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Inter-Generational Study on the Relationship of Personality Disorders of Adults, their Fathers and Grandfathers

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Abstract

Objective: To investigate the relationship between personality disorders (PDs) among adults, their fathers and grandfathers and to explore the inter-generational differences (between these three generations) on PDs.

Study type settings & duration: This cross-sectional study had been conducted in Mandi-Bahuddin city of Pakistan and was completed from March 2016 to April 2017.

Methodology: Personality Diagnostic Questionnaire used for data collection from 300 participants including adults, their fathers and grandfathers.

Results: Findings indicate that significant positive correlation among adults, their fathers and grandfather PDs. **Conclusion:** There is significant positive correlation in PDs among three generations and results also indicated that PDs shift from one generation to another that shows genetic factors play significant role in development of PDs.

Key words: Personality disorders, adults, fathers, grandfathers.

Introduction

well organized set of characteristics that entirely effect person's motivations, feelings, thoughts and behaviors according to dissimilar situations. Past Researchers have examined PDs in both clinical and general population. PDs are enduring patterns of individual's personal experiences and behaviors, and these behavior or manners markedly deviates from culture and cultural expectations of individuals. These behaviors are rigid, persistent and stiff. PDs appear in the adolescence or early adulthood, and remain firm and steady with the passage of time. These PDs

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Authors Contribution

SA, MNR & MAR conceptualized the project performed the data collection, Literature search, statistical analysis and drafting, revision & writing of manuscript.

make destructions or disturbance in individual's activities, daily life and relations. Basically two factors play important role in the development of human personality as well as PDs. Firstly, biological factors, means people's genetic make-up, and secondly environmental factors, means people's life experience. According to expert these two factors cannot be understood separately from one another. In puberty and adulthood, these early memories of maltreatment, violence and neglect, and their subsequent developmental symptoms, put an infant at risk of experiencing a psychiatric condition such as Borderline Personality Disorder (BPD). Holding a history of maltreatment often tends to affect people with BPD in their own position as parents.

Bio Psychosocial Model suggests that biological, social and psychological factors all arise together to clarify the development of PDs. 10 Traumatic conditions in childhood such as sexual abuse and neglect are among the contributing factors that have been the most thoroughly studied as possible risk factors for PD. 11,12 Moreover both permissive and authoritarian parenting styles led to personality disorders among offspring in the adult phase of their lives. 13 In the local context of Pakistan personality and psychological issues are common. Roughly 50 million people in Pakistan suffer from

psychiatric illnesses according to one survey. There have been studies of a number of psychological illnesses, such as personality disorders addiction, bipolar disorder and post-traumatic stress disorder. According to an estimate, 36 percent of Pakistanis suffer from anxiety and depression, which is also triggered by broken relationships between family and friends, a sense of inadequacy in society, the country's dysfunctional economic and political circumstances that give rise to unemployment and poverty. ^{14,15}

Research proposes that genetics, abuse and some other factors play important role to the development of narcissistic, obsessive-compulsive, or other PDs. Researchers are beginning to recognize some possible psycho social factors behind PDs. 16 They have identified that a malfunctioning gene might be a factor in obsessivecompulsive PD and others are exploring the possibility of genetic links between anxiety, aggression and fear playing a role in development of PDs. 17 The present study examined the relationship between PDs of adults, their fathers and grandfathers and explored the inter-generational differences on PDs. Past researches have mostly focused on the role of environmental factors behind PDs. 7,18-20 However, present study intended to work on genetic causes of PDs which is a gap in the existing literature.

Methodology

It was a cross-sectional survey research. Sample (N = 300) consisted of adults (n = 100, 33.33%), their fathers (n = 100, 33.33%) and grandfathers (n = 100, 33.33%). Purposive sampling technique used to collect the data from residential areas of Mandi-Bahauddin. Sampling inclusion-exclusion criterion was age specific. Minimum age for adults was greater than 18 years according to the criteria of DSM- 5^6 and there is no age limit for their fathers and grandfathers.

