

Moderating Role of Coping Strategies in Relationship Between Household Chaos and Mental Health

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Abstract

Background. Household chaos is identified with mental well-being as the level of chaos promptly affecting the mental health of adolescents. A chaotic home situation is portrayed as when there is an elevated degree of disturbances, noise and crowd, instability, and an absence of a schedule that may add to levels of stress in a home environment (Bronfenbrenner & Evans, 2002). Adolescence is said to be a vulnerable period in which an individual is involved in physical and psychosocial changes (WHO, 2004). Coping strategies are the mechanism used by an individual to cope with stressful events (Folkman, 1984). Problem-focused coping strategy with reference to mental health focuses on problem solving. Emotion-focused coping helps to regulate emotions and dysfunctional coping tries to avoid stressful situations (Tolor & Fehon, 1987). The objective of this study was to examine the role of coping strategies in a relationship with household chaos and the mental health of adolescents.

Method. The sample was consisted of 200 adolescents (52% girls, 48% boys) between the ages of 10 and 19. The correlational research method was used to assess the relationship among variables. The convenient sampling technique was used to collect the data. Confusion, Hubbub and Order scale (Mathen et al., 1995), Mental Health Inventory (Ware & Veit, 1983), and Brief Cope scale (Carver, 1997) were used to measure the study variables.

Results. The correlational analysis revealed a significant negative correlation between household chaos and mental health. Findings showed that household chaos negatively predicted psychological wellbeing and positively predicted psychological distress while, coping strategies was positively linked with mental health. Findings further indicated that coping strategies buffered the relationship between household chaos and mental health.

Conclusion. Adolescents with high levels of chaos at home, suffer from mental health problems. In the presence of coping strategies, the effect of household chaos on mental health decreases.

Keywords. *Household chaos, mental health, coping strategies, adolescents.*



Introduction

Adolescence is considered a notice period as it connects young people to adulthood. Adolescence is said to be a vulnerable period in which an individual is involved in physical and psychosocial changes. This progress includes significant physical, physiological, mental, emotional, social, and intellectual changes. Santrock (2014) illustrates puberty as a formative time of progress that includes socio-emotional, psychological, and biological changes among adolescents. World Health Organization (WHO, 2004) defines the age range of adolescence as between 10 to 19 years. The puberty period is divided into three periods which are early, middle and late adulthood. The age range for early adulthood is 10 to 13 years, for middle adulthood is 14 to 17 and for late adulthood 18 to 21 years.

Household chaos is defined as “the disposition of uncontrolled movement, the absence of structure, irregularity in the normal routine, and high levels of surrounding stimulation” (Bronfenbrenner & Evans, 2002, p. 121). Evans and Wachs in 2010 conducted research influenced by the bioecological model of Bronfenbrenner (Bronfenbrenner & Morris, 2006). This research was based on the effect of households on the development of the child. Research has analyzed that home conditions are considered a natural microsystems which may foster or restrain the healthy development of children. A functional meaning of household chaos incorporates two key ideas which are insecure or disturbance and disorder. Insecurity or disturbance reflects changes in home environments and associations or irregular schedules, while disturbance incorporates the crowd, mess, noises, and irregularity at home (Sameroff, 2010). The home environment is considered a microsystem for a child and its impact on a child's well-being through daily connections and processes is very important (Fiese & Beardslee, 2013). Disturbances and instabilities inside the home are family-level factors that add to the working of children and adolescents (Brient & Spoon, 2017).

Mental health is a condition of complete well-being of a person without any mental disorder. The mental health term has two domains, psychological wellbeing and psychological distress. Psychological well-being is all about the sense of mastery, optimism, interest and attitude of an individual while psychological distress is referred to disorder such as anxiety, depression and stress.

