices indicated an adequate fit, $\chi^2=49.30$, $df=31$, CFI=0.985, TLI=0.973, RMSEA=0.040 (CI$_{90}$=0.016, 0.060), AIC=131.300, and ECVI=0.354. Comparisons across models indicated that the increase in chi-squared values ($\Delta\chi2=7.181$, p=0.784) was not statistically significant and changes in other model fit indices were small, indicating robust measurement consistency across the groups of boys and girls. This was further followed by constraining one regression path at a time and comparing chi-square difference. None of the path was statistically different in boys and girl.

Table 4

Path Analyses of BRI, ERI, and CRI as predictor of Mental Health Problems and Psychosocial Strengths in Adolescents

Paths	Unstandardized Coefficients	Standardized Coefficients	S.E	t	p
BRI→ Externalizing Problems	.134	.180	.038	3.56	<.001
ERI→ Externalizing Problems	.122	.173	.046	2.65	.008
CRI →Externalizing Problems	.112	.258	.028	4.03	<.001
BRI→ Internalizing Problems	-.039	-.053	.05	-.777	.437
ERI→ Internalizing Problems	.144	.208	.047	3.02	.002
CRI→ Internalizing Problems	.072	.17	.029	2.47	.014
BRI→ Intrapersonal Strengths	.106	.103	.075	1.419	.156
ERI→ Intrapersonal Strengths	.044	.045	.077	.572	.568
CRI→ Intrapersonal Strengths	-.089	-.148	.03	-2.89	.004
BRI→ Interpersonal Strengths	-.354	-.254	.069	-5.16	<.001
ERI→ Interpersonal Strengths	.035	.027	.098	.361	.718
CRI→ Interpersonal Strengths	-.114	-.140	.047	-2.43	.015
BRI→ Family Involvement	.037	.039	.067	.547	.584
ERI→ Family Involvement	-.061	-.069	.069	-.892	.373
CRI→ Family Involvement	-.14	-.257	.027	-5.12	<.001

Note. BRI= Behavior Regulation Index; ERI= Emotional Regulation Index; CRI= Cognitive Regulation Index.

Discussion

The primary aim of this research was to analyze relationships of three domains of self-regulation (BRI, ERI, CRI) with mental health problems (internalizing and externalizing) and psychosocial strengths (interpersonal strength, intrapersonal strength, family involvement) of adolescents. A secondary aim was to explore gender differences in this relationship.

Overall, results indicated that not all domains of self-regulation (BRI, ERI, CRI) were related to mental health problems and psychosocial strengths in a similar way. For example, internalizing problems were significantly predicted by ERI (.21**), and CRI (.17*) and BRI was not a

statistically significant predictor in the present sample (Table 4, Figure 1). These findings are consistent with findings from western literature indicating poor emotional regulation as a precursor of internalizing problems (Eisenberg et al., 2010; Loevaas et al., 2018; Young et al., 2019). ERI significantly predicting internalizing problems suggests that those adolescents who have ineffective emotional control and have problem shifting from one aspect/situation/problem to another as the situation demands, experience more internalizing problems as compared to those who have effective emotional control and can shift their attention swiftly as demanded. CRI which includes the ability to complete tasks on time, planning ahead, and holding information to stay on task also predicted internalizing problems in adolescents indicating that those adolescents who have ineffective skills to plan ahead, difficulty persistence on tasks and working with multiple information in a given time are more prone to internalizing problems (Table 4, Figure 1). These findings corroborate in previous findings about the impaired role of working memory in anxiety disorders, and depression (Lukasik et al., 2019; Moran, 2016; Tallon et al., 2016).BRI did not appear as a significant predictor of internalizing disorder in this research. This is consistent with research on adolescents from the Netherlands indicated that cognitive regulation style is more common in internalizing disorders and behavior regulation style is more common in externalizing disorders (te Brinke et al., 2021). Previous research indicated that poor inhibitory control, emotional control and shifting is the mechanism associating reactive aggression with internalizing disorders (White et al., 2013). This might suggest that emotional control and shift have more predictive power for internalizing disorders as compared to *self-monitoring* which is the component of BRI in the present study. Another study indicated that better hot inhibitory control which is defined as control during emotionally laden situations is a predictor of few internalizing disorders as compared to cool inhibitory control which is defined as control in a context where strong emotions are not involved (Lawler et al., 2022).

The BRI measurement in the present research can be categorized as cool inhibitory control because it is measuring behaviors in situations where strong emotions are not mentioned in the items.

For externalizing problems which included conduct-related issues and hyperactivity, all three domains of self-regulation appeared as significant predictors. The strongest predictor was CRI (.26***), followed by ERI (.21**), and BRI (.18***) thus rejecting the second hypothesis of present research that BRI will be a stronger predictor for externalizing problems (Table 4, Figure 1). The ability to organize, plan, and task completion are defining characteristics of CRI. Adolescents suffering from externalizing disorders including ADHD, and conduct-related problems have difficulty in organizing, planning, and completing their tasks efficiently (Becker & Langberg, 2014; Toplak et al., 2008). The present results indicated that adolescents having problems in managing their emotions, shifting their attention, monitoring their behavior, and inhibiting it when required were more likely to experience externalizing problems as compared to those who have effective self-regulatory skills. This finding is also consistent with existing literature on self-regulation difficulties in externalizing disorders in western literature(Perry et al., 2018; White et al., 2013).

The present research also focused on analyzing how BRI, ERI, and CRI are related to psychosocial strengths in adolescents. The hypothesis of present research that all three domains will significantly predict three psychosocial strengths was partially supported because all domains did not significantly predict the strengths. Interpersonal strengths which include active listening, admitting mistakes and emotional maturity was significantly predicted by BRI (-.25***), followed by CRI (-.14*) (Table 4, Figure 1). These results are consistent with previous literature on the role of self-control in effective interpersonal relationships. Those individuals who have poor self-control will struggle in active listening, admitting their mistakes and less emotional maturity because of

acting on the impulses initiated by poor self-control and having ineffective planning and difficulty holding information which would certainly impact decision making (Baumeister, 2018; de Ridder et al., 2012).

In the present research Intrapersonal strengths was significantly predicted by CRI (-.15**) only and ERI and BRI were not significant predictors. Intrapersonal strength is operationalized as how adolescents view himself and his abilities. So, it appeared that effective task completion, effective planning and organization along with effective working memory will predict positive views about oneself as compared to when an adolescent has ineffective CRI.

In the present research, ERI was not a significant predictor of any psychosocial strength indicating that adolescent emotional control and shift are not significantly predicting their interpersonal, intrapersonal strength and family involvement in this sample. This finding is not consistent with Western literature which indicates that emotional regulation is linked to social competence (Murphy et al., 2004).

Present research indicated that girls had significantly ineffective emotional and behavioral regulation skills as compared to boys with small effect size (Table 3). In Pakistan, girls are socialized as emotionally feeble and sensitive while boys are socialized as being tough and emotionally strong (Khalid, 2021) and this might influence emotional and behavior regulation differently. Previous research has also found that girls experience more anger, sadness, and depression (Sanchis-Sanchis et al., 2020) and remain in stable externalizing trajectories (Perry et al., 2018) which is linked to ineffective ERI and BRI. A study on Pakistani adolescents also reported high anger, and difficulty in engaging goal directed activity which is consistent with the present findings of girls having less effective ERI and BRI (Zafar et al., 2021). There were significant age differences only in CRI in such a way that early adolescents reported to have more effective planning, working memory, and task completion skills as compared to late adolescents (Table 3). A

recent study in Pakistan indicated that higher externalizing problems in later adolescents (Naveed et al., 2020). In collectivist culture like Pakistan, children are dependent on their parents for an extended period of time and parents take care of all home, and school related task. One plausible reason could be that in early adolescence more assistance is available and there is less pressure and demands that need to be managed and organized as compared to late adolescents. There was no significant interaction effect between age and gender for the differences in BRI, ERI, and CRI (Table 3). Although there were differences in regression pathways in path analysis but multi-group analysis indicated that these differences were not statically significant.

Limitations

There are some limitations of this research which need to be kept in mind while interpreting the results and which can be targeted in future research on self-regulation. Firstly, self-regulation was assessed using a self-reported scale i.e., BRIEF-2 and no task based behavioral assessment was done. Secondly sample was very diversified and this may be a reason of lowering the study power to detect significant differences.

Implications

The present research highlights the multidimensional nature of self-regulation and its differential linkages with mental health problems and psychosocial strengths in Pakistani adolescents. Targeting behavioral, emotional and cognitive regulation skills in schools, and intervention programs has the potential to improve mental health of adolescents in Pakistan, as in western countries. Absence of mental health problems is not complete wellness, rather positive emotional and behavioral strengths like interpersonal strengths, intrapersonal strengths are also important for positive youth development. Similarly, family involvement is a hallmark of Pakistani society, and it is also important for optimal psychosocial development of adolescents. There are significant gender and age differences which are further amplified by the cultural milieu,

thus both girls and boys need to be trained in effective self-regulatory skills. Girls may need more focus on effectively regulating their emotions and behavior than boys.

Declaration

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Research Article

Exploring Employee Mental Health, Coping Mechanisms, and Workplace Support: A Qualitative Study

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Abstract

Objective. The purpose of this qualitative study was to better understand the experiences and viewpoints of Pakistani employees with regard to workplace assistance, coping mechanisms, and mental health.

Method. Purposeful sampling was used to recruit a total of 16 participants who had had mental health concerns at work. Semi-structured interviews were used to collect the data, which were then transcribed and subjected to a thematic analysis to discover patterns, themes, and subthemes.

Results. This study identified three main themes: mental health issues in the workplace, assessment of client capacity to cope with workplace stress, and preventative measures. These topics shed light on the relationship between health issues and productivity at work, offer methods for handling stress and making decisions at work, and emphasize the value of enhancing mental health and calming workplace tension. These findings underline the importance of organizational support, effective communication, work-life balance, and self-care in promoting employee wellbeing and productivity.

Implications. This research has implications for the creation of more effective interventions and policies to support the mental health and well-being of Pakistani employees in the workplace. The findings imply that companies should be more aware of the difficulties employees have in managing their mental health and provide assistance in the form of flexible work arrangements and training for management on mental health awareness. Employers can establish a healthy work environment and enhance the well-being of their employees by doing so.

Keywords. Pakistani employees, Mental health, Workplace assistance, Coping mechanisms, Stigma, Flexible work arrangements

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Introduction

Mental health is increasingly being recognized as a significant factor in both the physical health of employees and their productivity at the workplace in Pakistan. It is an essential component of one's overall happiness and well-being. According to the World Health Organization, depression and anxiety are two of the leading causes of disability in the world. Moreover, the World Bank estimates that lost productivity due to work-related stress might cost the global economy up to one trillion dollars annually (WHO, 2021). As a result, employers in Pakistan are developing a greater awareness of the significance of addressing issues related to mental health in the workplace through the implementation of preventative measures and policies of support (Awan, A. G., & Tahir, 2015; Sohail et al., 2017; Wang et al., 2020). In order to acquire a more in-depth understanding of mental health in the workplace in Pakistan, one way that can be utilized is the investigation of the experiences and perspectives of Pakistani workers. The in-depth exploration of human experiences and views that is made possible by qualitative research has the potential to shed light on difficult and intricate topics like mental health (Braun & Clarke, 2019).

Previous qualitative studies carried out in Pakistan and other countries has shown that workers have to overcome a number of challenges in order to keep their mental health in good condition while they are on the job. Workers frequently have the misconception that expressing their mental health issues to their employer or coworkers may result in unfavorable repercussions such as being discriminated against or having their employment terminated (Clement et al., 2015; LaMontagne et al., 2014). Many studies have been conducted to study the coping mechanisms that workers in Pakistan and other countries use to take care of their mental health while they are on the job. According to the findings of a study, workers may participate in self-care activities including going on walks, practicing mindfulness, and reaching out to their colleagues for social support (Ducharme et al., 2020).

On the other hand, these coping mechanisms aren't always going to work, and employees may run into roadblocks like time constraints, a lack of resources, or conflicting professional and personal obligations. Still, there are strategies to deal with stress (Murphy, & Kruis, 2022; LaMontagne et al., 2014). Research has also shown how important workplace support is to improving employees' mental health. Research have shown, for instance, that supportive policies such as flexible work arrangements and mental health awareness training for managers can help eradicate stigma and build a more friendly workplace culture. (Bilsker et al., 2016; Lerner et al., 2015).

In light of these findings, additional qualitative research is required to analyze the experiences and perspectives of Pakistani workers with regard to mental health, methods of coping, and support in the workplace. This type of research can be used to inform the establishment of programs and policies that are more effective in supporting the mental health and well-being of Pakistani employees in the workplace.

Objective

This qualitative study aimed to better understand the experiences and viewpoints of Pakistani employees with regard to workplace assistance, coping mechanisms, and mental health.

Method

Research Design

In Pakistan, employee experiences and perspectives on mental health, coping methods, and workplace assistance were investigated using a qualitative research approach. As it allowed for an in-depth investigation of human experiences and perspectives, qualitative research was particularly suited to examining complicated and nuanced subjects, such as mental health (Braun & Clarke, 2019).

Sample and Sampling Technique

Purposive sampling was used to select 16 participants for the study, including 9 men and 7

women with ages ranging from 28 to 43 who are currently employed in Pakistan. Employees who had struggled with their mental health at work were included. The sample size was determined by the data saturation, and recruitment continued until no new themes could be identified in the data (Guest et al., 2006). Table 1 shows the details of the demographic characteristics of the study population.

Table 1

Demographic Characteristics of the Study Population (n = 16)

Variable	Category	*f*	%
Gender	Male	9	56.25
	Female	7	43.75
Profession			
	Doctor	3	18.75
	Business Owner	2	12.50
	Marketing Professional	2	12.50
	Clerical staff	2	12.50
	Media professional	2	12.50
	Customer service representative	2	12.50
	Nurse	2	12.50
	IT professional	1	6.25

Note. Mean age of the respondents was 33.19 ± 2.88

Data Collection

With the help of subject matter experts, including two mental health professionals, one HR professional, and a manager, the interview guidelines were created. The interview guide was developed using the research questions and relevant literature on workplace support, coping skills, and employee mental health. The experts gave input on the questions and assisted in making sure they were comprehensive, relevant, and sensitive to the needs of the research population.

Semi-structured interviews were conducted in person or through mobile conferencing as the main method of gathering data. The interviews were audio recorded, then verbatim transcribed. Throughout the interviews, the researcher took field notes to document nonverbal cues and background information. The resulting information was subjected to a thematic analysis in order to uncover significant themes and patterns relating to worker mental health, coping skills, and workplace support.

Ethical Considerations

The study adhered to ethical guidelines, including voluntary participation, informed consent, and confidentiality. Participants were given a page of information detailing the objective, methods, and potential risks and benefits of the study. Before taking part in the trial, participants supplied written consent. Participants had the option to withdraw from the study at any time, and all data was stored in a secure, anonymous manner. Before beginning, the study received permission from an institutional review board.

Data Analysis

Thematic analysis was chosen as the primary data analysis technique for this study because it permits a flexible and iterative approach to discovering patterns, themes, and categories in the data. Thematic analysis is a useful method for

analysing qualitative data that does not fit into predetermined categories or theoretical frameworks (Braun & Clarke, 2019). In comparison to other qualitative analysis techniques such as content analysis or grounded theory, thematic analysis allows for a more open-ended exploration of the data and can reveal themes and patterns that may not have been anticipated or predicted. When conducting qualitative research that frequently employs small sample sizes, thematic analysis is also suitable for data analysis. Because it allowed for a flexible and iterative approach to finding patterns, themes, and categories in the data, thematic analysis was selected as the best method of data analysis for this study. This methodology was appropriate for both the research questions and the nature of the qualitative data. These are the steps that comprised the analysis:

1. **Data familiarization:** To fully comprehend the data, the researcher read and reread the interview transcripts.
2. **Creating first codes:** The researcher recognized and labelled the crucial aspects of the data, which were then used to create initial codes.
3. **Finding themes:** The codes were organized into possible themes, which were then examined and improved as the study went on.
4. **Examining Themes:** The final themes and sub-themes were examined and defined by the researcher.
5. **Theme definition and naming:** The themes were identified and defined by the researcher in light of their substance and applicability to the research objectives.

6. **Writing the report:** The researcher wrote a report that outlined the major themes and sub-themes and included excerpts from the interview transcripts to substantiate each claim.
7. **Validity and Reliability:** The following steps were taken to assure the study's validity and reliability: a) Triangulation: To triangulate the data, information was gathered from many sources, including interviews and field notes. b) Member checking: To confirm the validity and accuracy of the data, participants were given the chance to evaluate and comment on the findings. c) Reflexivity: Throughout the study process, the researcher considered their own prejudices and presumptions and recorded these reflections in a reflexive journal. d) Peer debriefing: The researcher discussed the study method and findings with peers in order to critically assess them.

Results

This study examines workplace dynamics through interviews with 16 employees, aiming to uncover key themes. The three overarching themes are: Theme 1 delves into the prevalence and impact of mental health issues within the workplace; Theme 2 centers around the assessment of client potential to cope with stress at work; and Theme 3 encompasses the exploration of preventative measures to foster a healthier work environment. These themes provide insights into individual well-being, organizational practices, and the employee experience. Each theme includes subthemes that offer a detailed exploration of the complex issues involved (see table 2).

Table 2

Theme	Subthemes
1. Mental health issues in the Workplace	1. Workplace health issues 2. Experience with Work-Related Health Issues
2. Assessment of client potential to cope stress at workplace	1. Presentation and Workplace Performance 2. Workplace Stress Management 3. Feedback and Decision Making 4. Workplace Change and Adaptation
3. Preventative measures	1. Mental Health Awareness and Understanding 2. Managerial Role in Employee Mental Wellness 3. Impact of Mental Health on Workplace Performance 4. Workplace Policies and Practices for Stress Reduction 5. Employee Support and Self-Care 6. Employee Well-being and Support Networks

Theme 1: Mental Health Issues At workplace

Occupational health concerns emerged as a subtheme. The participants discussed their experiences with health conditions and their effects on the workplace. For instance, one participant stated, "*I was diagnosed with cardiac MR, but it has not significantly affected my employment. My only problem arises when my blood pressure occasionally increases*" (WPE-1). This quotation illustrates how a particular health condition may occasionally impact work performance. A further aspect of workplace health issues mentioned by participants was the tension and exhaustion caused by work load. A participant stated, "*Sometimes, due to the weight of my work, I became stressed and physically exhausted*" (WPE-7). This quote illustrates the effect of work demands on a person's mental health and physical vitality.