Urdu translated Personality Diagnostic Questionnaire-Forth Edition (PDQ-4) consisted of 99 items and twelve subscales, self-administered questionnaire constructed by Hyler et al.21 with response categories 0 = false and 1 = true. Each subscale measured one PD, including Paranoid, Schizoid, Schizotypal, Antisocial, Borderline, Histrionic. Narcissistic, Avoidant, Dependent, Obsessive-compulsive, Passive-aggressive and Depressive. Too Good scale in PDQ-4 assesses under reporting of pathological personality traits and the Suspect scale identifies individuals who are responding randomly, lying or not taking the

questionnaire seriously. Higher scores on subscale represent specific PD.

For data collection researcher contacted some local residents for help. A good rapport was established with the participants through introducing the purpose and importance of the study. Informed consent was taken in written form. All participants were given the right to withdraw from study at any time. The respondents were instructed to complete their questionnaire as honestly as possible and make sure to give response on every item. There was no time limit for the completion of questionnaire. Participants were thanked for their time and effort.

The ethical clearance was taken from Institutional Review Board of Advance Studies and Research, University of Lahore, Lahore.

Results

Table-1 shows descriptive statistics and skewness for study variables in three groups including adults, their father and their grandfathers. The values of skewness are less than +/- 1 which indicates that data is not skewed for adults, their fathers and grandfathers.

Table-2 shows most of the significant positive correlation in adults, fathers and grandfathers PDs. Values in the diagonals of Table-2 shows that [1] the reliability coefficient of adult's PDs scales is .55, .57, .68, .64, .50, .65, .52, .61, .63, .54, .66, and .52 which indicates that subscales have acceptable internal consistency. [2] The reliability analysis indicate that the reliability coefficient of adult's father PDs scales are .54, .59, .61, .52, .52, .69, .53, .55, .55, .59, .67, and .69 which indicates that subscales have acceptable internal consistency. [3] The reliability coefficients of adult's grandfather PDs scales are .62, .54, .62, .51, .52, .67, .53, .65, .51, .60, .51, and .62 which indicates that subscales have acceptable internal consistency.

Table-3 shows that [1] Pearson correlation among adult's PDs and adult's father' PDs. Findings indicate that all personality disorders in adults have significant positive correlation with their father' PDs, except few correlation coefficients which are nonsignificant. [2] Findings revealed that adult PDs have significant positive correlation with their grandfather PDs, except few correlation coefficients which are non-significant. [3] Findings revealed significant positive correlation between adult's fathers' PDs and adult's grandfathers' PDs. Overall correlation coefficients indicate that there is significant association between three personality disorders of three generations.

Table 1: Psychometric properties among study variables.

Variables		[1] Adults (n	= 100)		[2] Fa	thers $(n = 1)$	00)	[3] Grandfathers (n = 100)			
		Rar	nge			Actual	Actual				
	M(SD)	Potential	Actual	Skew- ness	M(SD)	Range	Skew- ness	M(SD)	Range	Skew- ness	
Paranoid	3.98(1.51)	0-7	0-7	52	3.82(1.51)	0-7	01	3.68(1.85)	0-7	36	
Schizoid	3.67(1.51)	0-7	0-7	.14	3.91(1.75)	0-7	21	3.51(1.38)	0-6	42	
Schizotypal	4.14(1.67)	0-8	1-8	.37	4.63(1.80)	0-9	.25	3.70(1.52)	0-7	.22	
Antisocial	3.32(2.08)	0-8	0-8	.33	3.05(1.93)	0-8	.30	3.01(1.99)	0-7	.19	
Borderline	3.67(1.90)	0-9	0-8	.27	3.84(2.11)	0-9	.32	3.40(1.80)	0-8	.29	
Histrionic	4.16(1.77)	0-8	0-8	04	4.36(1.61)	0-7	32	4.17(1.69)	1-8	.58	
Narcissistic	4.68(1.89)	0-9	1-9	.41	4.81(2.01)	0-9	.15	4.15(1.81)	0-9	.02	
Avoidant	4.05(1.50)	0-7	0-7	45	4.04(1.82)	0-7	25	3.80(1.68)	0-7	27	
Dependent	3.97(1.90)	0-8	1-8	.15	3.95(2.08)	0-8	12	4.14(1.95)	0-8	33	
Obsessive- compulsive	4.42(1.47)	0-8	1-8	.18	4.25(1.63)	0-8	.33	4.23(1.54)	1-8	16	
Passive- aggressive	3.07(1.64)	0-7	0-6	.06	3.24(1.64)	0-7	.20	3.01(1.96)	0-7	.53	
Depressive	3.53(1.48)	0-7	0-7	23	3.79(1.42)	0-7	.23	3.56(1.55)	0-6	05	