Basic cognitive and social skills are the main components of mental health (Artero, 2001). Mental health includes our social, emotional and psychological well-being. It influences how we think, feel, and act. Mental health and well-being are always characterized by the absence of a mental problems. The positive component of mental health is featured in WHO's definition of well-being is a state of complete physical, mental and social success and not just the exclusion of illness (WHO, 2004). Coping strategies are the mechanism that a person uses to address stressful events. The most intensive and thorough definition of coping given by Folkman is, "a connection between the individual and the condition that is assessed by the individual as surpassing their capabilities for the well-being which is threatening (Folkman, 1984). Coping mechanisms try to resolve the discrepancies between the demands and the available recourses to manage the stressors. This cycle can be a reaction to an unpleasant occasion evaluated as a danger, challenge or threat (Lazarus, 1993). More extensive studies, both problem-focused coping and emotion-focused coping strategy deals with stress and emotional consequences with cognitive and behavioral mechanisms (Lazarus & Folkman, 1984). Problem-focused coping includes the actions such as solving issues, focusing on the positivity and having no worrying about the situation. Emotion-focused category helps to regulate emotions by seeking information and social support (Tolor & Fehon, 1987) and dysfunctional coping by trying to act in another way such as avoiding stressful situations (Compas, 1988). The present study is carried out to explore the moderating role of coping strategies in the relationship between household chaos and mental health among adolescents. The study is an effort to fill the gap in the literature as there have been very little research done on the moderating role of coping strategies with household chaos and mental health. The aim of the present research is, to identify the daily stressors caused by household chaos and how typically adolescents cope with these stressors.

Research Hypotheses

1. Household chaos negatively predicts the psychological wellbeing among adolescents.
2. Household chaos positively predicts the psychological distress among adolescents.
3. Problem-focused coping and emotion-focused coping is positively related to psychological wellbeing among adolescents.

4. Problem-focused coping and emotion-focused coping is negatively related to psychological distress among adolescents.
5. Dysfunctional coping is positively related to psychological distress among adolescents.
6. Dysfunctional coping is negatively related to psychological wellbeing among adolescents.
7. Problem-focused coping and emotion-focused coping buffers the effect of household chaos on mental health among adolescents.
8. Dysfunctional coping boost the effect of household chaos on psychological wellbeing among adolescents.

Method

Sample

The sample of this study consisted of 200 adolescents (52% girls, 48% boys) with age ranges between 10 to 19 years ($M=1.52$, $SD= .50$). Participants were approached through a convenience sampling technique. Data was collected from different cities in Pakistan i.e. Faisalabad, Rawalpindi, and Sargodha. Each participant approached individually and time limit was not set to complete the questionnaire. Demographic information included age, gender, education, socioeconomic classes, and total members in a family. A cross-sectional survey research design was used in the present study.

Measurements

Household Chaos Scale. To assess the perception of chaos by the participants Hubbub, Confusion, Order Scale (CHAOS; Phillips, Matheny, Wachs, & Ludwig, 1995) was used. This CHAOS was consisting of 15 items. Items were rated on a true/false scale (e.g., 1=true; 2=false) and then averaged with the appropriate items reversed so as to create a total score, with higher score being indicated as more household chaos. For this scale Cronbach's alphas were .83, .80, and .79, respectively. In present research the Urdu, translated version of CHOAS scale was used (Tus-Sabah, 2010).

Mental Health Inventory. To assess the mental health, the present study used 38 items MHI (Ware & Veit, 1983). This inventory has already been translated and adapted for Pakistani Culture (Bashir & Naz, 2013) and used in different Pakistani research projects (Bano & Malik, 2013; Mahmood & Malik, 2013).

It has 6-point rating scale; participants were asked for each item to rate on a six point frequency or intensity scale, for how they had been feeling during the past month. The inventory gives an overall picture of mental health of an individual through mental health index. On the other hand, it has two major subscales i.e. psychological distress and psychological well-being that tell about the level of distress and wellbeing of individuals. For mental scales, the estimates of internal consistency were high, alpha reliability being .95. Cronbach's co-efficient alpha for the Distress scale was .94 and for the Well-being scales .92. In present re-search, Urdu translation of Mental Health Inventory was used (Khan, Hanif & Tariq, 2015).