A second subtheme that emerged from the interviews was the participants' experiences with health issues related to the workplace. Participants described instances in which their health conditions impeded their capacity to perform their jobs effectively. One participant described their experience, stating, "*Recently, in a stressful environment, I encountered a similar situation. I had a burden that I had no prior experience with, and I did not know much about it... This was the source of my stress, and I was unable to focus on my work because these thoughts kept repeating in my consciousness*" (WPE-8). This quotation illustrates how unfamiliar work tasks and high levels of tension can contribute to mental distress and inhibit job performance.

Theme 2: Evaluation of Client Capacity to Cope with Workplace Stress

The Presentation and Workplace Performance subtheme revealed employees' methods for managing their responsibilities and meeting deadlines. One participant explained, "*When you labor harder and put forth more effort, the project is completed before the deadline. After the allotted time, you must labor overtime in order to work and prepare in time for the deadline*" (WPE-12). This quotation emphasizes the participant's proactive coping strategy of putting in extra effort to complete tasks ahead of schedule. Further, the subtheme of Workplace tension Management addressed the techniques employed by participants to manage tension in the workplace. According to one participant, "*Well, there's a technique. First, I slow down the moment, and then I convince myself that everything is alright. Difficult circumstances will pass, and things will improve. Initially, I attempt to comprehend this. People generally refer to this as reflection. However, the technique I use is to first consider the circumstance, then consider the worst-case scenario if things don't go well, or consider the*

best-case scenario if things go well. But there is also the option to engage in pre-reflection. Then, I consider how I can enhance it. Everything about what I should do and how I can do it becomes crystal clear in my mind" (WPE-13). This quote highlights the importance of self-reflection, visualization, and problem-solving for stress management.

Further, the subtheme of Feedback and Decision Making examined the perspectives of participants on feedback and its impact on their decision-making process. Before reaching a decision, pros and cons are considered, according to one participant "*How much things on this page are good and how much things on this page are evil, and how much loss and how much gain are possible on this page. Not only do I benefit, but others do as well. When I determine that the loss is less than the benefit, I make that choice. Consequently, I imagine that after making that choice, my existence would be as follows*" (WPE-16). This quote exemplifies the participant's evaluative approach to decision-making, which takes into account multiple factors and considers prospective outcomes.

The subtheme of Change and Adaptation in the Workplace highlighted participants' approaches to handling situations requiring adaptation. One participant described their approach to problem-solving, stating, "*If the situation is directly related to me or involves me, I would immediately strive to find a solution. I would attempt to identify applicable solutions and implement them... I would seek the counsel of a superior or a colleague who could provide me with a second opinion on the situation. I would present the issue and my proposed solution and then solicit their feedback*" (WPE-5). This quote exemplifies the participant's proactive and collaborative approach to problem-solving by seeking counsel and integrating diverse perspectives.

Theme 3: Preventive Measures

Participants in the discussion emphasized the importance of promoting mental health and reducing workplace tension through preventative

measures. One participant stated, "*It is essential for mental health that after you have mentally exerted yourself, you can engage in any outdoor activity that distracts you from your work... And fresh air also has a very positive effect, as both your mind and body become refreshed*" (WPE-11). Another participant mentioned the importance of work-life balance and using breaks or music therapy to alleviate stress during work, stating, "*Whenever I get bored during work, I must take a break or try to have some music therapy, like listening to some favorite music that refreshes me a bit*" (WPE-12). These strategies indicate that employees recognize the need to priorities mental health in their daily lives.

The Managerial Role in Employee Mental Wellness emerged as an additional subtheme, highlighting the significance of managers in promoting the mental health of employees. Participants emphasized the significance of being sensitive to employees' requirements and setting clear work boundaries. One participant detailed, "*If someone is struggling with a problem, we should be sensitive to their requirements and do what we can to assist them... If a supervisor observes an employee exceeding these limits and the employee expresses concern, the supervisor should attempt to accommodate the employee*" (WPE-1).

The subtheme Impact of Mental Health on Workplace Performance highlighted the negative effects that mental health issues have on job performance. Participants acknowledged that mental health issues can hinder productivity and result in physical stress symptoms. One participant described their experience, stating, "*If a person is experiencing mental health problems, it may be difficult for them to generate quality work... Moreover, physical symptoms such as fatigue, dizziness, headaches, and muscle discomfort can be linked to stressors that negatively impact job performance*" (WPE-1).

Participants also discussed stress-reduction workplace policies and practices. They emphasized the significance of policies that consider the impact of certain situations on the mental state of employees and suggested implementing strategies

such as breaks and participation in activities such as walking or jogging. One participant stated, "*Sometimes your policies and compliments are such that they interfere with your work because they cause mental distress... So they affect your work, but if you take them in a positive light, as I do, when I feel bad I take a short vacation from my work and my busy mind. I also unwind a bit and engage in various outdoor activities... This can also mean that your relationships do not deteriorate, that you do not display aggression, and that you complete your work in peace*" (WPE-11).

Further, the subtheme of Employee Support and Self-Care highlighted employee strategies for seeking support and engaging in self-care. Participants emphasized the significance of taking breaks, seeking emotional support from superiors and peers, and recognizing early warning signs of mental health problems. One participant shared, "*Whenever I feel a little burnt out or stressed, I simply lock up my office, turn off my computer, and go for a walk... I require additional emotional support from my superiors and friends*" (WPE-2).

Lastly, the subtheme of Employee Well-being and Support Networks emphasized the significance of balancing solitude and social connections. Participants acknowledged the advantages of spending time alone, but emphasized the importance of social interaction in preventing feelings of isolation and loneliness. In addition, they emphasized the importance of relaxation exercises, problem-sharing with trusted individuals, and understanding of mental health by managers and executives. One participant stated, "*Spending time alone can be beneficial, but it's essential to maintain a healthy balance by also spending time with friends and family... Taking pauses and engaging in relaxation exercises can assist with stress management... "Discussing problems with a close friend or loved one can also facilitate problem-solving*" (WPE-6).

Discussion

The qualitative data in this study reveals a number of significant themes and subthemes

regarding mental health issues at workplace. Under a theme regarding mental health issues at workplace the experiences of individuals with health issues and their consequences on work performance emerged as one subtheme. Participants talked about their own health issues, such as cardiac MR and high blood pressure, and how these issues occasionally affected their capacity to do their jobs well. This topic is consistent with earlier evidence that highlights the link between wellbeing and productivity at work (e.g., Frone, 2000). Another subtheme that emerges from the interviews is the stress and exhaustion induced by work demands. Participants discussed how the stress and physical tiredness brought on by their profession affected their mental health and general vigor. This result is in line with earlier studies that recognized burnout and work-related stress as major issues in occupational health (e.g., Maslach et al., 2001; Bakker et al., 2004). The adverse impacts of excessive workloads on employee well-being are highlighted.

Importantly, the interviews illuminated the challenges encountered by participants whose health conditions were not adequately addressed by their workplaces. Participants reported anger over inadequate accommodations and a lack of support, which had an adverse effect on their health and productivity at work. This conclusion emphasizes how crucial it is for employers to be aware of and responsive to their employees' health requirements in order to ensure their wellbeing and productivity. Previous research (such as Amstad et al., 2011) have stressed the importance of organizational support and accommodations in fostering employee health and performance.

In terms of second theme "evaluation of client capacity to cope with workplace stress" The qualitative data in this study reveals a significant subthemes and patterns pertaining to workplace change and adaptation, workplace tension management, feedback and decision-making, and presentation and workplace performance. Participants in the subtheme of Presentation and Workplace Performance talked about how they handle their workload and adhere to deadlines.

They stressed proactive coping techniques including exerting extra effort, setting priorities for tasks, and effectively managing time. These results are consistent with other literature (e.g., Parker et al., 2010) that emphasizes the value of proactive actions and efficient time management in improving workplace performance.

The subtheme of "Workplace Tension Management" exposed the methods used by participants to handle stress at work. They talked about how to deal with stress by thinking about oneself, visualizing solutions, and addressing problems. These techniques are consistent with earlier research (e.g., Lazarus & Folkman, 1984; Saks & Gruman, 2014) that highlights the significance of self-regulation and cognitive assessment in managing workplace stress. Further, participants in the subtheme of Feedback and Decision Making talked about how they evaluate potential outcomes and pros and disadvantages while making decisions. They also acknowledged the value of taking input to heart, even when it's unfavorable. These results are consistent with earlier work (e.g., DeRue et al., 2011) that highlights the value of reflective decision-making processes and the contribution of feedback to the promotion of learning and growth. Furthermore, the participants' methods for dealing with circumstances needing adaptation were highlighted by the subtheme of Change and Adaptation in the Workplace. They placed a strong emphasis on proactive problem-solving, soliciting advice, and incorporating many viewpoints. These results are consistent with earlier research (e.g., Bala & Venkatesh 2013) that highlights the value of adaptable behaviors, teamwork, and requesting support in managing workplace change.

Regarding the third theme "preventive measures" the qualitative data reveals the subthemes and patterns concerning employee well-being and support networks, managerial involvement in employee mental wellness, the effect of mental health on workplace performance, and the promotion of mental health and reduction of workplace tension. These results complement earlier research in the topic and add to it. Further,

participants in the subtheme on enhancing mental health and lowering workplace tension underlined the value of preventative actions like taking breaks, going outside, and using music therapy to reduce stress and revitalize the mind. These tactics are in line with other research (e.g., Sonnentag & Fritz, 2007; Trougakos et al., 2008) that emphasizes the advantages of leisure activities, breaks, and relaxation techniques in boosting mental well-being and reducing stress.

The subtheme "managerial role in employee mental wellness" emphasizes the importance of managers in fostering employees' mental well-being. Participants stressed the significance of managers promoting effective communication, establishing clear work limits, and being sensitive to employees' needs. These results are consistent with earlier literature (e.g., Bakker et al., 2005) that highlights the importance of supportive leadership, unambiguous communication, and work-life balance in fostering employee well-being and mental health. Moreover, the subtheme on the effect of mental health on job performance draws attention to the detrimental consequences that mental health problems can have on productivity. The fact that mental health problems might reduce productivity and cause physical stress symptoms was accepted by the participants. These results are consistent with earlier research showing the negative effects of mental health issues on work performance, such as decreased productivity, absenteeism, and presenteeism (e.g., Hilton et al., 2008; Dewa et al., 2010).

The participants' recommendations for putting into practice policies that take into account how various events affect employees' mental states and methods like taking breaks and engaging in outdoor activities are highlighted by the subtheme of stress-reduction workplace policies and practices. These results are consistent with earlier research that emphasizes the value of implementing organizational practices and policies that support worker wellbeing and stress reduction, such as flexible work schedules, wellness initiatives, and welcoming work environments

(e.g., Hammer et al., 2011; Amstad et al., 2011). Employee support and self-care as well as employee well-being and support networks are subthemes that focus on the participants' methods for seeking help, practicing self-care, and striking a balance between their solitary lives and their social lives. These tactics are consistent with other research (e.g., Eby et al., 2005) that highlights the value of social support, self-care routines, and work-life balance in enhancing employee well-being and mental health.

Several potential policy and decision-making avenues are suggested by the implications of these findings. Organizations ought to think about creating rules and procedures that support workers' mental health and wellbeing. This can entail offering tools and assistance for stress management, advocating for work-life balance, and encouraging a cooperative and open leadership style. Organizations can also set up clear guidelines and expectations to support workers in efficiently managing their workloads and avoiding burnout. A happier and more effective workforce can result from policies that value mental health and promote self-care activities like taking breaks and exercising outdoors. Additionally, managers must to receive training on how to identify and attend to the mental health needs of workers, offer assistance and criticism, and foster a positive work environment. These results emphasize the significance of a comprehensive strategy for employee well-being that takes into account both individual and organizational aspects.

Conclusion

This qualitative study offers insightful information on people's perspectives and experiences with regard to workplace mental health issues and wellbeing. The findings are consistent with earlier research, which has focused on the effects of health issues on productivity, the harmful effects of work-related stress, and the significance of organizational support and accommodations for employee well-being. The study also illuminates the methods people use to deal with stress at work, make choices, adjust to change, and advance their own mental health. These results have policy and decision-making ramifications, highlighting the necessity for organizations to give mental health top priority, build supportive leadership, put stress-reduction policies and procedures in place, and offer resources and support for employee well-being. Organizations may establish a safer and more effective working environment by addressing these problems.

Limitations

Because only qualitative information from a small number of Pakistani employees was used in the study, it may be challenging to apply the findings to other ethnicities and cultures. Also, the study makes no mention of how effectively employees manage stress, which suggests that additional research is required. Moreover, the opinions of managers and employers on mental health services at work were not examined.

Recommendations

To learn how well employees deal with stress, more research is required. In order to apply the findings in broader contexts, future study should use a larger and more varied sample of employees. Researchers should investigate how managers and employers feel about mental health support at work in the future. The findings of this study can be utilized to develop therapies and accommodations for the workplace, such as social support, a variety of tasks, and flexible work schedules, to enhance employees' mental health and wellbeing.

Declaration

Ethics approval and consent to participate: Informed consent was obtained from all study participants prior to administration.

Competing Interest: The authors declare no competing interests.

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Research Article

Risk and Protective Factors of Suicidal Ideation among Eastern and Western Countries: A Systematic Review

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Abstract

Background. Suicide is the second consumer of life among 15 to 29 years old adults. Extant literature is invested in psycho-social determinants of suicidal behavior, whereas little synthesized evidence about determinants of suicidal ideation in Eastern and Western countries is available. Hence, this study aimed to deliver a thorough, updated, and methodical review of the available literature on risk and protective factors of suicidal ideation in Eastern and Western countries, and a critical appraisal of selected studies.

Method. A total of 41 out of 273 full-text articles were included as per PRISMA guidelines. Data was extracted from the database of PubMed Central, Embase, and ScienceDirect. The articles with risk and/or protective elements of suicidal ideation, published in English language were included. The sampling populations were young students lying in most vulnerable age group between 15 to 29 years old. For critical appraisal, SIGN and AXIS criteria were employed. The instruments administered to assess the level of suicidal ideation among studies varied from a single item to complete questionnaire.

Results. Consistent risk and protecting determinants of suicidal ideation in both Eastern and Western countries like psychological disorders, personality traits, childhood and adult maltreatment, familial conflicts, anhedonia, strain, sleep disturbances, emotional reactivity, rumination, and negative coping were observed. Hardiness, resilience, social support, autonomy, and extraversion had a protective role. Physical risk elements like allergic diseases and defecation disorders were identified in Eastern countries.

Conclusion. More similarities than differences were found in Eastern and Western countries. Policymakers should take into account the modifiable risk elements and employ protective elements to manage risk at the ideation level before its progression to complete suicide.

Keywords. *Suicidal ideation, risk factors, protective factors, Eastern and Western countries, systematic review*

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Introduction

Suicide claims more than 800, 000 lives every year which approximates one life in every 40 seconds. It accounts for 8.5% of all deaths among 15 to 29 years old adults (World Health Organization 2014). For every complete suicide, there are approximately 25 suicidal attempts (SA) and for every attempt, there are at least two to three people suffering from suicidal ideation (SI) (Goldsmith, 2002; Nock et al., 2008), estimating the figures for SI far more alarming than complete suicides. SI is defined as "having thoughts, ideas, and desire to claim one's life" (Silva et al., 2014). SI is a gateway to SA (Herba et al., 2007), having a lifetime prevalence of SI (11.5%) much higher than SA (3.1%) (Nock et al., 2008). With prevalence rates ranging between 19.8% and 24.0% among youth, one-third of adolescents suffering from SI go on to attempt suicide (Nock et al., 2013) and are 12 times more likely to attempt under the age of 30 (Reinherz et al., 2006). Most of the literature is centered on suicidal behavior (SB) or SA, neglecting SI, the strongest predictor of suicide (Wolff et al., 2017). Therefore, addressing SI among the most vulnerable population is inevitable to prevent SI.

Previously conducted systematic reviews have either completely neglected SI (Goodfellow, Kõlves & de Leo, 2018; Hill et al., 2020) or addressed with attempts and behavior (Torok et al., 2019). The term "suicidality" blurs the boundary between ideation, attempt, and behavior. Individual risk elements were addressed in literature, but very few studies focused on protective factors. Risk and protective factors (RPFs) of SI are the attributes in a person or his environment that increase or decrease the prospect of SI respectively (Centers for Disease Control and Prevention, 2022). There is a need to address RPFs of SI to prevent and intervene at ideation level before its progression to behavior.

79% of the suicide cases occur in low and middle-income countries, whereas the highest suicide rates are reported in high-income countries (WHO, 2018). It is speculated that suicide is under-reported in Middle Eastern and Islamic countries, due to the stigma, shame (Ziaei et al., 2017) and legal implications associated with it (Naveed et al., 2017). The variability in suicidal rates and cultural norms demands comparison of studies conducted in Eastern and Western countries (EWCs). The countries falling in Asia and Middle East regions would be deemed as Eastern in this study, while those in regions of America, Europe, Australia and New Zealand as Western countries. Coentre and Góis (2018) conducted a review among 13 Western and non-Western studies to assess the prevalence of risk determinants only, whereas protective elements were ignored. To our knowledge, no previous or recent systematic review on RPFs for SI, comparing EWCs, among young adults has been conducted.

This review highlighted complex etiology of SI, addressing the wide range of RPFs in psychological, biological and social domains and caters the suicidal risk at active rather than reactive stage. The findings would be of interest to youth vulnerable to highest risk of suicide aged 15 to 29, their families and caregivers to predict suicide with the help of individualized determinants at ideation stage before it's progression to behavior. This evidence based study would offer a better outlook on the critical nature of the suicide statistics in EWCs than precarious media portrayals of suicide. SI seems a relevant problem, with few differential determinants in the Eastern and Western region. This study highlighted the common precipitants that need to be addressed among youth of both

EWCs. It addressed methodological discrepancies in the study and measurement of SI. Standardized approaches to the study of SI will open avenues to further explore inter and intra-individual characteristics that may result in effective and tailored SI treatment.

The main objective of the study was to deliver a thorough, updated (recent), and methodical review of the available literature on RPFs of SI in EWCs. In recent years, there has been rapid economic changes, global pandemic and related mental health issues (Mann & Metts, 2017). These intra-individual attributes like economic recession, unemployment is associated with increased risk of suicidality at both population and individual level as observed in recent systematic review (Methieu et al., 2022). Similarly, in the last decade, suicidal presentation is documented to have increased globally in emergency departments, and the COVID-19 pandemic has worsened the situation (Sara et al., 2022). If the rates of reported cases has increased dramatically in the past 10 years, the number of people suffering silently from SI might be exponential. Hence, there is a need to document recent update on the RPFs of SI.