Table 2: Pearson correlation in PDs on the data of adult, father and grandfather.

Adults PDs	1	2	3	4	5	6	7	8	9	10	11	12
 Paranoid Schizoid Schizotypal Antisocial Borderline Histrionic Narcissistic Avoidant Dependent Obsessive-compulsive 	(.55)	.12 (.57)	.27** .29** (.68)	.37*** .41*** .41*** (.64)	.36*** .35*** .52*** .60*** (.50)	.38*** .02 .30** .51*** .38*** (.65)	.36*** .30** .44*** .57*** .58*** .46*** (.52)	.24** .04 .30** .23* .39*** .32** .39*** (.61)	.33** .01 .31** .28** .33** .36*** .47*** .51*** (.63)	.26** .23* .36*** .48*** .46*** .46*** .42*** .21* .45*** (.54)	.30* .39*** .45*** .57*** .64*** .57*** .33** .32** .30**	.33** .16 .24* .35*** .30** .19* .21* .11 .07
11. Passive-aggressive12. Depressive											(.66)	.21* (.52)
Fathers PDs 1. Paranoid 2. Schizoid 3. Schizotypal 4. Antisocial 5. Borderline 6. Histrionic 7. Narcissistic 8. Avoidant 9. Dependent 10. Obsessive- compulsive 11. Passive-aggressive 12. Depressive	(.54)	.01 (.59)	.38*** .42*** (.61)	.34*** .31** .62*** (.52)	.42*** .31** .59*** .54*** (.52)	.30** 07 .35*** .38*** .36*** (.69)	.59*** .22* .58*** .57*** .65*** .44*** (.53)	.38*** 09 .43*** .38*** .42** .44** .51*** (.55)	.40*** 09 .50*** .49*** .42*** .47*** .46*** .68*** (.55)	.23* .02 .38*** .35*** .39*** .24* .53*** .51*** (.59)	.47*** .41*** .69*** .59*** .71** .28** .75*** .34** .35*** .22*	.38*** .22* .32** .29** .56*** .23* .36*** .40*** .32** .37***
Grand Fathers PDs 1. Paranoid 2. Schizoid 3. Schizotypal 4. Antisocial 5. Borderline 6. Histrionic 7. Narcissistic 8. Avoidant 9. Dependent 10. Obsessive- compulsive 11. Passive-aggressive 12. Depressive	(.62)	.10 (.54)	.52*** .29** (.62)	.47*** .23* .47*** (.51)	.51*** .29** .63*** .56*** (.52)	.55*** .08 .39*** .55*** .45*** (.67)	.54*** .39** .52** .58** .59** .54** (.53)	.62*** .07 .41*** .38*** .47*** .38*** .45*** (.65)	.66*** .05 .31** .37*** .45*** .44*** .62*** (.51)	.53*** 04 .36*** .50*** .35*** .38*** .37*** .46*** (.60)	.42*** .37*** .48*** .56*** .50*** .54*** .36*** .34*** .35*** (.51)	.43*** .28** .40*** .42*** .47*** .45*** .42*** .34*** .44*** .37***

^{*}p<.05. **p<.01. ***p<.001

Table 3: Pearson correlation among early adults with their fathers' PDs, adults with their grandfathers' PDs and fathers of adults with adults' grandfathers' PDs.