Brief COPE Scale. The Brief COPE (Carver, 1997) is a coping inventory having 28 items, with 14 subscales. Each subscale further comprises two items. Carver reported validity of scale and reliability of sound on scale with Cronbach alphas ranging from .50 to .90. Three types of coping measured by the scale; problem-focused, emotion-focused and avoidant. Problem-focused coping: Measured via active coping, positive reframing, instrumental support and planning. Emotional coping was measured using items related with self-blame, religion, venting, emotional support, humor and acceptance. Avoidance coping include denial, behavioral, substance abuse, disengagement, and self-destruction. In current research, another translated version in Urdu of brief cope by Qadeer & Jamal, 2012 was intervened to assess the coping strategies employed by respondents.

Procedure

After the finalization of the scales, permission was taken from the authors for using the scales. For data collection, participants were approached directly and after their consent for participation, they were briefed about the objectives and nature of the study. They were ensured that the confidentiality of their provided information will be maintained and will only be used for research purposes. Then, a test booklet including all the scales and demographic sheets was given to participants and they were asked to fill every portion of the questionnaire correctly, sincerely, and honestly. There was no time limit for filing the scales. Data was collected from a sample of 200 participants. Then, data was entered in IBM-SPSS and different statistical analyses were run on it to test the proposed hypotheses. After analysis, results were compiled and discussed.

Results

The purpose of this study was to analyze the impact of household chaos on mental health (psychological well-being and psychological distress) and moderating role of coping strategies among adolescents. To meet the objectives of the study and for hypothesis testing some major and advanced analyses were carried out. A correlation matrix was produced to check the relationship among study variables. Linear regression analyses were used to predict the relationship among all the variables of the study. The process macro model was used to check out the moderating effect of coping strategies (problem-focused coping, emotion-focused coping, and dysfunctional coping) with household chaos and mental health.

In an attempt to find out the nature of the relationship among study variables correlation coefficient was computed. Pearson Product Moment Correlation Coefficient was carried out to examine the relationship between all the study variables. Results of the correlation matrix revealed that there is a notable relationship between household chaos, mental health, and coping strategies. A significant negative correlation was observed between household chaos and mental health which indicates that adolescents who experience household chaos suffer from mental health issues. Coping strategies had a significant positive correlation with mental health while a negative relationship with household chaos. In addition, the relationship among subscales of major study variables is also shown in the correlation matrix. Mental Health Inventory has two subscales, psychological well-being, and psychological distress. Brief Cope Scale has three types of coping strategies, dysfunctional coping, problem-focused coping, and emotion-focused coping. Findings indicate that psychological well-being, problem-focused and emotion-focused coping had a remarkable positive correlation while a significant negative correlation with psychological distress and dysfunctional coping. The only significant correlation between household chaos and coping strategy observed is dysfunctional coping. The significant positive correlation between household chaos and dysfunctional coping indicates that those who experience chaos at home more frequently engage in a dysfunctional coping strategies.

Table 3 demonstrates the moderating role of coping strategies in relationship with chaos and mental health. Moderation analysis performed by using macro process (Hayes, 2013). Findings suggest that problem focused coping significantly positively predict psychological wellbeing ($B = .16$ $p < .01$) and psychological distress ($B = .62$ $p < .01$). Household chaos produced a significant negative effect on psychological wellbeing ($B = -.86$ $p < .01$) and psychological distress ($B = -.39$ $p < .01$). Emotion-focused coping significantly positively predicts psychological wellbeing ($B = .07$ $p < .05$) and psychological distress ($B = .48$ $p < .05$). Household chaos produced a significant negative effect on psychological wellbeing ($B = -.21$ $p < .05$) and psychological distress ($B = -.54$ $p < .05$). Dysfunctional coping significantly negatively predicts psychological wellbeing ($B = .51$ $p < .05$) and significantly positively predicts psychological distress ($B = .18$ $p < .01$). Household chaos produced a significant positive effect on psychological wellbeing ($B = .41$ $p < .05$) and significant negative effect with psychological distress ($B = .23$ $p < .01$).

The findings of the moderation table are further described through the mod graph (Figure 1-5). The graph shows that in the presence of moderator problem-focused coping, the effect of household chaos is decreasing on psychological wellbeing and on psychological distress. In the presence of emotion-focused coping, the effect of household chaos on psychological wellbeing and on psychological distress is decreasing. The graph shows that dysfunctional coping increases the level of psychological distress while dysfunctional coping has non-significant effect on psychological distress.