Secondly, to carry out critical appraisal and assessment of methodological precision of selected studies.

Method

Search Strategy and Information Sources

The authors independently searched the literature using 3 major databases, namely PubMed Central, Embase, and ScienceDirect for studies published from January 2015 to May 2020. For search terms, Boolean terms like "Suicidal" AND "Ideation", "Suicidal" OR "Ideation", "Suicidal" AND "Thoughts", "Suicidal" OR "Thoughts" were used for Embase and ScienceDirect databases. The Medical Subject Heading (MeSH term) for PubMed Central was (("risk"[MeSH Terms] OR "risk"[All Fields]) AND ("protective factors" [MeSH Terms] OR ("protective"[All Fields] AND "factors"[All Fields]) OR "protective factors"[All Fields]) AND ("suicidal ideation"[MeSH Terms] OR ("suicidal"[All Fields] AND "ideation"[All Fields]) OR "suicidal ideation"[All Fields])). No existing review protocol other than what was described above was used for this study.

Selection Criteria for Studies

The inclusion criteria adopted for the systematic review were "peer-review, English language publications (with at least one RPF as a predictor variable) and SI as an outcome variable". The age of the recruited sample was set between 15 to 29 years to be included in the review. Articles were published between the set date of January 2015 to May 2020 were included.

The exclusion criteria were adopted maintaining the discrepancy between SI and SB. Studies with outcome variables other than SI, assessing SI through SB's questionnaire, or solely examining suicidal risk without specifying discrete outcome (SI or thinking) were excluded. Studies conducted for the prevention and treatment of SI were beyond the scope of this review. Qualitative studies were excluded due to their limited generalizability.

Data extraction

The authors systematically extracted study type, years of publication, predictors, outcome and control variables, sample country, sample age group and size, gender ratio, instruments administered, theoretical evidence, RPFs, sampling technique, and analysis from each article included in this systematic review. Initially, the data search was conducted by one author, which was then independently checked for accuracy by the other author. Any discrepancies were discussed and resolved until both authors reached an agreement.

Assessment of Study Quality

To assess methodological precision, relevance, and critical evaluation, a set of predetermined criteria derived from the Scottish Intercollegiate Guidelines Network checklist (SIGN, 2001) and a critical appraisal tool for cross-sectional studies (AXIS; Downes et al., 2016) were used by the authors. SIGN offers a suitable checklist for observational and case-control studies while AXIS for cross-sectional studies.

Critical Appraisal

The included studies were evaluated against the following criteria: clearly Stated aims and objectives, sample size and generalizability, sampling frame and selection process, measures to address response rate bias and non-responders, predictor and outcome variable reflecting the aims of the study, and measured adequately, quality of instruments used to operationalize predictor and outcome variable, statistical significance, sufficiently described methods, adequately described basic results/data, internal consistency, discussions, and conclusions adequately addressing the results, sufficiently addressed limitations, funding, conflict of interest and ethical approval. For detailed information see supplementary data file.

Results

The initial search generated a total of 11,568 peer-reviewed publications which were screened based on titles and abstracts (inclusion criteria). Out of all the above-generated results, 11, 295 articles were excluded, and the remaining 273 articles were reviewed. After the second round of screening of 273 full-text articles, 41 were retained. A flow chart of systematic identification following PRISMA (Preferred Reporting Items for Systematic reviews and Meta-Analysis) guidelines is presented below in **Figure 1**. Grey or unpublished literature was not reviewed during the selection of the paper. The reason for exclusion of 232 articles included that 3% were duplicates, almost 4% were not fully accessible, while the rest were irrelevant as per criteria.

Study country. The shortlisted 41 peer-reviewed articles involving RPFs for SI in EWCs were critically evaluated. Of the 19 Western studies, 7 were conducted in the United States of America, 2 each in France, Spain, and the Netherlands, and 1 each in Australia, Germany, Portugal, Belgium, Poland, Sweden, and Ireland. Of the 21 studies conducted in Eastern studies, 10 were in China, 3 in Malaysia, 2 in South Korea, and 1 each in Japan, Mongolia, Turkey, Egypt, Iran, Vietnam, and Taiwan. A comparison study between the USA and China was also included in the review.

Study design. Out of 41 studies, only 9 were longitudinal, while the rest of them were cross-sectional. Results indicated that most studies investigating SI were conducted in China and the USA. The sample size in Western countries ranged from 72 members in a study conducted in the USA (Stange et al., 2015) to a nation-wide sample in China (Huang et al.,2019). The variation in the study sample leads to variation in the generalizability of the results.(See table 1)

Instruments to assess SI. SI was operationalized in various ways ranging from a single-item inquiring about thoughts of killing oneself to 10-item suicidal ideation scale and the Beck Scale for Suicide Ideation (For details see supplementary data). Although administering a complete questionnaire to assess SI becomes very difficult among large sample size, but single-item measures may result in greater estimates of false positives and negatives (Milller, Lee & Nock, 2015). This might lead to misclassification bias and possibly distorted findings. Most of the instruments used were self-reports that might lead to information bias. Socially desirable answers might be provided to avoid stigma and shame or legal implications (Ziaei et al., 2017).

Figure 1. PRISMA flowchart indicating the study selection procedure

| Identification | Records identified through PubMed database search string (n=3561) | Records identified through ScienceDirect database search string (n=6359) | Records identified through Embase database search string (n=1648) |

Records after duplicates removed
(n=10,661)

Screening

Title and abstracts reviewed
(n=10,661)
→ Records screened
(n=273)
→ Records excluded
(n=10,388)

Eligibility

Full-text articles assessed for eligibility
(n=273)

Full-text articles excluded
(n=232)
- Outcome variable was not SI
- Sample age range was not clearly stated
- Age range was did not fit inclusion criteria (15 to 29 years)
- Instrument used assessed suicidal behavior
- Qualitative studies

Included

Studies included in systematic review
(n=41)

Note. For Characteristics of Included Studies Contact Corresponding Author

RPFs for SI. The study included the most vulnerable population to SI, youth aged 15 to 29 years old. Due to the set age range most of the studies included in the review recruited students as sample. Young age, student status (Ahmed et al., 2016; Blasco et al., 2019; Chow et al., 2018) and female gender were demographic risk factors of SI found in the review. Females reported higher rates of SI in the majority of studies, indicating greater susceptibility to SI, with one exception (Ibrahim et al., 2017). Poly-victimization (Le et al., 2016), higher-level stress in members of LGB (Baams et al., 2015), disputes with parents (Chiu et al., 2017) and alcohol drinking (Davaasambuu et al., 2017) acted as determinants of SI in females. Literature suggests females contemplating more about ending their lives as compared to males, whereas, more males die by suicide (World Health Organization, 2018). The higher rates of SI might be attributed to higher rates of depression among females (Adlina et al., 2007), more than twice among young females aged 14 to 25. The sample size, gender ratio and educational level in each study is indicated in the table 1.

Several psychological determinants like autistic and borderline traits (Chabrol & Raynal, 2018) depression (Polanco-Roman et al., 2018), anxiety (Doering et al., 2019) anhedonia (Loas et al., 2019), negative affect and chronic stress (Rosiek et al., 2016) were identified Western countries. Other identified psycho-social determinants include dimensions of masculinity (conformity to violence norms and self-reliance norms) (King et al., 2020), LGB coming out stress, sexual orientation victimization (Baams et al., 2015), 1st year of enrollment (Chow et al., 2018), and coercive control (i.e., dominance/ intimidation and restrictive engulfment) (Wolford-Clevenger et al., 2017) and personality traits like Impulsivity, neuroticism, and five factors of personality were also identified (Salami et al., 2015;

DeShong et al., 2015). Somewhat similar risk elements were identified in Eastern countries along with other physical risk elements such as allergic diseases and defecation disorders (Lee et al., 2015; Jiang et al., 2019). Sleep disturbance and cognitive factors like negative cognitive style, brooding, reflection, and perceived knowledge of sexual identity, all significantly predicted SI across both genders in adolescents and young adults (Baams et al., 2015; Bernert et al., 2017; Stange et al., 2015). Protective elements like social, peer and parental support (Chan et al., 2016; Ziaei et al., 2017; M.Wang et al., 2019) were associated with decrease in levels of SI. Hardiness, problem-solving (Abdollahi et al., 2015) and work-related personality stability buffered against SI (Chow et al., 2018).

Discussion

Socio-demographics and SI. Young age, especially 15 to 29, and students are vulnerable to a higher risk of suicide due to study pressure and the transitional phase (Abdollahi, 2015). A prospective study conducted in Spain provided evidence for the onset of SI in the 1st year of enrollment in university and the persistence of baseline SI in university (Blasco et al., 2019). A comparable study in Egypt (Ahmed et al., 2016) and Germany (Chow et al., 2018) reported similar findings among medical students. Literature suggests females contemplate more about ending their lives as compared with males, whereas more males die by suicide (Altangerel et al., 2014; WHO, 2018). The gender discrepancy can be attributed to cross-cultural emotional expression. Among most Asian cultures, emotional expression is considered a sign of weakness for men, as they are expected to hold back their sad emotions as compared to women (Balhara, Verma, & Gupta, 2012).

Psychological Determinants of SI.

1.1.1 Mental disorders. Results revealed that

individuals suffering from comorbid borderline and autistic traits experienced a higher level of SI than those suffering from borderline traits (Chabrol & Raynal, 2018). Also, borderline, and other atypical categories were found to be associated with *SI, i*n nationwide, twin population studies both in Sweden and the Netherlands (Doering et al., 2019). Most suicides are found to be associated with some psychiatric disorders worldwide like depression, psychosis, substance use, anxiety, and personality-related disorders (Brådvik, 2018). A review study indicated that people suffering from mental disorders *have an 8*-fold amplified risk of SI as compared to those who are not (Too et al., 2019). Major depressive disorder and generalized anxiety disorder significantl*y* predicted SI at 12 months follow-up in a longitudinal study (de Beurs et al., 2019). Similarly, depression was found to be the strongest predictor of SI, even after 18 months of follow-up, with post-traumatic stress disorder and loss of family members *as* other significant predictors (Ran et al., 2015). Alcohol drinking (Chan et al., 2016), smoking, and thoughts surrounding alcohol and drug use were related to greater chances of SI (Ziaei et al., 2017).

1.1.2Anhedonia and SI. Not only depression, but one of its characteristics, anhedonia, correlated significantly with SI. State anhedonia and negative affect independently predicted SI even after controlling for depression (Loas et al., 2019). Comparable findings were reported in a longitudinal study in China, where state social anhedonia significantly predicted SI (Yang et al., 2020). A meta-analysis conducted from 1965 to 2016 declares anhedonia as an independent, significant

determinant for SI when the effect of depression was controlled (Ducasse et al., 2018). This indicated that youth who experience lack of interest in previously enjoyed activities might contemplate on ending their lives.

*1.1.3 Rumination and SI.*Rumination acted as a mediator between negative life events and SI (S.Wang et al., 2020). Self-criticism and reflection combined were significant predictors of SI onset (Stange et al., 2015). A review study by Morrison & O'Connor (2008) provides evidence in favor of the association between rumination, its subtypes, and SI. This indicates that youth who constantly brood over negative thoughts is more likely to think about suicide.

1.1.4 Personality and SI. Personality traits like impulsivity and neuroticism significantly predicted SI, whereas extraversion was found to decrease the risk of SI (Chow et al., 2018). Similar results were reported in Eastern studies (Huang et al., 2019; Salami et al., 2015). This indicated that youth suffering from neurotic or impulsive issues tend to think more about ending their lives, whereas those with extrovert traits are less likely to think about suicide.

1.1.5 Interpersonal Needs and SI. Psychological factors like perceived burdensomeness (PB) and thwarted belongingness (TB) were found to be independent risk factors (Lafuente-Castro et al., 2018) as well as intermediates in different studies, enhancing the likelihood of thinking about killing oneself (Chu, Rogers, et al., 2017). Neuroticism was positively, while extraversion was negatively associated with TB and PB (DeShong et al., 2015; Campos et al., 2020).

In South Korea, interpersonal needs were studied where high TB, sociotropy (exhibiting a desire for social relations and societal acceptance) acted as a defense against SI. Conversely, with high levels of PB, highly autonomous individuals had enhanced vulnerability to SI. Conversely, with low levels of PB, autonomy acted as a buffer to SI (Park et al., 2019). A review study and meta-analysis over decades of exploration of interpersonal determinants supports the above-mentioned findings (Chu, Buchman-Schmitt, et al., 2017). The interpersonal theory of suicide (Joiner, 2005), reinforces similar idea by emphasizing the lethality of suicidal risk when PB and TB are combined.

1.1.6 Stress and SI. Under the influence of severe stress, students were found to be vulnerable to SI. Almost 23% of students reported feeling stressed every day, while 34% testified being stressed several times a month, and 37% informed struggling with it 3 to 4 times a week (Rosiek et al., 2016). Students suffering from academic or chronic stress might think about ending their lives when unable to cope with it.

1.1.7 Psychological strain and SI. A comparison study was conducted in China and the USA to assess the impact of psychological strain on SI. Young age and strain in Chinese undergraduates, while female gender and strain in their American counterparts were identified as possible determinants of SI (Zhang et al., 2017). This indicated that not only stress, but strain can also lead to SI among young students. Unable to decide between two equally important yet contradicting choices might trigger young minds to find escape in thinking to end their lives.

1.1.8 Coping and SI. Stress alone is not a determining factor of SI, rather coping in the face of stress also plays its role in mitigating or mediating to SI. Avoidance coping was considered a risk element while hardiness and problem-solving were protective elements against SI (Abdollahi et al., 2015). Those who reported better emotion-focused coping had .80 times fewer chances to suffer from SI (Yoon et al., 2018). Some coping skills had a negative association with SI like active coping and positive reframing. Coping skills like self-distraction, substance abuse, behavioral disengagement, and self-blame are positively associated with SI, after controlling for socio-demographics and mental health variables (Liang et al., 2020). Resilience factors such as life satisfaction and expectation for future life have a protective effect against SI (Davaasambuu et al., 2017). This indicated that among young adults, chronic stress and strain may not lead to SI if hardiness, resilience and problem-solving mitigate the impact of those stressors.

1.1.9 Emotional Reactivity and SI. Emotional reactivity and comfort in expressing emotions predicted SI at 12 months follow-up (Polanco-Roman et al., 2018). The impact of this risk factor can be found in literature as well, e.g., in a review study, alexithymia, i.e., difficulty with identifying and expressing emotions had strongly predicted SI (Hemming et al., 2019).

Psycho-social Determinants of SI

1.1.10 Social connectedness. Stress and strain is associated with higher rates of SI among young students. Conversely, a sense of membership at the university was found as a significant protective element against SI (Blasco et al., 2019). In a prospective study,

peer and family connectedness (Czyz, Liu & King, 2012), and social connectedness (Reyes et al., 2020) reduced the risk for SI among adolescents. The literature also alludes connectedness as protective element and intervention against SI among students (Robert et al., 2018).

Contrarily, lack of support is deemed as a risk element for SI. A lack of Perceived Parental Support was found to be related with 9-fold augmented threat of frequent SI (Macalli et al., 2018). A conflicting family environment like negative family events, parental divorce and death, and low socioeconomic status were other identified determinants of SI (Goldstein et al., 2009). Similar findings were reported in Eastern countries where a lack of close friends, supportive peers, parental supervision, connectedness, and bonding, predicted an increase in SI (Chan et al., 2016). Having understanding parents predicted a protective effect (Ziaei et al., 2017). In another longitudinal Eastern study, quarrels with parents were the strongest predictor of SI for girls under the age of 18 (Chiu et al., 2017). Family factors that influenced SI both, directly and indirectly, are the most powerful determinants of SI (M.Wang et al., 2019).

1.1.11 Maltreatment and SI. Maltreatment of any nature (including physical, psycho-emotional, and sexual) were significant predictors of SI (Yoon et al., 2018) in both Eastern and Western studies. Emotional security, anxious attachment, and disengagement were also associated with SI, even after controlling for the effect of abuse (Cantón-Cortés et al., 2020). Regardless of any protective factor, sexual abuse remained the strongest determinant of SI (Yoon et al., 2018). Literature suggests

similar findings as in a review study, a 2 to 3-fold amplified risk of SI and SA is seen among adults (Angelakis, Gillespie & Panagioti, 2019) and adolescents (Miller et al., 2013) with history of childhood maltreatment.

A Part from childhood maltreatment, abise in adult relationships can be a risk factor for SI. A hostile withdrawal was related to SI. (Wolford-Clevenger et al., 2017). Similarly, in Eastern studeis, sexual victimization, and poly-victimization (suffering from a chronic disease, living with a stepparent, living in a less developed region, experiencing harsh events) are other predictors of SI (Le et al., 2016). Bullying was found as another significant determinant of SI (Canbaz & Terzi, 2018). Individuals having a greater intensity of LGB comingout stress and victimization exhibited an increased level of SI (Baams et al., 2015). This shows that victims of emotional, physical and sexual abuse are more likely to contemplate about ending their lives and think suicide as a solution to their problems.

Physical Determinants of SI

In Eastern studies, physical determinants of SI were found. The presence of allergic diseases (Lee et al., 2015), chronic abdominal discomfort, defecation disorder, and low satisfaction with defecation predicted a high risk of SI when depression and anxiety were controlled (Jiang et al., 2019). Evidence from literature also supports medical (Hirsch, Duberstein & Unützer, 2009), and physical problems increasing the risk for SI (Kavalidou et al., 2019). The youth suffering from physical illness is more likely to think about ending one's life as compared to a physically healthy person.

Not only physical ailment, but sleep deprivation is another risk element found to drastically increase the prevalence of SI in both Eastern (Supartini et al., 2016) and Western study (Bernert et al., 2017). Self reported insomnia appeared as critical alarming signal of SI.