Variables	1	2	3	4	5	6	7	8	9	10	11	12
[1] Adult's with Father PDs												
1. Paranoid	.22*	.19*	.24*	.24*	.28**	.02	.28**	.09	.09	04	.28**	.12
Schizoid	.09	.28**	.27**	.10	.15	.01	.15	04	01	.01	.21*	.04
Schizotypal	.25*	.06	.40***	.39***	.33**	.31**	.47***	.33**	.32**	.10	.39***	.06
4. Antisocial	.30**	.18*	.45***	.44***	.43***	.21*	.46***	.20*	.27**	.14	.45***	.10
Borderline	.35***	.06	.23*	.30**	.44***	.11	.46***	.19*	.16*	01	.41***	.16
Histrionic	.35***	03	.36***	.24*	.47***	.27**	.42***	.34**	.40***	.23*	.41***	.28
Narcissistic	.41***	.04	.32**	.30**	.36***	.24*	.43***	.21*	.20*	.06	.35***	.15
8. Avoidant	.42***	23*	.14	.09	.14	.15	.28**	.22*	.26**	.07	.18*	.15
Dependent	.37***	18*	.31**	.22*	.22*	.18*	.27**	.30**	.38***	.15	.22*	.17
Obsessive compulsive	.35***	07	.31**	.33**	.26**	.02	.26**	.28**	.41***	.03	.35***	.15
Passive aggressive	.34**	.17*	.43***	.30**	.42***	.20*	.44***	.27**	.24*	.16	.49***	.19*
Depressive	.19*	.22*	.30**	.32**	.31**	.09	.24*	.07	.03	00	.18*	.17*
[2] Adult's with Grandfather I	PDs											
1. Paranoid	.21*	.18*	.11	.17*	.10	.09	.27**	.23*	.16	.07	.13	.16
Schizoid	.05	.24*	.24*	.12	.18*	.06	.24*	.07	.03	.03	.22	.02
Schizotypal	.38***	.19*	.29**	.28**	.36***	.23*	.40***	.34***	.28**	.25*	.32**	.12
4. Antisocial	.34**	.10	.25*	.41***	.39***	.31*	.34***	.26**	.17*	.32**	.26**	.26**
Borderline	.24*	.27*	.26**	.35***	.35***	.14	.35***	.32**	.15	.17*	.22*	.17*
Histrionic	.49***	05	.25*	.36***	.27**	.33**	.32**	.33**	.31**	.34***	.13	.19*
Narcissistic	.30**	.12	.24**	.25*	.28**	.35***	.29**	.32**	.21*	.19*	.25*	.11
8. Avoidant	.38***	.12	.43***	.36***	.35***	.27**	.35***	.47***	.29**	.19*	.18*	.12
Dependent	.24*	01	.31**	.26**	.16	.21*	.17*	.46***	.26**	.12	.16*	.07
10. Obsessive compulsive	.27**	.08	.16	.26**	.21*	.13	.28**	.33**	.19*	.23*	.15	.09
 Passive aggressive 	.37***	.10	.31**	.32**	.33**	.31**	.34***	.34***	.28**	.24*	.32**	.21*
12. Depressive	.18*	.26**	.08	.29**	.23*	.11	.21*	.13	.11	.07	.29**	.22*
[3] Father's with Grandfather												
1. Paranoid	.46***	.15	.39***	.33**	.41***	.45***	.44***	.49***	.43***	.26**	.34***	.25*
Schizoid	05	.37***	.12	.07	.15	.12	.25*	08	.01	.03	.23*	.24*
Schizotypal	.41***	.13	.40***	.38***	.41***	.44***	.35***	.42***	.26**	.35***	.48***	.35***
4. Antisocial	.31**	.16	.34***	.44***	.52***	.35***	.39***	.41***	.28**	.25*	.39***	.38***
Borderline	.44***	.18*	.37***	.50***	.51***	.46***	.41***	.33**	.33**	.31**	.41***	.45***
6. Histrionic	.34***	21*	.15	.25*	.25*	.34**	.14	.30**	.32**	.32**	.13	.11
Narcissistic	.45***	.09	.46***	.51***	.53***	.46***	.57***	.47***	.36***	.42***	.47***	.39***
8. Avoidant	.43***	01	.39***	.31**	.25*	.43***	.29**	.33**	.33**	.29**	.39***	.28**
9. Dependent	.53***	04	.33**	.34**	.32**	.43***	.34**	.42***	.48***	.37***	.26**	.35***
10. Obsessive compulsive	.21*	08	.07	.19*	.15	.25**	.01	.09	.15	.17*	.22*	.20*
11. Passive aggressive	.37***	.07	.43***	.47***	.47***	.46***	.43***	.44***	.26**	.39***	.44***	.38***
12. Depressive	.26**	.13	.28**	.47***	.43***	.48***	.37***	.18*	.31**	.35***	.42***	.47***