Table 1*Correlation among study variables (N=200)*

S.No	Variables	n	M	SD	1	2	3	4	5	6	7	8
					CHAOS	MHI	PWB	PD	BCS	PFC	EFC	DC
1.	CHAOS	200	4.39	3.65	—							
2.	MHI	200	138.0	14.3	-.15*	—						
3.	PWB	200	50.8	11.7	-.42**	.03	—					
4.	PD	200	87.2	18.8	.37**	.78**	-.64**	—				
5.	BCS	200	75.2	8.53	.12	.16*	.11	-.19**	—			
6.	PFC	200	18.0	3.10	-.08	.01	.01	.00	.69**	—		
7.	EFC	200	29.2	4.03	-.01	.06	.02	-.03	.77**	.57**	—	
8.	DC	200	25.8	4.33	-.27**	-.22**	-.23**	.31**	.68**	.13	.18**	—

Note. CHOAS=. Hubbub and Order Scale; MHI= Mental Health Inventory; PWB= Psychological Well Being; PD= Psychological Distress; PFC= Problem Focused Coping; EFC= Emotion Focused Coping; DC= Dysfunctional Coping.

* $p < .05$

Table 2*Multiple Regression Analysis by Household Chaos and Coping Strategies on Mental Health (N=200)*

Predictors	Psychological wellbeing						Psychological distress					
	B	SE B	β	t	95% CI		B	SE B	β	t	95% CI	
					LL	UL					LL	UL
Constant	34.6	4.4	-	7.8	25.9	43.4	12.5	6.6	-	18.0	106	133
CHAOS	.59	.15	-.28**	6.5	.64	1.2	-.15	.23	.29**	-6.6	-1.1	-2.5
PFC	.09	.16	.28**	.56	-.40	.22	-.01	.24	-.20**	-.05	-.48	.47
EFC	.13	.15	.24**	.87	-.44	.17	-.38	.23	-.28**	1.6	-.07	.84
DC	-.26	.11	-.03	-5.4	.39	.84	.13	.17	.34**	-7.6	-1.6	.96
	$R^2=.42$		$\Delta R^2=.41$		$F=21.7$		$R^2=.50$		$\Delta R^2=.49$		$F=33.2$	

Note. CHOAS= Confusion, Hubbub and Order Scale, PFC= Problem Focused Coping; EFC= Emotion Focused Coping; DC= Dysfunctional Coping.

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

Table 3

Moderating effect of Coping Strategies with Household Chaos on Mental Health (N=200)

Predictors	Psychological wellbeing						Psychological distress											
	B	SE	t	p	95% CI		B	SE	t	p	95% CI							
					LL	UL					LL	UL						
Constant	48.5	5.2	9.2	.000	38.2	58.8	18.1	8.1	13.3	.000	92	124						
CHAOS	-.86	.77	1.1	.008	-.65	2.3	-.39	1.1	-3.3	.001	-1.6	-6.3						
PFC	.16	.27	-.58	.001	-.71	.38	.62	.42	-1.4	.045	-1.4	.21						
PFC×CHAOS	.03	.04	.38	.011	-.06	.09	.01	.06	1.6	.006	-.01	.22						
	R ² =.34			ΔR ² =.33			F=17.8			R ² =.38			ΔR ² =.37			F=22.9		
Constant	47.8	6.5	7.2	.000	34.8	60.7	110	10.1	10.8	.000	90.6	130						
CHAOS	-.21	1.1	.80	.002	-1.3	3.1	-.54	.76	-3.1	.002	-8.9	-2.1						
PFC	.07	.22	-.35	.012	-.55	.35	.34	.34	-1.4	.161	-1.1	.19						
PFC×CHAOS	.08	.04	.02	.032	-.06	.08	.02	.05	1.9	.046	.01	.23						
	R ² =.34			ΔR ² =.33			F=17.7			R ² =.38			ΔR ² =.37			F=22.4		
Constant	31.8	4.5	7.0	.000	22.9	40.8	127	6.8	18.7	.000	114	141						
CHAOS	.41	.97	.42	.068	-1.5	2.3	.23	.47	-.83	.041	-4.1	1.6						
PFC	-.51	.16	3.1	.001	.19	.83	.18	.24	-4.8	.000	-1.6	-.70						
PFC×CHAOS	.02	.03	.57	.563	-.04	.08	.13	.05	-.26	.004	-.11	.08						
	R ² =.41			ΔR ² =.40			F=28.1			R ² =.49			ΔR ² =.48			F=42.8		