Conclusion

Although there are cultural differences between both geographical regions, fewer differences and more similarities were found in terms of RPFs of SI. The studies regarding biological risk factors were conducted in the Eastern region, while western studies were more dominated by psychological problems. Due to the attached stigma regarding mental health and suicide, Eastern people tend to somatise their symptoms for social acceptability. As research indicates that Eastern samples like Chinese report more somatic symptoms than psychological symptoms (Dere et al., 2013), it is more likely for people in Eastern countries to emphasize physical health conditions instead of psychological problems. There is a need to study physical/somatic risk factors for SI. Similarly, a smaller number of studies highlighted protective factors, an area that deserves further attention in the future and must be explored further in both Eastern and Western countries. There is no Eastern study regarding LGBT in Eastern countries, reflecting the stigma and shame attached to LGBT in Eastern countries. The attached shame and stigma might contribute to the coming out of stress, thus leading to a greater risk of SI in LGBT people (Hequembourg & Dearing, 2013).

Implications

To our knowledge, this is the first review to compare the RPFs of SI between EWCs.

However, this review has its limitations. First, due to strict inclusion criteria, a limited chunk of the population has been addressed. Studies with age samples 15-29 were included in the review, with the majority of participants being students. Future studies can target the geriatric, children, and employed population. Second, only 3 databases were considered in the review, there is a large body of literature that remained unaddressed. Future studies can focus on data from other databases as well. Third, most of the studies included in the review are of a cross-sectional design that prevents drawing causal inferences. In the future, a review can be conducted to include all the longitudinal studies to draw causal inferences from certain risk factors. Fourth, a limited number of countries were studied in this review as most of the studies are from two countries i.e., China and the USA. Future studies can target the maximum number of studies involving samples with increased generalizability. Lastly, few studies have focused on protective factors regarding SI. Future studies can target protective factors exclusively to help in the prevention and intervention of SI.

Mental health and suicide prevention must be on the primary agenda in global health. Interventions could be designed to exclusively target more vulnerable groups first to curb the risk for SI. With somewhat similar RPFs among Eastern and Western countries, similar interventions may suffice globally with their cultural modifications. Policymakers should take into account both proximal and distal RPFs to prevent SI before its progression to suicidal attempt or behavior.

Availability of data and materials. Data and materials for the present study have not been made publicly available due to privacy concerns. Data analyzed in the current study are available on request from the corresponding author via email at dr.sumara@s3h.nust.edu.pk

Ethical Approval This study was conducted following the ethical guidelines provided by the American Psychological Association and the ethical committee of the National University of Sciences and Technology.

Competing interest. The authors declare to have no competing interests

Consent for Publication. The authors have agreed upon the publication of this manuscript.

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Research Article

Dark Triad Personality Traits, Locus of Control and Workplace Deviance Among Lawyers: Mediating Role of Moral Disengagement

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Abstract

Background. This study is conducted to investigate the role of moral disengagement as mediator between dark triad personality traits (machiavellianism, narcissism, and psychopathy) and workplace deviance among lawyers. Additionally, the mediating role of moral disengagement between internal locus of control which is dimension of LOC (locus of control) and external control locus (powerful others and chance locus of control dimensions) among lawyers were also explored.

Method. This is a cross-sectional research design, in which, purposive sampling technique is used. The sample comprised of 300 lawyers working under supervision of senior lawyers as their junior advocates/associates including genders, men and women, with age ranging from 22 to 46 years. The Measure of Short Dark Triad Scale by Jones & Paulhus, 2014, Propensity to Morally Disengage Scale by Moore et al., 2012, Multidimensional Locus of Control Scale by Levenson, 1981 and Workplace Deviance Scale modified for lawyers by Bennett & Robinson, 2000 were used.

Results. Results of this study showed that moral disengagement acted as mediator between dark triad personality traits and workplace deviance. As well as moral disengagement has showed mediation between subscales of dark triad personality traits which include machiavellianism, narcissism, and psychopathy. Furthermore, results revealed that moral disengagement did not play role as a mediator in internal locus of control and workplace deviance, showing a negative relationship, but moral disengagement positively mediated the relationship between powerful others and chance locus of control which are external control locus dimensions.

Keywords. Dark triad personality traits, moral disengagement, workplace deviance, l ocus of control, internal locus, chance, powerful others.

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Introduction

Dark triad personality traits are machiavellianism, narcissism, and psychopathy (Paulhus & Williams, 2002). Machiavellianism is defined by disregard for traditional morality and a conviction in the efficacy of deceitful tactics for pursuing power and material gain (Paulhus & Williams, 2002). A greater sense of grandiosity, entitlement, dominance, and superiority are characteristics of narcissism (Paulhus & Williams, 2002). Psychopathy is characterized by traits which include excessive impulsivity, as well as a lack of remorse and less concern for others (Paulhus & Williams, 2002).

Locus of control refers to individual's expectations that their behavior will be encouraged or impacted by their own choices or by aspects of their personality versus the degree to which individual's expect that the encouragement or a consequence is a component of chance, good fortune, or under the control of powerful figures which is simply unclear. Literature suggests two distinct loci of control: an internal locus of control based on person's talents, capabilities, and self-determination. However, the external locus of control involves work expectations and is dependent upon on other people's actions (Mulki et al., 2019). Both social and physical contexts are elements that affect the development of locus of control (Kusuma, 2018).

The moral disengagement theory explains why people act immorally yet don't seem to feel guilty or self-conscious about it (Moore et al., 2012). Workplace deviance is described as deliberate activities that go against important organizational standards that endanger the workplace, its members, or mental wellbeing of both. Interpersonal deviance and organizational deviance were identified as two distinct categories in the border term of workplace deviance defined by the authors. Organizational deviance are basically actions that are performed against the workplace itself, while interpersonal deviance refers to actions that are targeted against other members of the workplace, such as supervisors, coworkers, or subordinates (Bennett & Robinson, 2000).

Lawyers strive to act professionally and with integrity, which is why their clients regard them as their mentors and place their complete trust in them. Lawyers have to meet deadlines within the time constraints and have to face decision pressures, the intricacy of laws and juridical procedures, the desire of being notified on judicial decisions, legal principles, and have to face high level of client expectations and even hostility from other rival lawyers (Elwork, 2007).

By excelling in graduate school and in the legal profession, lawyers usually exhibit type A personality traits (target oriented, hardworking, calm, and highly achieving etc.) There are undoubtedly a lot of mental and social problems among lawyers created by blend of their personal traits and professional expectations (Azeem et al., 2020). However, there is a prevalent misconception in the society that all lawyers and law students have unethical and "dark" personalities and those possessing these dark triad personalities are more likely to be drawn to certain occupations than others (Dutton, 2012). Lawyers, media professionals, and business chief executive officers are the professions which attract dark triad leaders whereas care assistants, nurses, and various "health" therapies are the occupations that are least likely to draw such people with dark triad personality traits (Manne, 2013).

A trend in the six jobs (farmers, physicists, musicians, teachers, lawyers, and accountants) was analyzed in literature (Cramer et al., 2009). Results of this study revealed that lawyers showed higher prevalence of dark triad traits. The reason could be because participants' think of lawyers as using those same tactics as weapons in court, and the reason for these results could be because manipulation and deceit of machiavellianism is seen as advantageous for lawyers due to their professional demands. Participant might think that lawyers as narcissistic based on the image of an attorney delivering an ardent argument (Cramer et al., 2009). Literature evidence supports this assumption, portraying lawyers as narcissistic, psychopathic, and possessing machiavellian tendencies (Newton, 2015).

According to Elwork and Benjamin (1995), the confrontational entire judicial system in which lawyers practice leads to paranoia, which makes lawyers judge others intentions as suspicious. As long as a lawyer manages his defense in a moral and legal way, he is just carrying out his professional responsibility as an attorney. He may be deemed a lawyer engaging in misconduct if he uses his defense to circumvent the law and professional ethics (Shreya et al., 2021).

Three variables have been put out in the literature as potential determinants of lawyer misconduct or deviance. The first is a lack of practice time or, more particularly, a lack of experience in workplace. With experience, lawyers acquire stability, practical knowledge, and resources that aid in upholding ethical standards and also help in avoidance of severe punishments. Due to their lower professional revenues, poorer individual clients, lawyers with less time in practice face more pressures and have more opportunities for misconduct than lawyers with more work experience. The stratification hierarchy of the profession is another element that affects legal misconduct. The legal profession is extremely stratified even though it presents itself formally as a single profession with a shared set of credentials. There are several methods for identifying this hierarchy, but it is generally agreed that solo practitioners are at the bottom. Lower court settings are often associated with solo practitioners. According to research, lawyers at the bottom of the status hierarchy are suitably vulnerable to do violation of rules; they are under high pressure to break ethical standards. Macroeconomic changes in society as a whole are the third factor that affects lawyers' misconduct. Despite their position in the profession, lawyers are susceptible to changes in the economic cycle (Arnold & Hagan, 1992 as cited in Sklar, 2020).

The legal sector has long suffered with a negative reputation. Negative stereotypes are also associated with lawyer's personality as being manipulative, showing work deviance and exhibiting psychopathic, narcissistic tendencies because of their professional demands and the nature of their job. The practice of law is a demanding one, and the pressure lawyers face from clients, fellow lawyers, and the judiciary contributes to more severe problems that leads them towards performing acts that are harmful to others in society. While the majority of lawyers perform their professional duties with morality and discretion, a small minority of them engage in dishonest or unethical behaviors that harms clients. Misbehavior on the part of lawyers happens in the context of their personal and professional life, but not in isolation (Rutten et al., 2017).

It means that all lawyers do not exhibit these symptoms and will not show deviance from norms or moral disengagement in their legal profession, only a few of them will engage themselves in such practices and that is because of their professional demands and to fulfill their needs.

Role of Moral Disengagement as a Mediating Factor between Dark Triad Personality Traits and Workplace Deviance

The "dark trio" of psychological traits, which include machiavellianism, narcissism, and psychopathy, is subject of wealth of study. These attributes have frequently been put up as indicators of immoral actions, either together or separately (Jakobwitz & Egan, 2006). Numerous factors that are linked to the dark triad personalities and workplace deviance are highly correlated with moral disengagement. In one study, abusive supervision was shown to activate manipulation tendencies which results in demonstrating deviance at workplace (Greenbaum et al., 2017).

According to empirical research, normal personality traits, such as agreeableness, conscientiousness, and emotional stability, as well as the dark personality traits, such as narcissism, machiavellianism, and psychopathy are strongly correlated with one another and with moral disengagement (Caprara et al., 2013; Fossati et al., 2014). These findings of this study made clear that those who are ethically detached are more likely to act in atypical ways and are more prone to engage in destructive deviance.

Studies on machiavellianism have shown a positive relationship between various undesired aspects that are harmful for the workplace such as workplace deviance (Bennet & Robinson, 2000; Galperin, 2012). According to research, those with a strong machiavellian orientation are more prone to engage in detrimental deviant practices at work. However, prior research also suggested a positive correlation between deviance at workplace and moral disengagement (Christian & Ellis, 2014; Hystad et al., 2014; Samnani et al., 2014).

Previous studies have established a favorable relationship between moral disengagement and psychopathy (DeLisi et al., 2014). Furthermore, narcissists egoistic character drives them to be arrogant, callous, domineering and conforming to morally righteous social norms is not a concern for them. They are more likely to use technique of moral disengagement called as distortion of consequences to rationalize their own behaviors. Previous studies looked at how moral disengagement acted as mediator between individual-level predictors and detrimental behavioral consequences (Moore, 2015). Arvan found associations among the dark triad facets of personality and judgments of immorality (Arvan, 2013). Recent studies on the dark triad characteristics and the processes of moral disengagement showed that these three personality attributes that constitute up the dark triad are linked to antisocial conduct in a group of young people (Sijtsema et al., 2019).

Researches anticipate that moral disengagement will be the connecting element between dark triad personality traits and harmful deviant workplace actions based on the above mentioned justifications.

Role of Moral Disengagement as Mediating Factor between Internal and External Locus of Control and Workplace Deviance

Locus of control encompasses the two different types of individual mentalities pertaining to their vision towards the life & work environment. People with internal locus of control are inclined to assert that they have the power to influence all the events, consequences, and outcomes of day-to-day life. They hold that only humans and conditions that are within human control can bring about changes. However, those with external locus of control assert that uncontrolled external factors like chance, destiny, social forces, and people with power have the potential to control one's life (Farhadi et al., 2015).

Moore and his colleagues (2015) discovered that moral disengagement was linked with dishonesty, skepticism, and is core of external locus of control they found connection between external locus of control and moral disengagement (Moore et al., 2015). Findings of the Ogunyemi (2013) study demonstrated that external locus of control might aggravate unethical conduct, despite the fact that internal locus of control is not a guarantee that people would act ethically (Ogunymemi, 2013). According to the findings of a different study, managers with an internal locus of control exhibit ethical behavior that is more consistent with their evaluations than managers with an external locus of control (Chiu's 2003). According to Karimi and Alipour (2011), people with internal locus of control consider themselves to be in charge of their own lives (Karimi & Alipour, 2011).

A study investigated the link between rule breaking, athletes locus of control, and moral disengagement as well as whether moral disengagement acts as a mediator in this relationship. The findings showed that frequent rule breaking and moral disengagement in sports were positively correlated with external locus of control (Tsai et al., 2014). Another research examined link among external locus of control and work productivity deviance among public sector employees. The study's findings revealed role of moral disengagement as a mediator in this interaction (Latipun, 2019).

In Pakistan, people with different kind of personalities perform their duties in the workplace at the same time. Personality characteristics have a level of impact on deviating actions of persons working in any workplace or part of any legal firm, with serious repercussions for the workplaces. People who feel they have complete internal control over life events are less likely to participate in workplace deviance and regard their workplace as

supportive of meeting their needs compared to people with an external locus of control.

The objective of this study was to investigate the potential mediating effects of moral disengagement between the dark triad personality characteristics and subscales of the dark personality (machiavellianism, narcissism, and psychopathy) and workplace deviance among lawyers. Furthermore, role of moral disengagement as a mediator in both internal locus of control and external locus of control (powerful others and chance locus of control) dimensions has been explored in the present study.

Hypotheses

1. Moral disengagement play mediating role between dark triad personality traits (machavellianism, narcissism, and psychopathy) and workplace deviance among lawyers.
2. Moral disengagement play mediating role between internal locus of control, external locus of control (powerful others and chance) dimensions and workplace deviance among lawyers.

Method

Purposive sampling technique was used in the current study to get the data from lawyers working under supervision of senior lawyers as their associates or junior advocates (*N*=300). It is comprised of both males (*n*= 197) and females (*n*= 103) with age range from 22-46 years (*M*= 29.59, *SD*= 4.76). Married individuals were (*n*=142) and single were (*n*= 158). Lawyers belonging to joint family system were (*n*=186), while the number of those belonging to nuclear family system were (*n*=114). (75.65%) of sample had minimum of 1 year to 5 year experience and (24.3%) of them had 6 years of experience to 10 years of experience (*M*= 3.71, *SD*= 2.53). 13.7 percent of the lawyers were dealing with criminal cases, 7.3 percent deal with civil cases, 1 percent only deal in corporate sector, 5.7 percent of them deal with family related cases. Lawyers working in different courts and law firms in areas of Pakistan included Rahim Yar Khan, Islamabad, Rawalpindi, Bahawalpur, and Sadiq Abad were part of this study.

Assessment Measures

Short Dark Triad Scale. The short dark triad questionnaire is a self-report questionnaire designed to examine three components of the dark triad personality characteristics machiavellianism, narcissism, and psychopathy (Jones & Paulhus, 2014). This is a 27-item measure, with nine items for each of the traits. It is a 5-point Likert scale with a range of 1 *(Strongly Disagree)* to 5 *(Strongly Agree)* to measure the brief dark triad traits. The first subscale in short dark triad is machiavellianism. It is comprised of first 9 items in the scale. There is no reverse scored items in machiavellianism subscale. The scoring range for machiavellianism subscale is 9-45. The next subscale is narcissism. This subscale is also comprised of 9 items. There are reversed scored items in this subscale which are item no. 11, 15, and 17. The scoring range for this subscale is from 9-45. The last subscale of short dark triad scale is psychopathy. This one is also comprised of 9 items. There are also reversed scored items in this subscale. Item number 20 and 25 are reversed scored items. The scoring range for this subscale is also from 9-45. Short dark triad scale had alpha .76 for machiavellianism, .73 for psychopathy, and .78 for narcissism and the inter correlations ranged from .22 to .40 (Jones & Paulhus, 2014).

The Multidimensional Locus of Control. Hanna Levenson created the multidimensional locus of control scale (Levenson, 1981). The scale contains 24 items that assess person's locus of control. The Likert scale has six points, with the range being 1 *(Strongly Disagree)* to 6 *(Strongly Agree)*. This measure generates three separate components. Eight questions make up the internal locus of control subscale (items 1, 4, 5, 9, 18, 19, 21, 23), which measures a person's conviction in his or her skills to influence life events. The powerful others subscale also contains eight items (items 2, 6, 7, 10, 12, 14, 16, 24) it assesses how much a person believes his or her life is being directed by persons in positions of power. The chance subscale consists of eight items (items 3, 8, 11, 13, 15, 17, 20, 22), estimating the beliefs that chance and fate dictate a person's life, offering him or her little to no influence over his or her

personal circumstances. The reliability of internal locus of control dimension is α= =.67, powerful others α = .82 and chance subscale α = .79. The overall scoring range for the scale is 24-144. There are no reverse scored items present for this scale. A person's score on all three aspects might be high or low. High scores expressed a high level of internal locus of control or external locus of control (powerful others) or fate (chance) (Levenson, 1981).

Workplace Deviance Scale. The study measured workplace deviance by using the Bennett-Robinson workplace deviance scale (Bennett & Robinson, 2000). This scale contains 19 items. It comprised of 12 items on organizational deviance and 7 items on interpersonal deviance. Organizational deviance subscale scale items are (1,2,4,6,8,9,11,12,13,16,17,19). Interpersonal deviance subscale items are (3, 5, 7, 10, 14, 15, 18). The response format included seven options, with a 1 indicating (*Never)* in that behavior and a 7 indicating (*Daily)*. The scoring range for the workplace deviance scale ranges from 19-133. The scoring range for organizational deviance subscale was from 12-84, whereas for interpersonal deviance subscale scoring range was from 7-49. The internal reliabilities of organizational and interpersonal workplace deviant behaviors are .81 and .78. The alpha reliability of workplace deviance scale is .88. There are no reversed scored items in the scale (Bennett & Robinson, 2000).