Note. a = adults; f = fathers of adults; g = grandfathers of adults. *p<.05. **p<.01. ***p<.001

Figure shows mean difference among adults, fathers and grandfathers' personality disorders. Results shows that paranoid, antisocial and obsessive-compulsive personality disorder significantly increases from grandfather to father and then in adults. However, the remaining mean differences in the personality disorders of three generations were non-significant, indicating that they have same level of symptoms of personality disorders.

Discussion

PDs can be caused by hereditary and environmental factors.²² The findings of the present study confirmed the hypothesis that adult's PDs have significant positive correlation with fathers and grandfathers PDs, and father's PDs have significant positive correlation with grandfathers PDs. Hereditary factors significantly influenced on PDs. Prior studies

indicated significant associations between genes and PDs. ¹⁰ Several family, twin and adoption studies have confirmed that obsessive compulsive PD, antisocial PD, substance use disorder and conduct disorder share a common inherited liability. ¹⁴ In the context of Pakistan a study conducted by Batool et al. on a huge sample revealed that malparenting also have significant impact on offspring's personality as leads personality disorders in them. ¹³ Therefore it can concluded that parental impact on the growth of any child's personality is profoundly important. It is very important to make sure parenting style encourages the child's safe growth and development.

The findings of present study shows PDs shift from one generation to another, paranoid, antisocial and obsessive compulsive PD significantly increases from grandfather to father and then in adults. Other PDs also increase from one to another generation. Normal personality traits are

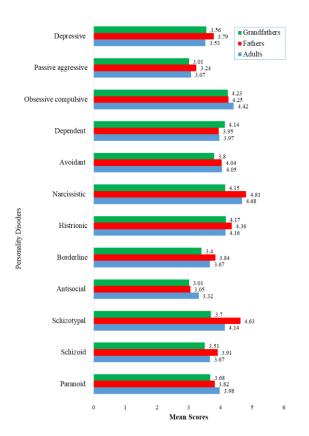


Figure: Mean differences among adult, father and grandfather PDs.

influenced by genetic factors, with heritability from approximately 35-60%. researches have proposed that hereditary factors contribute to the development of the three PDs of the DSM cluster-A. Heritability was assessed to be 28% for schizotypal, 21% for paranoid, and 26% for schizoid PD.23 In a twin study on DSM cluster-B PDs, heritability was estimated to be 31% for histrionic PD, 35% for borderline PD, 38% for antisocial PD and 24% for narcissistic PD.24 Prior researches propose that 60% of developing disorder borderline is carried bγ genetic abnormalities. 16 DSM cluster-C PDs have been significantly influenced by genetic factors.22 A population based study related to all DSM-IV cluster-C PDs, heritability was estimated to be ranging from 27% for obsessive-compulsive PD to 35% for avoidant PD. 25 There is clear evidence that parents can and do influence children, their food preferences, their religious beliefs, and certain enduring personality traits also impacts on children personality. In the context of Pakistan a study also indicated about 27% prevalence of mental disorders including all personality disorders.²⁶

The study examined relationship between PDs among adults, their fathers and grandfathers

and to explore the inter-generational mean differences on PDs. Results indicated significant positive correlation among adults, their fathers and grandfathers PDs .Findings of this study also indicated PDs shift from one generation to another which shows that biology play significant role in development of PDs.

Conflict of interest: None declared.

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