Note. CHAOS= Confusion, Hubbub and Order Scale, PFC= Problem Focused Coping; EFC= Emotion Focused Coping; DC= Dysfunctional Coping.
*p < .01. **p < .05. ***p < .001

Figure 1. Moderating effect of Problem-Focused Coping in predicting psychological wellbeing

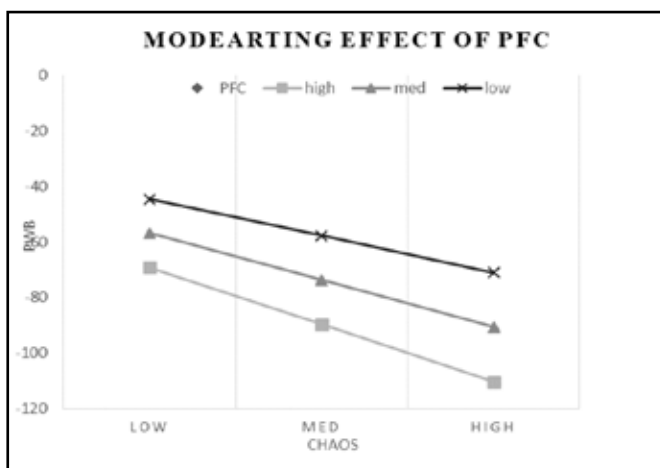


Figure 2. Moderating effect of Emotion-Focused Coping in predicting psychological wellbeing

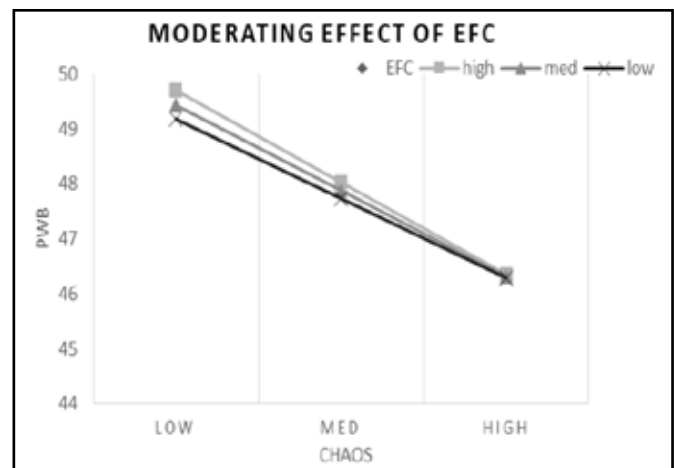


Figure 3. Moderating effect of Problem-Focused Coping in predicting psychological distress

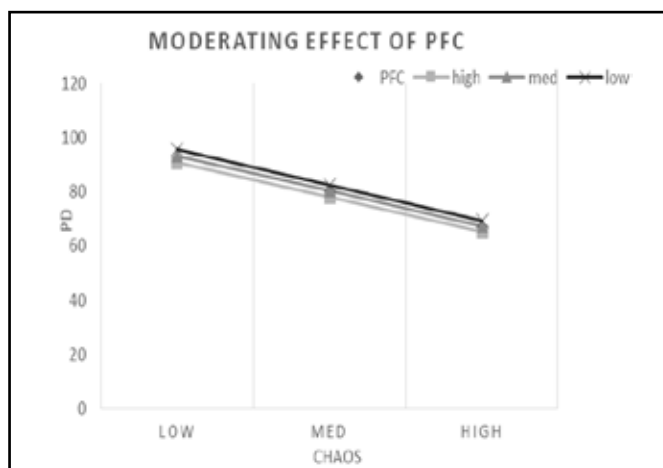
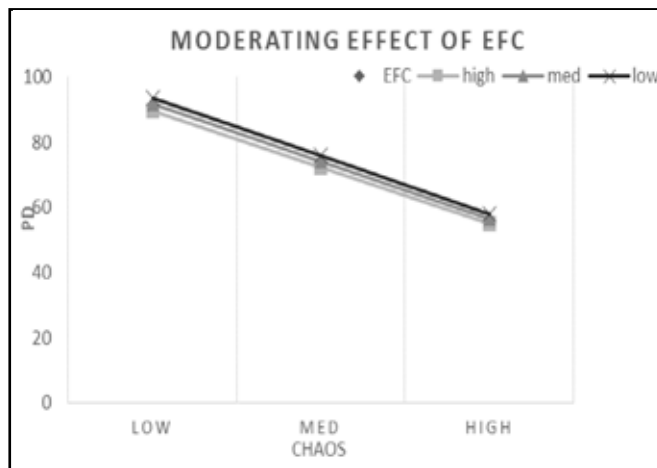