Propensity to Morally Disengage Scale. Propensity to morally disengage scale was employed to assess moral disengagement which was made by (Moore et al., 2012) for adult population. There are 24 items on a 7-point Likert scale, with 1 being *(Strongly Disagree)* and 7 being *(Strongly Agree).* This measure evaluates each of Bandura's eight suggested moral disengagement mechanisms. First three items of scale measure moral justification (item no. 1, 2, and 3). Euphemistic labeling subscale items are from item no. 4, 5, and 6. Advantageous comparison items are 7, 8, and 9. Displacement of responsibility subscale items are 10, 11, 12. Diffusion of responsibility subscale items are from 13, 14, and 15. Distortion of consequences subscale items are 16, 17, and 18.

Dehumanization subscale includes items 19, 20, and 21. Attribution of blame subscale items are 22, 23, and 24. The alpha reliability of overall scale is α=.80. It was found in previous studies initial findings that each of the subscales had alpha coefficients greater than .70 (Moral justification a = .85; Euphemistic Labeling a = .83; Advantageous Comparison a = .82; Displacement of Responsibility a = .87; Diffusion of Responsibility a = .88; Distortion of Consequences a = .85; Dehumanization a = .80; Attribution of Blame a = .78), showing good reliability of the subscales. As there are eight subscales of propensity to morally disengage scale. Each sub-scale has a possible score range of 3 to 21, and higher scores on all subscales indicate a stronger inclination to morally disengage, whilst lower scores on the propensity to morally disengage scale represent an individual's reduced predisposition to do moral disengagement. Possible total score range for total propensity to morally disengage scale ranges from 24-168. There are no reversed scored items present in this scale.

Procedure

Permission to use the questionnaires in this study was first acquired from the authors of the scales. Authors of the scales were contacted through emails and their permissions were sought. Then the permission for data collection was acquired from authority figures that belonged to legal profession. Those authority figures helped to collect data from different courts and law firms of Pakistan. First an informed consent form was given to the participants and their voluntary participation in the study was made sure. In that consent form, they were properly debriefed about the purpose of the study and its potential benefits. All the research variables were clearly mentioned in that informed consent form. But before handing over research questionnaire to them, lawyers were clearly told that we will be checked for dark personality traits, moral disengagement, locus of control and workplace deviance and even inclusion criteria was also made clear to them. They were informed that only those lawyers working under your supervision as their junior advocates will be part of this study. Next they were asked about various kinds of deviant practices

their junior advocates/ associates do in their courts or firms. Lawyers were interviewed for this purpose. On the basis their responses which we got from them, helped us in modification of workplace deviance scale specifically designed for lawyers in this research study. Their queries regarding the present study was answered by the researcher. Then the questionnaires were administered in both individual and group setting. The respondents were ensured that ethical boundaries will be maintained in the present study, and their information will not be shared with anybody. All participants had voluntary participation in this study. In the end, all those who participated in the study were thanked for their cooperation. As study participants were informed that their responses would be kept anonymous and the results would only be used for research so chances of social desirability in that case were reduced.

Results

The mediation analysis was performed, which assisted in determining how and why there is a link between the dependent and independent variables (Hayes, 2017). The goal of present analysis was to determine the mediating role of variables in single mediation. This level involves mediation analysis which is comprised of single mediation; such that there is one mediator between dark triad personality traits (X) and its subscales (machiavellianism, narcissism, and psychopathy) and workplace deviance (Y). Tables as well as conceptual model for all each single mediator are given below. The role of moral disengagement (M) as mediator and the relationship between locus of control dimensions (internal locus, powerful others, and chance locus of control) (X), and workplace deviance (Y) was carried out by using Model 4 of PROCESS macro (Hayes, 2017). The findings of the analysis are given as follows:

Table 1

Moral Disengagement as Mediator between Dark Triad Personality Traits and Workplace Deviance (N = 300)

Models				95% CI		
	R^2	F	B	LL	UL	p
Total effect – DT → WPD (c)			.12	-.04	.29	.15
	.00	1.99				
Model with mediator						
DT → MD (a)	.07	24.77	.56	.34	.78	.00
MD → WPD (b)		52.75	.38	.30	.45	.00
Direct effect – DT → WPD (c′)			-.09	-.24	.05	.21
Indirect effect – DT → MD → WPD	.26		.21	.12	.33	.00
Sobel's Test (Z) = 4.45						

Note. DT= Dark Triad Personality Traits, MD= Moral Disengagement, WPD= Workplace Deviance

Table 1 indicated that dark triad personality traits are associated with workplace deviance in case of total effect (B=.12*, p> .05)*. The coefficient of direct effect (B=-.09 *p>.05)* shows that direct effect is not explaining the relationship between the predictor and the outcome variable. But in indirect effect is explaining the relationship between predictor and outcome variable, the relationship between dark triad personality traits and workplace deviance is explained by the mediating variable that is moral disengagement (B=.21, *p<0.05*). The findings provide support for our hypotheses (Moral disengagement act as a mediator between dark triad personality traits and workplace deviance). The mediation is shown by given figure:

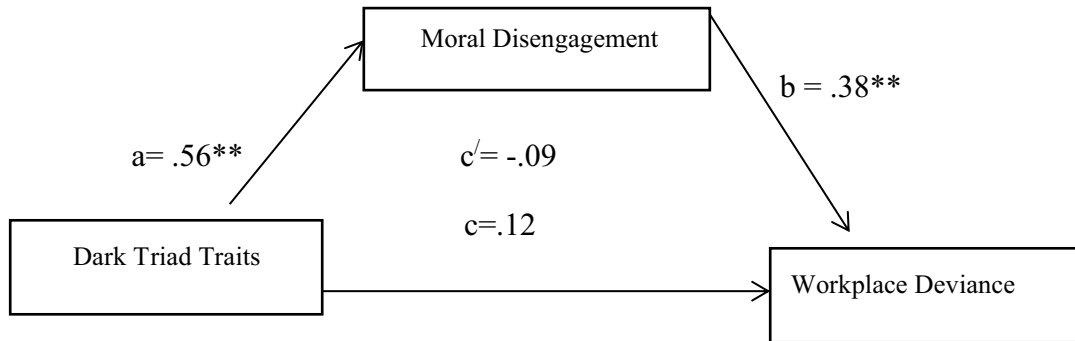**Figure 1.** *Moral Disengagement as Mediator between Dark Triad Personality Traits and Workplace Deviance*

Table 2

Moral Disengagement as Mediator between Machiavellianism and Workplace Deviance (N = 300)

Models	R^2	F	B	95% CI LL	95% CI UL	p
Total effect – Mach $\rightarrow$ WPD (c)			.04	-.31	.41	.79
	.00	.06				
Model with mediator						
Mach $\rightarrow$ MD (a)	.07	9.89	.78	.29	1.27	.00
MD $\rightarrow$ WPD (b)		53.35	.38	.30	.45	.00
Direct effect – Mach $\rightarrow$ WPD (c$^{/}$)			-.25	-.56	.06	.12
Indirect effect – Mach $\rightarrow$ MD $\rightarrow$ WPD	.26		.29	.08	.53	.00
Sobel's Test (Z) = 2.99						

Note. Mach= Machiavellianism, MD= Moral Disengagement, WPD= Workplace Deviance

Table 2 indicated that machiavellianism is associated with workplace deviance and (B =.04, *p> .05*) in case of total effect. The coefficient of direct effect (B = -.25, *p>.05*) shows that direct effect is not explaining the relationship between the predictor and the outcome variable. But in indirect effect is explaining relationship between predictor and outcome variable, the relationship between machiavellianism and workplace deviance is explained by the mediating variable that is moral disengagement (B=.29, p<0.05). The mediation is shown by given figure:

Figure 2. *Moral Disengagement as Mediator between Machiavellianism and Workplace Deviance*
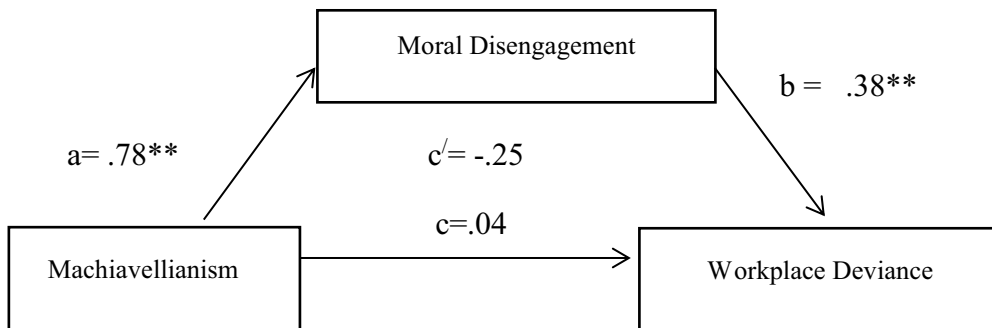
Table 3

Moral Disengagement as Mediator between Narcissism and Workplace Deviance (N = 300)

Models	R^2	F	B	95% CI LL	95% CI UL	p
Total effect – Narc →WPD (c)			.29	-.14	.73	.18
	.00	1.78				
Model with mediator						
Narc →MD (a)	.03	11.0	.99	.40	1.58	.00
MD →WPD (b)		51.82	.37	.30	.44	.00
Direct effect – Narc →WPD (c′)			-.07	-.46	.31	.70
Indirect effect – Narc →MD→WPD	.25		.37	.11	.65	.00
Sobel's Test (Z) = 3.13						

Note. Narc= Narcissism, MD= Moral Disengagement, WPD= Workplace Deviance

Table 3 indicated that narcissism is associated with workplace deviance (B=.29, *p> .05*) in case of total effect. The coefficient of direct effect (B= *-.07 p>.05*) shows that direct effect is not explaining the relationship between the predictor and the outcome variable. But in indirect effect is explaining relationship between predictor and outcome variable, the relationship between narcissism and workplace deviance is explained by the mediating variable that is moral disengagement (B=.37, p<0.05). The mediation is shown by given figure:

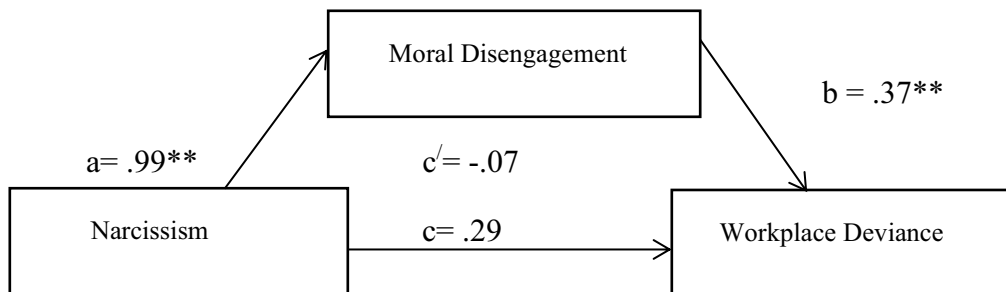**Figure 3. *Moral Disengagement as Mediator between Narcissism and Workplace Deviance***

Table 4

Moral Disengagement as Mediator between Psychopathy and Workplace Deviance (N = 300)

Models	R^2	F	B	95% CI LL	95% CI UL	p
Total effect – Psy →WPD (c)			1.01	.62	1.41	.00
	.07	25.39				
Model with mediator						
Psy →MD (a)	.03	11.0	1.86	1.33	2.38	.00
MD →WPD (b)	.34	54.30	.34	.26	.41	.00
Direct effect – Psy →WPD (c′)			.38	-.002	.76	.05
Indirect effect – Psy →MD→WPD	.26		.63	.40	.90	.00
Sobel's Test (Z) = 5.43						

Note. Psy= Psychopathy, MD= Moral Disengagement, WPD= Workplace Deviance

Table 4 indicated that psychopathy is associated with workplace deviance (B=1.01, *p< .05*) in case of total effect. The coefficient of direct effect (B= .38, *p=.05)* shows that direct effect is explaining the relationship between the predictor and the outcome variable. But in indirect effect is more strongly explaining the relationship between predictor and outcome variable, the relationship between psychopathy and workplace deviance is explained by the mediating variable that is moral disengagement (B=.63, *p<0.05*). The mediation is shown by given figure:

Figure 4. *Moral Disengagement as Mediator between Psychopathy and Workplace Deviance*
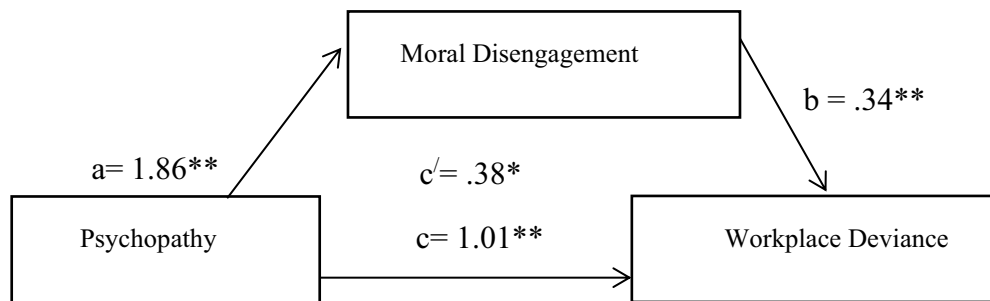

Table 5

Moral Disengagement as Mediator between Internal Locus of Control and Workplace Deviance (N = 300)

Models				95% CI		
	R^2	F	B	LL	UL	p
Total effect – ILC → WPD (c)			-.50	-.77	-.24	.00
	.04	14.03				
Model with mediator						
ILC → MD (a)	.001	.50	.13	-.23	.50	.47
MD → WPD (b)		67.55	.37	.30	.44	.00
Direct effect – ILC → WPD (c′)			-.55	-.78	-.33	.00
Indirect effect – ILC → MD → WPD	.31		.05	-.08	.20	.48
Sobel's Test (Z) = .70						

Note. ILC= Internal locus of control, MD= Moral Disengagement, WPD= Workplace Deviance

As values in the above table 5 indicated that total effect of IV (Internal locus of control) on DV (workplace deviance) is significant (B = -.50, *p* < 0.05), but when mediator (moral disengagement) is added in the model (path a) the effect became nonsignificant (B = .13, *p* > 0.05). In path b, moral disengagement (mediator) and workplace deviance (DV) have significant effect as (B = .37, *p* < 0.05). In the above table, direct effect is negatively explaining the relationship between internal locus of control (IV) and workplace deviance (DV) (B = -.55, *p* < 0.05). As internal locus of control will be high, workplace deviance will be less. In case of indirect effect, this is the product of coefficient of predictor-mediator relationship and the mediator-outcome relationship lead to mediation that is nonsignificant. Sobel test was also found to be nonsignificant (p >.05). In conclusion, direct effect negatively and significantly explained the relationship between internal locus of control and workplace deviance, as internal locus of control will get high, workplace deviance will

be less, but when moral disengagement as a mediator is added in this relationship the effect became nonsignificant, means moral disengagement is not acting as a mediator in the relationship between internal locus of control and workplace deviance. The mediation is shown by given figure:

Figure 5. *Moral Disengagement as Mediator between Internal Locus of Control and Workplace Deviance*
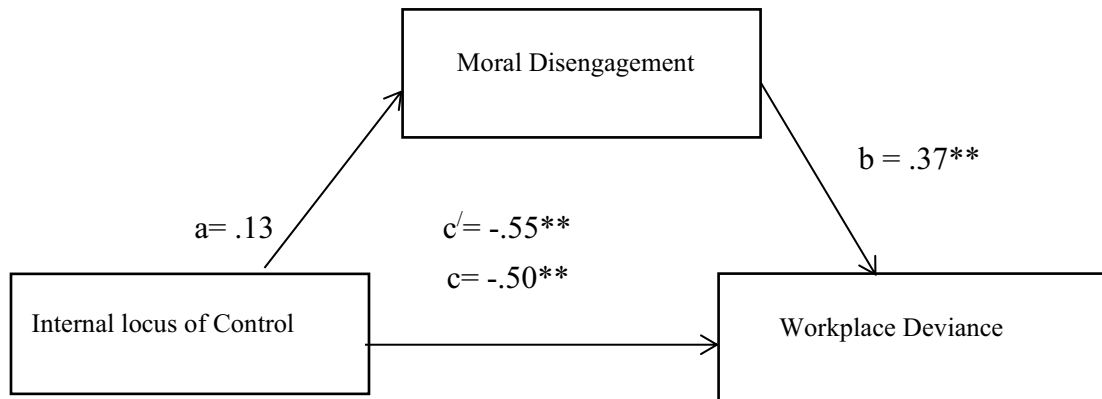

Table 6

Moral Disengagement as Mediator between External Locus of Control (Powerful Others) and Workplace Deviance (N = 300)

Models				95% CI		
	R^2	F	B	LL	UL	p
Total effect –EL (PO) $\longrightarrow$ WPD (c)			.76	.51	1.02	.00
	.10	35.89				
Model with mediator						
EL (PO) $\longrightarrow$ MD (a)	.18	65.52	1.36	1.03	1.69	.00
MD $\rightarrow$ WPD (b)		55.95	.32	.25	.40	.00
Direct effect – EL (PO) $\rightarrow$ WPD (c$^/$)			.32	.06	.57	.01
Indirect effect – EL (PO) $\rightarrow$ MD $\rightarrow$ WPD	.27		.44	.29	.63	.00
Sobel's Test (Z) = 5.75						

Note. EL (PO) = External locus of control (Powerful others) , MD= Moral Disengagement, WPD= Workplace Deviance

As values given in the above table show that total effect of IV (external locus of control (powerful others) on DV (workplace deviance) is significant (B = .76, *p < 0.05),* but after adding the mediator the direct effect also became significant *(*B = .32*, p < .05*) which means the mediator moral disengagement plays a role of strong mediator in the relationship between external locus of control (powerful others and workplace deviance). Similarly the indirect effect which is the product of coefficient of predictor-mediator relationship (a =1.36) and the mediator-outcome relationship (b = .32) leading to positive sign which means both direct and indirect effects are explaining the relationship between predictor variable and the outcome variable. Moral disengagement is acting as a mediator in the relationship between external locus of control and workplace deviance. As external locus of control individuals are more

likely to do workplace deviance and this relationship is mediated by moral disengagement. Sobel test was also found to be significant ($p < .05$) and have a nonzero value indicating difference between total effect (c) without mediator and direct effect (c′) and direct effect ($B = .32$, $p < .05$) is less than total effect ($B = .76$, $p < .05$) which indicates that moral disengagement acts as mediator between external locus of control (powerful others) and workplace deviance. This mediating role is shown in following figure:

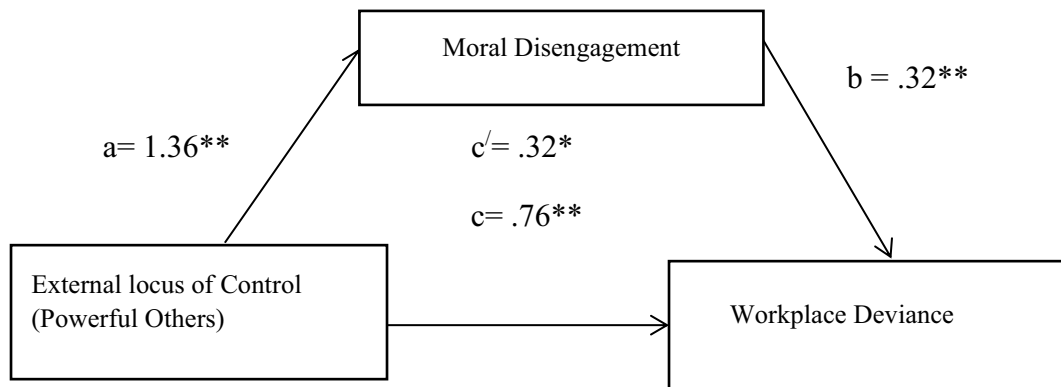**Figure 6.** *Moral Disengagement as Mediator between External locus of control (Powerful others) and Workplace Deviance*

Table 7

Moral Disengagement as Mediator between External Locus of Control (Chance locus of Control) and Workplace Deviance (N = 300)

Models				95% CI		
	R^2	F	B	LL	UL	p
Total effect –EL (CH) → WPD (c)			.19	-.09	.48	.19
	.00	1.69				
Model with mediator						
EL (CH) → MD (a)	.06	22.24	.92	.54	1.31	.00
MD → WPD (b)		52.73	.38	.30	.45	.00
Direct effect – EL (CH) → WPD (c′)			-.16	-.42	.09	.22
Indirect effect- EL (CH) → MD → WPD	.26		.35	.19	.55	.00
Sobel's Test (Z) = 4.26						

Note. EL (CH) = External locus of control (Chance locus), MD= Moral Disengagement, WPD= Workplace Deviance

As values given in the above table show that total effect of IV (external locus of control (chance locus of control) on DV (workplace deviance) is nonsignificant ($B = .19$, $p > 0.05$), after adding the mediator in this relationship as shown in path a, the effect become significant ($B = .92$, $p < .05$) which means the mediator moral disengagement played a role of strong mediator in the relationship between external locus of control (chance locus of control and workplace

deviance). The coefficient of direct effect *(B=-.16, p>0.05)* is not explaining the relationship between predictor that is external locus of control (chance locus of control) and outcome (workplace deviance). But when moral disengagement is added as mediator in this path, indirect effect is explaining the relationship between external locus of control (chance locus of control) and workplace deviance. As the indirect effect which is the product of coefficient of predictor-mediator relationship (a =.92) and the mediator-outcome relationship (b = .38) leading to positive sign which means that indirect effects is explaining the relationship between predictor variable and the outcome variable.

Moral disengagement is acting as a mediator in the relationship between external locus of control and workplace deviance. As external locus of control individuals are more likely to do workplace deviance and this relationship is mediated by moral disengagement. Sobel test was also found to be significant (p < .05) and have a nonzero value indicating difference between total effect (c) without mediator and direct effect (c') and direct effect (B = -.16., *p > .05*) is less than total effect *(B = .19, p >.05)* which indicates that moral disengagement acts as mediator between external locus of control (chance locus) and workplace deviance. This mediating role is shown in following figure:

Figure 7. *Moral Disengagement as Mediator between External Locus of Control (Chance locus) and Workplace Deviance*
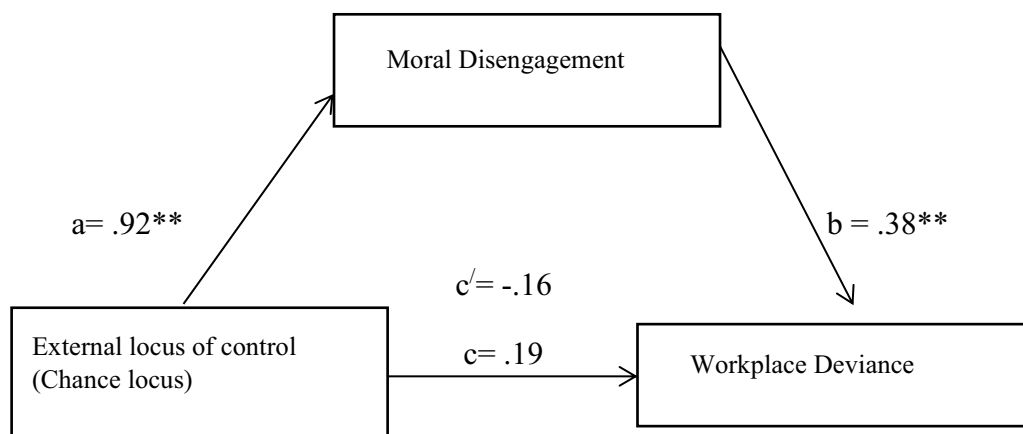
Discussion

Moral disengagement has played mediating role between dark triad personality characteristics (machiavellianism, narcissism, and psychopathy) and workplace deviance. Individuals with dark personalities are more likely to be morally disengaged, and this allows them to readily rationalize activities that are against their moral norms, so they can display schadenfreude more freely. Research elaborated role of moral disengagement as mediator between dark triad personality traits and negative emotions. Moral disengagement enhances link between dark traits. The research study provided evidence on moral disengagement as mediator between dark triad personality traits and

schadenfreude, in addition to that interpersonal aggressiveness was also found to be mediated through moral disengagement (Erzi, 2020).

A study of Italian workers showed that moral disengagement mediated the link between unpleasant emotions and workplace deviant actions. It has been discovered that when personnel in the workplace are faced with personal problems like anxiety, they become more morally disengaged. As a result they have more opportunities to participate in unproductive work actions as a response to rationalize their aggressive acts under troublesome settings (Fida et al., 2015). Fontaine and colleagues examined data from Italian teenagers. They concluded that individuals who

are abandoned by their colleagues are socially marginalized which leads them to engage in moral disengagement, which expedites their pursuit of destructive objectives. Findings of this research discovered that the link between peer rejection and criminality is mediated by moral disengagement (Fontaine et al., 2014).

Another study looked at the effect of moral disengagement as a mediator and empathy as a moderator in the relationship between callous-unemotional characteristics and cyber bullying victimizations (Fang et al., 2020). Rice, Letwin, Taylor, and Wo (2021) emphasized the significance of supervisor moral disengagement in mediating abusive management conduct and abusive supervisor behavior, which leads to staff deviance (Rice et al., 2021).

Most investigations on the connection between moral disengagement mechanisms and the dark triad personality characteristics have focused on the study of the psychopathic personality traits (Hyde et al., 2010; Risser & Eckert, 2016). Meanwhile, Shulman came to the conclusion that individuals with psychopathic personality characteristics are more inclined to rationalize their deviant behaviors as appropriate (Shulman et al., 2011).

Locke (2009) discovered that the narcissistic personality characteristic was linked with the moral disengagement mechanism of dehumanization in a university sample (Locke, 2009). Research literature reveals strong relationship between narcissism and moral disengagement. Jones and colleagues discovered that moral disengagement mechanisms worked as mediators between misconduct and narcissistic personality characteristics in another investigation with a sample of athletes. As a result, there is documentary evidence that moral disengagement and narcissistic personality traits are related (Jones et al., 2017).

In the literature that is currently available, it is established that moral disengagement primarily serves as a mediator, as seen in the relationship between poor parenting practices and antisocial behavior in adolescents (Hyde et al., 2006). According to earlier research, workforce that acts more morally and with social responsibility encounter a decrease in workplace deviance phenomenon (Ahmad et al., 2012).

Moral disengagement has played mediation role between internal locus of control, external locus of control (powerful others and chance locus) and workplace deviance. People who have an internal locus of control versus an external locus of control are typically identified. People who have an internal locus of control think their own activities caused the events in their lives. On the other side, those with an external locus of control believe that external factors like fate, destiny, or other people have a significant impact on life's outcomes (Kesavayuth et al., 2020). Personal attributes, character development, susceptibility to societal factors, individual circumstances, and life experiences all contribute to the development of locus of control (Dijkstraa et al., 2011). Cognitive issues are a major factor in the emergence of anxiety and depressive disorders. Anxiety and depression's onset, duration, and severity have all been associated to the locus of control construct, which is a crucial cognitive susceptibility component. Locus of control is typically thought of as a personality trait that is rather stable through time (Hovenkamp-Hermelink et al., 2019).

People with a high internal locus of control orientation were more susceptible to identify wide range of morally problematic workplace behaviors as undesirable and will not engage in them. A research study hypothesized that moral disengagement would buffer the direct correlations between locus of control orientations and unethical conduct, by acting as a mediator. For example, those with internal locus of control orientations are less likely to morally disengage through processes such as diffusion or displacement of responsibility. Therefore, moral disengagement and internal locus of control have a negative relation. People with greater empathy are more focused on the requirements of others. They are less inclined to ethically detach themselves since they perceive others concerns and struggles as their own.

People with a greater chance locus of control, on the other hand, may make more immoral actions because they think that destiny or luck is accountable in causing undesirable

consequences. In addition, people with greater powerful locus of control orientations may make more immoral judgments because it is simple for them to delegate authority to strong individuals. As a result, moral disengagement processes help to explain why these three locus of control orientations increase or decrease the likelihood with which morally questionable choices will be made. Studies provide evidence on the role of moral disengagement as mediating variable between internal and external locus of control (powerful others and chance locus of control) (Detert et al., 2008).

Conclusion and Limitations

The results of this also revealed mediating role of moral disengagement between dark triad personality traits and its subscales (machiavellianism, narcissism, and psychopathy) and workplace deviance. Moral disengagement in this study significantly mediated the relationship between dark triad personality traits (machiavellianism, narcissism, and psychopathy) and workplace deviance. Moral disengagement as mediator also significantly mediated the relation between locus of control dimensions and workplace deviance among lawyers. These disparities in findings of the study might be attributed to professional or cultural factors. For this study, sample of lawyers was taken; further studies can do comparison between different professions like doctors, police officers, media professionals etc. Lawyers from five cities included Rahim Yar Khan, Sadiq Abad, Bahawlpur, Islamabad and Rawalpindi) were taken for the study so the generalizability of the results is limited. Further studies can be done with representative sample of lawyers from all over Pakistan to check about the certainty of results. Secondly further researches can explore some other variables which can play mediating roles. All instruments used in this study are self-reporting measures so there is chance of element of social desirability among respondents so in future research study, any measure of desirability scale can be applied to cater for this issue.

Implications

The findings of this study can serve a precursor to instigate exploration of further avenues in the workplace deviance. Workplace deviant behaviors, dark triad personalities, moral disengagement, external locus of control are considered to be harmful for workplace, so this study will be helpful for the authorities and stakeholders (lawyers, bar councils) to know about problematic behaviors of lawyers and take precautionary steps so lawyers should try to eliminate or decrease such kind of behaviors. Exploring of dark triad personality traits tendencies prior to selection and induction of people in legal profession will lead towards creating a positive environment in law firms and courts.

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Research Article

Resilience as Moderator between Posttraumatic Stress and Suicidal Ideation among Institutionalized Orphans

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Abstract

Background. Growing without parents is a big trauma in one's life and after the death of parents children face so many problems that lead mental health problems. Orphans are the important part of our society as they are being neglected and this population is on risk, their mental health cannot be denied.

Methods. In a current study a risk of mental health issues within a neglected population was studied. The moderating role of resilience has also been investigated in posttraumatic stress and suicidal ideation among institutionalized orphans. Sample (N=200) comprised equal number of girls and boys with age range 12-18 years, present in different orphan houses of Rawalpindi and Islamabad. Sample was selected through technique of convenient sampling. For data collection Ego Resilience Scale (ERS), Posttraumatic Stress Disorder Checklist and Beck Suicidal Ideation Scale were used.

Results. Results indicated a significant positive relationship between posttraumatic stress and suicidal ideation, whereas resilience is negatively correlated with suicidal ideation and posttraumatic stress. Regression analysis showed that resilience proved to be a significant moderator between posttraumatic stress and suicidal ideation in orphans present in institutions. Further t-test analysis revealed significant gender differences on suicidal ideation while non-significant gender differences on posttraumatic stress and resilience.

Conclusion. In this study risk and protective factors are explored. Risk factors are posttraumatic stress and suicidal ideation whether the protective factor is resilience. The relationship between posttraumatic stress and suicidal ideation is significantly moderated by Resilience.

Keywords. Orphans, posttraumatic stress, resilience, suicidal ideation

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Introduction

Around the world, number of orphans is increasing due to poverty, underdevelopment, disasters and war conditions (Benjet, 2010). Orphan is a kid denied by loss of one or typically the two guardians. According to a report presented by the United Nations Children's Fund, there is an extensive number that is approximately at present 148 million orphans in Asia, as Asia has a huge populace. It is evaluated that by 2015, the quantity of abandoned kids has enormously increased. These children and adolescents are more vulnerable to develop mental health issues like emotional, psychological and behavioral problems and negative characteristics such as aggressiveness, antisocial behavior and impulsivity (Yendork & Somhlaba, 2016).

Adolescence is a sensitive transitional period of quick development where an individual is being separated from parents and building up a solid feelings of independence to go into the adulthood. In this stage, adolescents run over certain challenges such as developing mental health issues like stress, depression and suicidal thoughts (Wisner et al., 2010). It is exceedingly vulnerable phase that influences psychological health/wellness. In this phase stress is the most common psychological problem among adolescent, after some traumatic event that stress leads to posttraumatic stress. Adolescent age has proved to be more influential in developing identity issues in reaction to any trauma as compared to the adulthood (Ogle et al., 2013). When a child faces a trauma in a form of death of loved one's, these is an increased probability of developing Posttraumatic Stress Disorder (PTSD) in adulthood (Fairbank & Fairbank, 2009).

The traumatic events experienced in childhood are more intense to make an individual vulnerable to develop PTSD as compared to the traumas faced later in life such as in adulthood. One reason for that might be the resilience and coping skills which develops with advancing age. Posttraumatic stress is a type of stress in which individual face numbness, sadness and intrusive thoughts and that thought lead to suicidal thoughts (Whetten et al., 2011).

Suicidal attempts and suicide ideation are two main categories of suicidal behavior (Bhatta et al., 2014). In a suicidal attempt an individual performs a non-fatal, self-injurious behavior and he/she must has the intention to die (Suk et al., 2009). A study done in Europe reported that 10.5% of adolescents did suicide attempts (Kokkevi et al., 2012). In another study done by Gearing et al. (2015), 23.3% of German teenagers who undertook suicide received awful consequences, whereas 39.5% of them received various injuries. Suicidal ideation is thought to be at a risk of and preoccupation of suicidal thoughts. Stone and Crosby (2014) defined suicide ideation as preoccupied with the thoughts, and consistently bearing in mind and planning suicide. The rigorousness and severity of the suicide plans can vary depending on individual differences and situational differences according to Chapman and Dixon-Gordon (2007). Nanayakkara et al. (2013) studied the individuals having suicidal ideation and it has been revealed that 78.1% of adolescents had been experienced some sort trauma approximately six months prior to the exhibition of their suicidal behaviour. Protective factors proved to be helping in reducing the prospect of problematic behavior. They can be personal, social and institutional which are ultimately accompanying a positive outcome. There is a variety of factors which may seem to be a protective against posttraumatic stress and suicide ideation.

Orphan hood is considered as a phase accompanying a variety of psychological and emotional problems. Orphans may have a greater risk of developing anxiety and stress as they are unable to take decisions at their own. Moreover, they also experience lack of self-determination which in turn make them stresses (Shafiq et al., 2020).

Orphans who are resilient does not face extreme intensity of stress and suicidal ideations because they can cope with adverse situations and resilient in their nature. Resilience has been proved to be a protective factor against suicide

ideation and in turn for suicidal behavior (Asante et al., 2016). It has been seen in a study that if the individuals have high resilience, it moderates the relationship between hopelessness, stress and suicide ideation (Shenouda & Basha, 2014) whereas if the resilience is low there is an increased risk of suicidal behaviors and posttraumatic stress (Lui et al., 2014).

It is not essential that everyone who is exposed to trauma may eventually develops a post traumatic disorder (Fernando & Ferrari, 2011). According to Pietrzak and Cook (2013) there are many psychosocial resources which acts as a buffer against trauma and resilience is one of those psychosocial resources. Sometimes it can happen that after adversity individuals may show high levels of resilience. But it is not so in all the cases. Van der Merwe et al. (2020) found that in South Africa the high prevalence of traumatic experiences negatively affected the resilience in orphans.

According to Sorsdahl et al. (2011) in South African, exposure to trauma was found to be a significant trigger for suicide ideation. In different studies resilience has been explored as a moderator in depressive individuals and children who experienced traumatic experiences as this population is on high risk of developing PTSD (Salami, 2010).

Rationale of study

Pakistan's 35.4% populace contains less than 15 years of age individuals and they placed under the tender age of immaturity (World Population Prospects, 2011). Adolescents face multiple triggers that cause stress. It can be anything from physiological, psychological, social and emotional changes among adolescents. In this phase after losing parents and become an orphan is a big trauma in one's life and the consequences of this prolonged strain include adverse mental health problems like posttraumatic stress and suicidal ideation. Not everyone who exposed to trauma develops mental health problems because some individuals may have better resilience which acts as a protective factor and buffer against

these issues. Orphans who are resilient less likely to develop mental health issues and orphans who are less resilient develop posttraumatic stress and suicidal ideation (Farooqi & Intezar, 2009).

In Pakistani society comparative studies have been done on personality differences and self-esteem of orphans (Farooqi & Intezar, 2009). Another comparative study of personality differences among orphans was done in Lahore (Khan & Majeed, 2014). Other than these researches some other researches have also been done on the role of orphanages in the over all well being of orphans (Akram et al., 2015; Alam & Sajid, 2021; Lassi et al., 2011). But literature with reference to Pakistani society is very deficient with respect to the present study variables. This research might be contributive to social psychology, and also beneficial in other fields of psychology. It can also serve as a source of well-intentioned information in other fields of psychology and sociology in future perspective. The objectives of present study are the following:

1. To study the relationship between resilience, posttraumatic stress and suicidal ideation among institutionalized orphans.
2. To examine the role of resilience as a moderator between posttraumatic stress and suicidal ideation among institutionalized orphans.
3. To investigate gender differences on resilience, posttraumatic stress and suicidal ideation among institutionalized orphans.