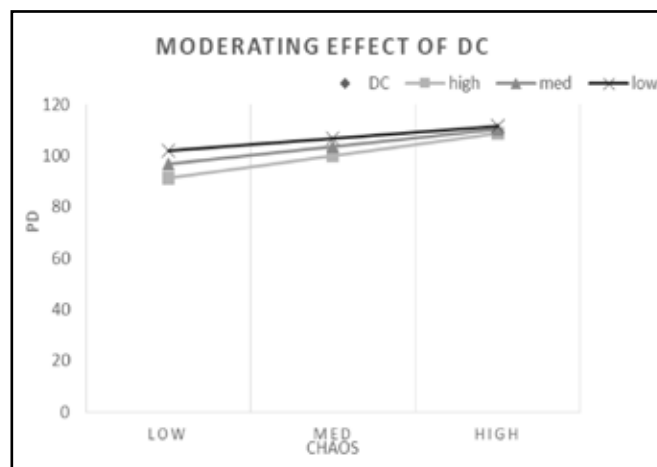
Figure 4. Moderating effect of Emotion-Focused Coping in predicting psychological distress



Discussion

Inter correlation matrix showed the relationship between household chaos, mental health, and coping strategies. According to the results, household chaos had a significant negative correlation with mental health which indicates that more chaos at home predicts a low level of mental health. Adolescents who suffer from household chaos pertain to be affected by mental health. These findings are consistent with research conducted by Klemfuss (2018) to examine the effect of household chaos on mental health. Psychological well-being significantly negatively correlated with household chaos which showed that individuals with chaos scored low on psychological well-being. In line with the previous study, the stress of household chaos is related to psychological well-being (Cooper & Marshall, 1976). Previous literature has shown that household chaos affects psychological well-being (Deater-Deckard et al., 2012). The theory of chaos explains that psychological well-being gets affected by the harmful risk factors of chaos in adolescents (Gonzales et al., 2007). On the other hand, psychological distress showed a significant positive correlation with household chaos. A previous study also revealed that a crowded home environment is correlated with psychological distress (Zvara et al., 2014).

Figure 5. Moderating effect of Dysfunctional Coping in predicting psychological distress



Multiple regression analysis was performed to see the effect of household chaos and coping strategies (emotion-focused coping, problem-focused coping, dysfunctional coping) on psychological wellbeing. Psychological well-being refers to the efficacy in working, hopefulness, complete emotional state, self-acceptance, autonomy, personal growth, and positive functioning (Keyes et al, 2002). Household chaos appeared to be a significant negative predictor of psychological well-being and the beta value explained .59 units decrease in psychological wellbeing. Previous literature has shown that household chaos affects psychological well-being and minimizes optimal functioning (Deater-Deckard et al., 2012). Problem-focused coping appeared to be the strongest positive predictor of psychological well-being. This finding is in line with a study predicting the role of coping for psychological well-being. It was concluded that higher use of problem-focused coping predicts psychological well-being (Cai et al., 2020). Emotion-focused coping appeared to be a significant positive predictor of psychological well-being. Emotion-focused coping decreases the stress level and contributes to enhancing the psychological well-being (Jang et al., 2019). Dysfunctional coping appeared to be a negative predictor of psychological well-being. Avoidance coping or dysfunctional coping strategy is related to depressive symptoms and poor adaptation or maladjustment (Griffith et al., 2000). Psychological distress is refer to the state of emotional suffering and is embedded with terms such as stress, strain, and distress (Selye, 1974). Household chaos appeared to be a significant positive predictor of psychological distress and the beta value explained .15 units decrease in psychological distress. Anxiety and depressive symptoms are the factors caused by chaos at home and are characterized by behavioral problems and distress (Sanders & Abaied, 2015). Problem-focused coping and emotion-focused coping appeared to be a significant negative predictor of psychological distress. These findings are in line with the study of coping strategies with psychological distress. High scores on problem-focused coping and emotion-focused coping reflect the low score on symptoms of psychological distress (Chang et al., 2007). Dysfunctional coping appeared to be a significant positive predictor of psychological distress. In a previous study with dysfunctional coping and psychological distress, it was suggested that the dysfunctional coping mechanism rendered the psychological distress and makes a person more vulnerable toward general stress (Neville et al., 1997).

Problem-focused coping is adaptive in nature as it involves efforts in solving the problems rather than withdrawing and escaping from the situation (Baker & Berenbaum, 2007) which ultimately decreases psychological distress in long run among individuals, and decreases the impact of chaotic environment (Folkman & Moskowitz, 2000). Results of problem-focused coping with all the outcome variables reveal that the moderating role of problem-focused coping in relationship with chaos and psychological well-being. Findings suggests that PFC significantly predicts psychological wellbeing and explain the total variance of 34% in PWB. CHAOS produced a significant negative effect on psychological well-being. The findings of the moderation table are further described through the mod graph which depicts that problem-focused coping significantly moderate the relationship between household chaos and psychological well-being among adolescents. The graph shows that in the presence of moderator problem-focused coping, the effect of CHAOS is decreasing on psychological well-being.

Problem-focused coping significantly predicts psychological distress explaining the total variance of 38% in psychological distress. CHAOS produced a significant negative effect with psychological distress explaining the additional 15% variance in PD. The findings of the moderation analysis are described through the mod graph (Figure 6) depicts that problem-focused coping significantly moderates the relationship between household chaos and psychological distress among adolescents. The graph shows that problem-focused coping decreasing the effect of CHAOS on psychological distress. The results of the present study are consistent with the existing literature (Stanton et al., 2000) which indicated that problem-focused coping moderated the relationship between chaotic home environment and neurotic disorders.

Limitations and Recommendations

A cross-sectional design was used to collect the data from adolescents. For future research, it would be more beneficial to do research with more cities for the effectiveness and generalizability of the data. To examine the effect of household chaos on mental health, more research are required to conduct. Moreover, this research is limited to the mental health of adolescents, while it can be done with other domains of health-related issues.

Three questionnaires were used in the current study which was time-consuming to collect the data. For future research, it would be better to use questionnaires with fewer items and in a short form. For future research with these variables, qualitative research will be suggested, as it will provide the difference between age ranges in the context of using coping strategies. Qualitative research will provide in-depth explanation of the effect of household chaos on mental health. Age is an important part to explore the cause and effect among adolescents. In this study adolescents between the ages range of 10 to 19 years were taken. It would be more effective for future research that data should be taken from a specific age limit among adolescents to explore better findings.

Parents, teachers, and adolescents should be aware of the concepts of household chaos, mental health and coping strategies through seminars, media, conferences, and discussions. As it is very important to be aware of these concepts for better functioning and mental well-being. A union NICHD Early Child Care Research Network was introduced in 2003 for the intervention of children who suffers from household chaos. By enhancing the understanding of coping strategies, the provision of guidelines related to the management of risk factors can reduce dysfunctionalities.

Declaration

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Conflict of interest. The authors are well informed and declared no competing interests.

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Availability of data and materials. The datasets used and/or analyzed during the current study are available from the corresponding authors on reasonable request.

Ethics approval and consent to participate. Formal permission was acquired from institutional Ethical board to conduct research.

Competing interest. The authors declare to have no competing interests.

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