Hypotheses

To achieve the above mentioned objectives following hypotheses are formulated.

1. There is positive relationship between posttraumatic stress and suicidal ideation among institutionalized orphans.
2. Resilience is negatively correlated with posttraumatic stress and suicidal ideation among institutionalized orphans.
3. Resilience plays as a moderator between posttraumatic stress and suicidal ideation among institutionalized orphans

4. There is a difference between male and female orphans on posttraumatic stress and suicidal ideation among institutionalized orphans.

Method

Sample

The sample *(N=200)* size was selected using WHO calculator at 7.5 % margin of error. The sample consisted of institutionalized orphans having age between 12 to 18 years and integrated equivalent number of male (n=100) and females (n=100). The convenience sampling technique was utilized to select the sample. The four orphan houses of Islamabad and Rawalpindi randomly selected were Sweet Homes Islamabad, Aghosh Rawalpindi, Bab-e-Abi Talib Islamabad and Edhi homes Rawalpindi. Consent was taken from the Principals of orphan houses of Islamabad and Rawalpindi and assigned a senior teacher to assist the orphans.

Inclusion Criteria. Male and female orphans of 12 to 18 years of age living in the orphan houses from five or more than five years were included.

Exclusion Criteria. Male and female orphans who had some serious diseases or any psychotic disorder were excluded.

Assessment Measures

Demographic Sheet. Along with utility of standardized scales a demographic sheet was developed indigenously to get information of each participant taking part in a study. Demographic sheet contained information regarding age, education, gender, and duration of stay, province, number of siblings and birth order.

Beck Suicidal Ideation Scale (BSI). BSI is a 19-item instrument developed to measure suicidal ideation, depression and feelings of hopelessness (Beck et al., 1988). In a present study Urdu translated version of BSI is used (Ayub, 2008). In these items people respond about their suicidal thoughts on a three point likert scale from 0 means no suicidal ideation to 2 which means having more suicidal ideation. .75 alpha reliability of Urdu version indicates that it is a reasonable measure to study the suicidal thoughts in Pakistani adolescents and young adults (Ayub, 2008).

Posttraumatic Stress Checklist (PCL). PCL checklist by Weathers et al. (1993) and translated by Khalily et al. (2012) was used. The specific symptoms of PTSD are assessed by using the PCL. It is a 17 items inventory that requires the respondents to rate how much the problem described in each statement has bothered them over the past month but time frame can be accommodated in order to achieve the assessment goals. Rating is done on a five point scale ranging from 1(not at all) to 5 (extremely). Scores of PCL range from 17-85 and the cut off score is 44. Internal consistency is found to be .94 which means that it is a good measure to find the posttraumatic symptoms.

Ego Resilience Scale. The Ego resilience scale, a 14 items measure, was devised by Block and Block (1980) and further translated by Nangiana (2002) to assess the quality of resilience by determining the way through which each individual manages the oscillation in daily life. Moreover it also evaluates what they do about their own experiences. The reliability of the scale was .93.It is in Urdu language. Items of this scale are rated on 4 point scale ranging from 1 showing less resilience to 4 means strong resilience. Score above 37 indicated more resilience and below 37 indicated low resilience.

Procedure

The study sample was comprised of orphans of Islamabad and Rawalpindi. After getting permission from the orphan houses, orphan children were approached. At first, a rapport building was done. They were assured about the secrecy and privacy. They were then briefed about aims of the study and were guaranteed that their views and ideas will be kept

confidential. They were then given all questionnaires including demographic sheet, Beck suicidal ideation scale, Ego resilience scale and Posttraumatic stress checklist and were requested to fill them all. The respondents were given instructions that they have to complete the questionnaires as honestly as possible and make sure that no item was remained unfill. Participants could complete the questionnaires at their ease without any time constraint. All their queries were addressed. Finally questionnaires were collected and they were thanked for their cooperation.

Results

In order to investigate the framed hypotheses various statistical analyses were done. Reliability analysis was carried out to establish the psychometric estimates of the scales used in a study. In order to make comparisons and predictions, t-test and regression analysis was done through using SPSS version 21 was used. Comparisons were also made on the basis of different demographic information of participants.

Table 1

Frequency and Percentages of Demographic Variables (N=200).

Variables	Categories	Frequency	Percentage
Gender			
	Male	100	50
	Female	100	50
Education			
	Primary	99	49.5
	Metric	101	50.5
Age			
	12-15	135	67.5
	16-18	65	32.5
Duration of stay			
	Below 7 years	162	81.0
	Above 7 years	38	19.0
Province			
	Punjab	60	30.0
	Sindh	6	3.0
	KPK	79	39.5
	Balochistan	37	18.5
	Kashmir	17	8.5

Table 1 shows frequency and percentage of institutionalized orphans with respect to gender, education, age, duration of stay and province.

Table 2

Psychometric Properties and Descriptive Statistics for Posttraumatic Stress, Resilience and Suicidal Ideation among Orphans (N= 200)

Variables	k	M	SD	α	Potential	Actual	Skew	Kurt
						Range		
Posttraumatic stress	16	34.81	13.41	.90	17-85	17-74	.77	-.09
Resilience	14	35.37	14.16	.96	14-56	3-56	-.39	-1.36
suicidal ideation	19	15.67	13.55	.97	0-38	0-37	.41	-1.48

Table 2 shows Croanbach alpha reliability for all the measures. Croanbach alpha reliability of Posttraumatic Stress is .90, for Resilience reliability is .96 and for Suicide Ideation reliability is .97. The reliability coefficients indicates a quite satisfactory internal consistency of all scales.

Table 3

Pearson Product moment Correlation between Posttraumatic Stress, Suicidal Ideation and Resilience among Institutionalized Orphans (N=200)

	Variables	1	2	3
1	Posttraumatic stress	---	.79**	-.68**
2	Suicidal ideation		---	-.65**
3	Resilience			---

Note: p<.01**

Results in table 3 indicates a significant positive relationship between Posttraumatic stress and suicidal ideation among institutionalized orphans, as posttraumatic stress increases suicidal ideation also increases, r= .79, p<0.01. While a significant negative relationship exist between Posttraumatic stress and resilience. Furthermore a significant negative relationship is also found between suicidal ideation and resilience.

Table 4

Hierarchical Multiple Regression Analyses for Moderating Role of Resilience on the Relationship between Posttraumatic Stress and Suicidal Ideation (N=200)

	ΔR^2	B	95% CI
		Suicidal Ideation	
Constant	.41		[25.32,38.69]
Post Traumatic Stress		.69**	
Step 2	.64		[.54,.76]
Post Traumatic Stress		.17**	
Resilience		-.70**	
Step 3	.70		[-.756,-.55]
Post Traumatic Stress x Resilience		-.18**	

Note. **p<0.01

Step 1 R^2=.418 Adjusted R^2=.415 F=142.3 p<0.001
Step 2 R^2= .697 Adjusted R^2= .694 F=227.0 p<0.001
Step 3 R^2=.705 Adjusted R^2=.701 F= 15626 p<0.01

Table 4 shows that post traumatic stress has 41% main effect on suicidal ideation. The resilience has 64% main effect on suicidal ideation. The interaction effect of post traumatic stress and resilience was found to be 70%, indicating that the interaction effect account for a significant proportion of variance in suicidal ideation at the level of p<0.01.

Table 5

Mean differences between Male and Female Orphans on Posttraumatic Stress, Suicidal Ideation and Resilience (N=200)

Variables	Male (n=100) M(SD)	Female (n=100) M(SD)	t (198)	p	95%CI LL	UL	Cohen's d
PTS	35.36(14.26)	34.24(12.54)	0.59	.556	-2.62	4.86	0.12
SI	13.72(13.07)	17.67(13.80)	2.07	.039	-.769	-.196	0.09
Res	34.86(15.28)	35.87(13.02)	.50	.610	-4.90	2.95	0.07

Note: PTS= Post Traumatic Stress; SI= Suicidal Ideation; Res=Resilience

Table 5 shows differences of gender in correspondence with posttraumatic stress, suicidal ideation and resilience. Significant gender difference was reported on suicidal ideation, as female orphans reported higher on suicidal ideation (M=17.67. SD=13.80) than male orphans (M=13.72, SD=13.07). Results further indicate non-significant difference between male and female orphans on posttraumatic stress and resilience.

Discussion

The current study was conceded out to find out the relationship of post traumatic stress and suicidal ideation among institutionalized orphans and also to investigate the moderating role of resilience. Orphans were taken from different orphan houses of Islamabad and Rawalpindi. For this purpose translated post traumatic checklist, translated Beck suicidal ideations scale and translated Ego resilience scale were used to measure post traumatic stress, suicidal ideation and resilience. The sample selected was having age between 12- 18 years (adolescents), as prescribed by some previous researches, that in adolescent pahse psychological, emotional and behavioral problems appeared to be more prevalent. It is further suggested by some different researches that during this period adolescents are more vulnerable to different psychological problems that lead to stress and suicidal ideation (Gearing et al., 2015).

An inverse relationship was found significant between posttraumatic stress and suicide ideation among orphans. In a review of possible relationship between posttraumatic stress and suicidal thoughts, results revealed that they both are strongly correlated with each other irrespective of type of trauma experienced. Another study also revealed that there is a significant positive relation between these two constructs (Thabet et al., 2015).

Resilience is negatively correlated with suicidal ideation among institutionalized orphans, as with the increase in resilience decrease in suicidal ideation in orphans was seen. This finding is consistent with the view that suicidal ideation had a significant and negative relationship with resilience. Another study support the finding, Divine (2013) investigated the effectiveness of

resilience training on Suicidal ideation among clients. Mishra and Sondhi (2019) conducted a study on the relationship of resilience, suicidal ideation and depression in adolescents. The Data for afore mentioned study was gathered from 70 participants including both genders. And it was concluded that higher levels of resilience was negatively correlated with suicidal ideation and depression.

Present study results also showed a negative relationship between posttraumatic stress and resilience among institutionalized orphans. Results are evident with the literature that higher levels of resilience reduce the intensity of posttraumatic stress. The present study was conducted with the aim to explore the relationship between posttraumatic stress and resilience and the findings suggested that having higher resilience the adolescents exhibited lower posttraumatic stress (Pietrzak & Cook, 2013).

A person after encountering with some shocking event or trauma such as loss of close one may enter into the condition known as Posttraumatic stress. The age acts as an important factor in determining the level of suffering an individual will face. People at early ages are less likely to be effected than the older ones. Once the distress is caused they are at high risk to build up suicidal thoughts in them. Early childhood upsetting events play determining role among orphans for developing posttraumatic stress as well as suicidal ideations (Draper & Hancock, 2011).

Resilience moderated the relationship of posttraumatic stress and suicidal ideation. Resilience as a moderator was found to have a significant negative relationship with the posttraumatic stress and suicidal ideation among orphans, as resilient individuals counter less symptoms of posttraumatic stress and suicidal thoughts. Higher resilience moderates the effects of suicide ideation and posttraumatic stress (Fayombo, 2010).

If a child is institutionalized at an early age, he/she may commonly shows the delays in some sort of development that could be loving and passionate, social or physical. Adolescents raised in established units sometimes experience the hostile effects of severe conduct and they also have the attachment issues that can be an influential or reserved conduct. They have very limited information and conception of the world. They may experience mental hindrance to move forward to become a resilient adult. If the youngsters are kept and brought up in institutes, they could develop learning issues, for example, lack of decision making capability and poor reasoning, unable to establish cause and effect relationship, and develop impulsivity. On the other hand institutionalized kids who can face adverse situations and cope with the problems are resilient and have not developed psychological problems like stress, depression and suicidal thoughts.

Current study revealed that there is a difference between male and female orphans on suicidal ideation, whereas a non-significant gender differences were found on posttraumatic stress and resilience. Ibrahim et al. (2017) conducted a study on gender differences with respect to suicide ideation. The results showed that there were significant differences between resilience and suicide ideation among males and females. As females were more likely to have suicide ideation than males. As females show intense emotions when they do not have any social support, they may go through such self injurious behaviors. Females get easily distressed by insults and incidents as they don't have any other activity like males and secondly males don't easily get bothered by anything. So this makes the difference in suicidal ideation among males and females. Results are evident with the literature that there is no difference on posttraumatic stress and suicidal ideation among male and female adolescents. Gender differences were explored in Japanese culture on posttraumatic stress and data was gathered from 312 undergraduate students including male and female adolescents. Results showed that there were non-significant gender differences (Hourani et al., 2016).

Limitations and Suggestions

The study of institutionalized orphans is very important social issue form the context of

Pakistani culture; however the sample was restricted to orphan houses of Rawalpindi and Islamabad. Data was collected from small sample due to which the generalizability of the study is low. It is suggested to collect data from various locations of Pakistan to increase the generalizability of the study.

The age range of sample was 12-18. It is suggested that a broader age range of sample should be taken in order to make comparisons among different developmental stages.

It is recommended that for future researches some interviews should be cond ucted for this age range.

Implications

The findings of the present study can be proved beneficial to be implemented in different fields of psychology like counseling, social and clinical research. Study findings can be implied to make orphans aware of their psychological problems and also tell the caretakers of orphan houses that how to deal with their problems in future because in orphan houses individuals have been neglected. After counseling they can play an essential role in society and make useful member of society. Trainings should be given to the people who take care of orphans. The individuals who exhibited psychological problems can be helped by exploring and identifying the underlying causes of their problem. The problem can be cured by addressing the causes through counseling and therapy.

In different trainings the care takers should be told that how to deal with orphans and don't take being an institutionalization as a trauma and also give resiliency trainings to them. There is a need to inculcate in the caretakers of orphan houses to create a friendly atmosphere for them so they have not feel insecurity.

Conclusion

Being an orphan is trauma in one's life but after joining the orphan houses the children developed different psychological and emotional problems because this population is on risk and being neglected. After the death of their parents, children have to face so many problems in their lives. Orphan adolescents who are resilient have not developed posttraumatic stress and suicidal ideation. Higher levels of resilience reduce the symptoms of psychological and emotional problems. Posttraumatic stress is positively correlated with suicidal ideation among this group because lack of love and bonding is the cause. But it has seen that the individuals who have the ability to cope with the stressors have not developed mental issues.

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Research Article

Primary Appraisals Moderating Between Trauma Exposure and Mental Health Symptoms among Journalists

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Abstract

Background. The current research investigated how primary appraisal may affect the relationship between trauma exposure experienced by journalists and their symptoms of mental illness. The cognitive appraisal includes how an individual interprets an adverse event that may partially account for psychopathology. Consistent exposure of journalists to stressful life events increases the likelihood of the occurrence of illness, depression, and other physical and psychological problems.

Method. Participants were requested to complete Journalist Traumatic Exposure Scale (JTES), Depression, Anxiety, Stress Scale (DASS-21), and Primary Appraisal/Secondary Appraisal Scale (PASA). Personal and professional information was collected using comprehensive demographic sheet.

Results. Results of moderation analysis suggested that the link between trauma exposure and symptoms of mental health was moderated by harm/loss, threat, and challenge appraisal (B interaction = .01, $p < .01$ for stress, anxiety, & depression), (B interaction = .01, for stress .02, $p < .01$ for anxiety & depression), (B interaction = -.01, $p < .05$ for anxiety) respectively. However, the moderation of challenge appraisal for the association between trauma exposure, stress, and depression was non-significant.

Conclusion. Due to the nature of their job, journalists are constantly exposed to unpleasant incidents, and repeated exposure to such events may lead to underlying mental health issues. Therefore, it is recommended that training be provided to help journalists reframe stressful situations in a positive way, which could potentially lead to less severe mental health consequences.

Keywords. Primary appraisals, trauma exposure, mental health symptoms, journalists

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Introduction

Journalism in Pakistan has a long and complex history, shaped by political, social, and cultural factors. Pakistan is a diverse country with a vibrant broadcasting landscape, with both privately and state-owned media houses operating in the country. Despite the diversity of the media landscape, journalists in Pakistan face several challenges, including censorship, intimidation, and violence. Pakistan has been consistently ranked as one of the most hazardous countries in the world for journalism, with numerous incidents of violence and intimidation reported in recent years.

Journalism is, indeed, a highly stressful profession, particularly for those covering traumatic events. Journalists are often exposed to graphic and disturbing content, and they may face significant emotional and psychological challenges as a result. Studies have shown that this exposure may have a significant consequence on their mental health, preceding to symptoms of depression, anxiety, and PTSD (Gates & Gillespie, 2008; Cunningham, 2003). It is very important to note that issues related to mental health issues may be particularly pronounced for journalists who cover certain types of events including war, violent crimes, and natural disasters. The cumulative impact of exposure to multiple traumatic events can also increase the risk of mental health problems. Moreover, the chronic stress that journalists experience as a result of their work can further exacerbate these issues.

Cognitive Appraisal describe the process that accounts for the discrepancy between stressors and psychological resources resulting in psychological distress. A primary element of association between traumatic event and negative health symptoms is the cognitive appraisal of an event (Smith & Ellsworth, 1985). Cognitive appraisal includes both primary and secondary appraisals (Folkman & Lazarus, 1991). In present study, exploring the moderating role of primary appraisals in association between trauma exposure, depression, anxiety, and stress is the key interest. Primary appraisal accredits meaning to a specific transaction which determines the significance of the transaction to individuals' well-being. The transaction may be evaluated as positive (employing a positive effect on individuals' well-being), stressful (signify threat, harm/loss, or challenge), or irrelevant (no significance to individuals' well-being). The primary interest is stressful transactions as the other two transactions do not evoke the need for subsequent coping and negative emotions. A stressful transaction may further be appraised as producing substantial harm/loss, threat, or challenge (Oliver & Brough, 2002). Harm /loss entails loss, harm, or damage that has already been sustained that includes injury, loss of friendship, or loss of self-esteem. Threat appraisal includes anticipated loss, harm, or damage. Challenge appraisal is the judgment involving the assessment of whether a transaction holds the potential for mastery and the potential for harm. Thus, in challenge appraisal, the appraisal of a sense of control and stakes are fused. The stressful encounter is seen as challenging but not exceeding one's resources. Threat and harm appraisals provoke negative emotions as fear, anger, and resentment. On the contrary challenge appraisal, entails the potential for growth and rewards when adequate coping resources are available, and entails positive emotions (e.g., eagerness, enthusiasm) (Folkman & Lazarus, 1991). It is postulated that, where individuals perceive the stressful situation as challenging, will experience fewer negative outcomes relative to the individual who appraises the situation as threatening. Thus, the transaction between the stressful event and the appraisal of that event leads to negative/positive mental health consequences.

Professionals who work in fields such as emergency response, law enforcement, healthcare, and journalism are at increased risk for developing mental health symptoms due to their exposure to traumatic events and high levels of stress. These individuals are often referred to as "first responders" and can experience a range of mental health symptoms including depression, anxiety, and post-traumatic stress disorder (PTSD). It is important for these professionals to have access to mental health support and resources to help prevent or manage these symptoms. Journalists have to cover traumatic events directly (in fileds) and in newsrooms they may view some distrubing and traumatic content as a part of their job. Studies have consistently found mental health symptoms among professionals working in fields with regular exposure to traumatic events, including ambulance personnel (Jonsson, Segesten, & Mattsson, 2003), nursing (Gates & Gillespie, 2008), mental health (Cunningham, 2003), firefighters (Groot, Caturay, Khan, & Copes, 2019), and healthcare workers (Meadors, Lamson, Swanson, White, & Sira, 2010).

Frequently, journalists are being exposed to stressful events that involves psychological and physical harm (Seely, 2019). As similar to the first responders, journalists are also akin to respond to emergency situations including disaster, crime scene, destruction, and witnessing violence (Massé, 2011; Himmelstein & Faithorn, 2002; Rentschler, 2009; Melki et al., 2013;). Journalists responds to traumatic events including fatal accidents, natural disasters, bomb blasts, street crimes, murders, and other potentially stressful/traumatic events. They may experience secondary traumatization during interviewing a victim or victims' family and through graphic scenes (McCann & Pearlman, 1990; Beam & Spratt, 2009; Rentschler, 2010). In addition, Simpson and Coté (2006) found that journalists working in newsrooms may be indirectly exposed to repeated traumatizing content as they strive to fulfill the need for up-to-date news coverage. Thus, repeated encounters with situations that pose a threat to one's life are likely to have an adverse effect on both mental and physical health (Groot et al., 2019; Feinstein, Owen, & Blair, 2002; Dworznik, 2011; Newman, Simpson, & Handschuh, 2003; Morales, Pérez, & Martínez, 2014). It is possible for journalists to suffer from symptoms of post-traumatic stress disorder (PTSD) and may need to undergo psychological or medical interventions (Browne, Evangeli, & Greenberg, 2012). Further, literature has suggested that journalist's nature of job, like soldiers, firefighters, and police officers, are high-risk population for mental health symptoms, emotional distress, and post-traumatic stress disorder (Browne et al., 2012; Dworznik, 2018; Monteiro, Marques Pinto, & Roberto, 2016; Feinstein, Pavisian, & Storm, 2018; Feinstein et al., 2002).

Method

Participants and Procedures

A total of 625 Pakistani journalists participated in the present study, comprising 440 males and 185 females from various press clubs and media houses in Lahore and the capital territory of Islamabad. The study involved participants, age ranged from 20 to 61 years, with an mean age of 34.21 (SD = 8.21). Individuals who had less than one year of job experience and those working as fashion journalists were not included in the study. The job experience of the participants varied from 1 to 43 years, with an average of 10.32 (SD = 7.29). Of the total sample, 51.6% were postgraduates, followed by 33.5% graduates and 14.9% undergraduates. Among the participants, 55.8% worked on a desk, 24.5% worked in the field, and 19.7% worked in both field and desk roles.

The participants were informed about the study and their right to withdraw from it, and written informed consent was obtained to ensure their awareness of the purpose of the study, the procedures involved, and their rights. The researchers also took measures to ensure the privacy and confidentiality of the participants' information. Overall, it appears that the researchers adhered to ethical guidelines in conducting their study.

Assessment Measures

Journalist Traumatic Exposure Scale (JTES) (Pyevich et al., 2003). The Urdu Version of JTES (Malik, Malik, & Hanif, 2022) was used to evaluate the traumatic events encountered by journalists, with additional indicators added that are significant to the local context, such as blasphemy, stress crimes, mob activities, and cyber harassment. Participants were asked to report the extent to which they had been exposed to traumatic events during their job responsibilities. The 18-items of the scale assessed the frequency of exposure to various traumatic events, such as accidents, mass casualties, war zones, torture, murder, kidnapping, physical assault, natural disasters, blasphemy, and sexual assault. The response options in the original scale, which were open-ended, were replaced with a Likert-type scale for this study. The Likert-type scale ranged from 0, indicating "never," to 3, indicating "more than six times." The remaining nine items measured the occurrence of specific traumatic events at work, such as verbal threats, physical attacks, and injuries while covering various types of assignments. The instructions of the scale were modified, and journalists were guided to indicate how often they had been exposed to stressful events in the course of their job during the last three months. The composite score on the JTES was calculated by adding scores on the event occurrence scale and frequency scale. The original scale has demonstrated good internal consistency with a score of .83 (Drevo et al., 2013).

Primary/Secondary Appraisal Scale (PASA). The self-assessment tool, known as the Primary/Secondary Appraisal Scale, consists of 24 items designed to evaluate primary and secondary appraisals before engaging in a cognitive task (Gaab, Rohleder, Nater, & Ehlert, 2005). Primary appraisal comprises three subscales: threat, harm/loss, and challenge appraisal. The harm/loss appraisal is composed of 8 items that assess any loss, harm, or damage that has already been sustained, such as loss of self-esteem, injury, or loss of friendship. The threat appraisal is composed of 4 items that assess the potential for anticipated loss, harm, or damage.

The challenge appraisal is composed of 4 items that evaluate the potential for mastery or gain and the potential for harm. The secondary appraisal consists of conviction of control, which comprises 4 items that assess a sense of control over the outcome of the encountered situation, and self-concept of one's own abilities, which comprises 4 items that assess an individual's judgment regarding a wide range of coping options. Participants were asked to indicate their thoughts about the upcoming task on a 6-point Likert scale (ranging from 1 = strongly disagree to 6 = strongly agree), with negatively formulated items including items 1, 6, 7, 9, 10, and 22. The overall homogeneity was considered good based on internal consistency, which is an indicator of reliability, with a Cronbach's alpha score for the primary scale ranging from 0.61 to 0.83 and for the secondary scale ranging from 0.74 to 0.80 (Gaab et al., 2005).

Depression, Anxiety and Stress Scale (DASS21). Depression, anxiety, and stress were assessed through DASS-21, a self-report instrument which measures negative emotional state (Lovibond & Lovibond, 1995). The 7 items of depression subscale measures hopelessness, self-deprecation, lack of interest, and anhedonia. The anxiety subscale consisted of 7 items that measures skeletal situational anxiety, muscle

effects, subjective experience, and autonomic arousal. Further, the stress subscale of 7-items assessed chronic arousal that measures difficulty relaxing, being easily upset, nervous arousal, irritable, and impatient. Participants responds on 4-point frequency /severity scale the extent at which they have experienced each state over the last week. Studies have shown good estimates of alpha reliability ranging from .82 to .97 (Henry & Crawford, 2005).

Results

The study used Cronbach's alpha to assess the internal consistency of three scales: the Journalist Traumatic Exposure Scale (JTES), Primary/Secondary Appraisal Scale (PASA), and DASS-21. The results demonstrated the good reliability for all scales.

Table 1

Cronbach' alpha and correlation among demographics and study variables (N=625)

S.No.	Variables	a	1	2	3	4	5	6	7	8	9
1	Age (in years)	-	-	-.37**	-.04	-.01	.01	.01	-.07	-.05	-.06
2	Gender	-		-	.08*	.04	.06	-.03	.06	.07	.11**
3	Trauma Exposure	.94			-	.30**	.30**	-.33**	.41**	.41**	.40**
4	Harm/loss Appraisal	.94				-	.71**	-.72**	.68**	.66**	.65**
5	Threat Appraisal	.86					-	-.87**	.68**	.69**	.67**
6	Challenge Appraisal	.83						-	-.65**	-.69**	-.67**
7	Stress	.89							-	.84**	.85**
8	Anxiety	.90								-	.89**
9	Depression	.89									-

* p < .05, ** p < .01.

There are significant positive relationships between trauma exposure, stress, anxiety, and depression. Harm/loss appraisal was positively associated with stress, anxiety, and depression, which suggests that perceiving an event as harmful or involving loss can increase these negative outcomes. Threat appraisal was also positively associated with stress, anxiety, and depression, which suggests that perceiving an event as threatening can increase these negative outcomes as well. On the other hand, challenge appraisal was negatively associated with stress, anxiety, and depression, which suggests that perceiving an event as a challenge can decrease these negative outcomes.

Table 2

Mean Differences across study variables (N=625)

Variable	Male (n=440)		Female (n=185)		t	p	95% CI		Cohen's d
	M	SD	M	D			LL	UL	
Trauma Exposure	41.02	15.71	43.48	43.48	-1.84	0.07	-5.08	0.17	-.09
Harm/loss Appraisal	24.74	9.99	25.69	25.69	-1.07	0.28	-2.69	0.79	-.06
Threat Appraisal	10.48	4.62	11.15	11.15	-1.52	0.13	-1.53	0.20	-.09
Challenge Appraisal	17.25	4.39	16.98	16.98	0.63	0.53	-0.58	1.12	-.03
Stress	13.44	9.87	14.75	14.75	-1.41	0.16	-3.13	0.52	-.11
Anxiety	11.30	10.31	12.94	12.94	-1.79	0.07	-3.44	0.16	-.15
Depression	11.12	9.91	13.47	13.47	-2.54	0.01	-4.18	-0.53	-.21

Gender was found to be positively associated with trauma exposure and depression, with females scoring higher than males on depression. T-tests revealed a significant difference between genders in terms of depression.

Table 3

Moderating effect of Primary Appraisals for Exposure to Trauma in predicting Symptoms of Mental Health (N=625)

Predictors	Moderator Level	Dependent		
		Stress	Anxiety	Depression
Trauma Exposure		.16**	.17**	.16**
Harm/Loss Appraisal		.57**	.55**	.53**
TE*HL		.01**	.01**	.01**
	Low	.09**	.07*	.05
	Medium	.16**	.17**	.16**
	High	.23**	.27**	.26**
R^2		.52	.51	.49
F		224.87**	216.42**	200.01**
ΔR^2		.01	.02	.02
Trauma Exposure		.16**	.16**	.15**
Threat Appraisal		1.20**	1.23**	1.18**
TE*TA		.01**	.02**	.01**
	Low	.11**	.08**	.08**
	Medium	.16**	.16**	.15**
	High	.21**	.24**	.22**
R^2		.51	.54	.50
F		218.33**	240.02**	211.97**
ΔR^2		.01	.01	.01
Trauma Exposure		.15**	.15**	.14**
Challenge Appraisal		-1.24**	-1.33**	-1.26**
TE*CA		-.01	-.01*	-.01
	Low		.20**	.17**
	Medium		.15**	.14**
	High		.10**	.10**
R^2		.47	.52	.48
F		186.95**	228.98**	197.28**
ΔR^2		.01	.01	.01

* $p < .05$, ** $p < .01$. TE = Trauma Exposure, HL = Harm/loss Appraisal, TA = Threat Appraisal, CA = Challenge Appraisal

The moderation analysis revealed that harm/loss appraisal plays a significant moderating role in the relationship between traumatic exposure and symptoms of mental health. Specifically, the level of harm/loss appraisal was found to substantially impact the link between trauma exposure and stress, anxiety, and depression. As harm/loss appraisal increased from low to high levels, the association between traumatic exposure and symptoms of mental health became stronger, with higher level of harm/loss appraisal resulting in the strongest relationship. This suggests that individuals who perceive a high degree of harm/loss because of traumatic events may be more susceptible to experiencing mental health symptoms.

The model of moderation explains a significant amount of variance in stress, anxiety, and depression, indicating that harm/loss appraisal is an important factor to consider when examining the association between trauma exposure and symptoms of mental health in journalists.

The results of moderation analyses conducted in the study. The results indicate that threat appraisal moderates the association between traumatic exposure and symptoms of mental health, including anxiety, stress, and depression. The moderation result explains a significant amount of variance for each of these mental health symptoms, with 51%, 54%, and 50% of the variance explained for stress, anxiety, and depression, respectively. The results also show that for low, medium, and high levels of threat appraisal, there are significant effects on mental health symptoms. In addition, challenge appraisal moderates the association between trauma exposure and anxiety, explaining 52% of the variance, but the moderation effect for stress and depression was non-significant.

Discussion

Journalists often work in high-stress environments and are frequently exposed to traumatic events, which can lead to mental health symptoms such as stress, anxiety, and depression. It's important for journalists to take care of their mental health and seek support if needed (Yang, 2018). Frequently journalists are being exposed to traumatic events that have adversative physical and psychological effects. For instance, they cover a number of stressful events which involves the aftermath of natural disasters, killing, life-threatening illnesses, and war. Journalists interacts with individuals which are affected by disasters and tragedies. A study by Ananthan (2017) reported that 80-100% of journalists surveyed had experienced exposure to traumatic events. However, exposure to trauma does not essentially lead to mental health symptoms. In a study, Newman et al. (2003) postulated that 98% photojournalist had been exposed to stressful events, but only

6% of the journalists meet the criteria for post-traumatic stress symptoms. The differences in the prevalence rate of post-traumatic stress symptoms are most likely due to the different factors including the degree of the exposure to potential stressful events, intensity, and coverage (Hatanaka et al., 2010; Feinstein et al., 2014; Marais & Stuart, 2005; Lee, Ha, & Pae, 2018; Seely, 2019; Newman et al., 2003;), organizational stressors (Monteiro et al., 2016; Dworznik, 2020), and the way an individual appraises a particularly stressful event cognitive appraisal (Hatanaka et al., 2010).

The present study showed that journalists were recurrently exposed to events inducing trauma and often experience mental distress. Journalists were exposed to a potentially stressful event in the last three months. Several studies have been reported that the prevalence of post-traumatic symptoms was high among journalists (48.61%) among photojournalists (Shah et al., 2020) and (59%) covering war/drug cartels (Flores Morales, Reyes Pérez, & Reidl Martínez, 2012). The psychological distress may be explained by the ongoing intense risks and conflicts which Pakistani journalists are facing. Waisbord (2019) reported the increased financial burden and threats from non-state and state agencies make media professionals, including journalists, more vulnerable to mental health issues such as anxiety and depression. This is especially true in countries like Pakistan where press freedom is not always upheld, and journalists are often targeted for their reporting. The high number of journalists killed in Pakistan since 2002 is a clear indication of the risks that journalists face in the country. Along with the risk of physical harm, the ongoing conflict and insecurity in the country can cause acute stress among journalists, which can lead to the development of mental health symptoms over time. Journalists in Pakistan face threats from non-state and state agencies while performing their job responsibilities (Mezzera & Sial, 2010). Press Foundation Pakistan has reported that since 2002, a total of 72 journalists have been killed. the risks to journalists in

Pakistan are significant. The high number of journalist fatalities in Pakistan is alarming and can lead to increased fear and stress among journalists who continue to work in this field. Along with direct threats to their safety, journalists in Pakistan also face legal and political pressures that can impact their mental health and well-being. The ongoing risks and conflicts faced by Pakistani journalists can lead to chronic stress, anxiety, and trauma. It is important to recognize and address these risks and provide support to journalists in order to promote their mental health and well-being (Osmann, Dvorkin, Inbar, Page-Gould, & Feinstein, 2021).

More recent attention has been paid to how an individual stretch meaning in the aftermath of stressful events including earthquakes, sexual assault, life-threatening illness, combat, and how subjective interpretations of such traumatic event contributes to pathological responses, mental health illness, or positive adaptation (Ehlers & Clark, 2000). How an individual evaluates stressful events has implications for one's coping capacity, emotional response, and, consequently for negative or positive adaptation to adverse events. The present study investigated the moderating effect of primary appraisals for trauma exposure in predicting mental health symptoms. Results indicated that negative appraisals (harm/loss and threat appraisal) of stressful events tend to be associated with mental health symptoms (depression, anxiety, and. stress), Prospective studies reported that catastrophic appraisals in the immediate aftermath of the traumatic event may be a strong predictor of later psychopathologies such as posttraumatic stress disorder and mental health symptoms (Bryant, 2003; McNally, 2003). Furthermore, Ehlers and Clark (2000) contended that mental health illness is developed and maintained by negative appraisals of the current, ongoing threats that may persist long after the exposure of traumatic events has occurred. In post-traumatic stress, negative appraisal becomes intrusive which leads to cognitive suppression or a vicious cycle of conscious avoidance, and emotions that increase cognitive intrusion about the traumatic event thereby exacerbating emotional distress.

Moreover, results of the present study indicate that positive appraisal (challenge appraisal) tends to negatively predict mental health symptoms (anxiety) as an individual who may find positive meaning within the stressful situation is better able to justify hardships (Litz, King, King, Orsillo, & Friedman, 1997). Research also indicated that those who report positive meaning are less likely to develop post-trauma sequelae (Sutker, Davis, Uddo, & Ditta, 1995; Tugade & Fredrickson, 2004).

It is critical for media organizations to provide support and resources to journalists to help them cope with trauma exposure and mitigate the negative impact on their mental health. This may include access to counseling and therapy services, as well as training on how to manage stress and trauma. Additionally, media organizations can promote a culture of self-care and encourage journalists to take breaks and prioritize their mental health.

Limitation

It is important to acknowledge the limitations of the present study. Convenience sampling may not be representative of the population, as it involves recruiting participants who are readily available and willing to participate, which can lead to sampling bias. Therefore, the findings of present study may not be generalized to other populations or areas with different socio-cultural contexts. Moreover, self-report measures have limitations as they rely on participants' subjective perceptions and may be subject to response biases such as social desirability bias or memory biases. Additionally, the study was conducted only in metropolitan areas of Pakistan, that limits the generalizability of the findings to other areas with different socio-economic or cultural backgrounds. Finally, relationships found in this study are correlational and further research is needed to establish causation. Future studies should address these limitations by using representative samples, multi-method

approaches, and longitudinal designs to better understand the complex relationships between journalists' exposure to potentially stressful events and their mental health outcomes.

Recommendation

Future research may explore the effectiveness of interventions and strategies for promoting the journalist's mental health, such as counseling, peer support, and training on coping strategies. Longitudinal studies may also be useful in examining the long-term effects of traumatic exposure on the mental health of journalists. Overall, continued research in this area is crucial to better understand the mental health challenges faced by journalists and to develop effective interventions to support them.

Declaration

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