

Effect of Maternal Personality and Resilience on the Adaptive Functioning of Children with Intellectual Disability

Sidra Azim, Uzma Masroor, and

Nazia Iqbal

International Islamic University

This study explored the effects of maternal personality traits and resilience on the adaptive functioning of the intellectually disabled children. Children with intellectual disability ($n = 60$) with age range 6 to 14 years ($M = 12.03$; $SD = .66$) and their mothers ($n = 60$) comprised the sample of study. Sample was collected from different special education institutions of Rawalpindi and Islamabad. Mothers of these children filled the Urdu version of Neo personality Inventory Revised (Chishti, 2002), Ego Resilience Scale (Nangiana, 2002). Vineland Adaptive Behavior Scale Interview Edition Survey Form (Sparrow, Balla, & Cicchetti, 1984) was used to access the adaptive functioning of the children. Multiple regression analysis demonstrated that children whose mothers have high Neuroticism personality traits have lower adaptive functioning. Higher scores of mothers' on personality traits of extraversion, openness to experience, conscientiousness, and agreeableness impact better adaptive functioning of their intellectually disabled children. Multiple regression analysis indicated that resilience moderated the relationship between maternal personality traits of extraversion and conscientiousness and the adaptive functioning of their children.

Keywords. Intellectual disability, neuroticism, extraversion, openness to experience, agreeableness, conscientiousness, resilience, adaptive functioning

There are number of influential factors that contribute in the adjustment of children with intellectual disability in their everyday functioning and in their society. Among these most influential are education (Cram, Warfield, Shonkoff, Krauss, & Upshur, 1999);

Sidra Azim, Uzma Masroor, and Nazia Iqbal, International Islamic University, Islamabad, Pakistan.

Correspondence concerning this article should be addressed to Nazia Iqbal, International Islamic University, Female Campus, Islamabad, Pakistan, Pakistan. Email: nazia.iqbal@iiu.edu.pk

culture (Pervin & Cervone, 2010); socioeconomic status (Bradley & Corwyn, 2002); and personality (Riksen-Walraven, 2002). Besides, parenting style may also contribute to the children's maladjustment (Eisenberg, Chang, Ma, & Huang, 2009). Harmonious parent child interactions and good adaptive functioning of children is linked with positive affect of the parents whereas the negative affect is linked to maladaptive outcomes (Kochanska & Aksan, 1995). Parents play multiple roles in bringing up their intellectually disabled children which in turn increases the performance of their children (Mohsin, Khan, Doger, Awan, & Sher, 2011). Mothers as primary caregivers are given more importance in this research. Likewise, research on parenting attitudes and activities has mainly focused on mothers, hence recognizing that they are traditionally responsible for primary care across many cultures. This is the reason child rearing practices are more followed by mothers than fathers (Al-Qaisy, 2012).

Having a child with intellectual disability is a challenge which causes psychological distress (Hastings et al., 2005) and a great deal of strength and persistence is especially required on the part of mothers when little support is available (Meppelder, Hodes, Kef, & Schuengel, 2015). It is well established that communication skills, socialization skills and daily living skills of children improved by mother child interactions (Cram et al., 1999). Maternal personality, negative emotionality, and socialization broadly influenced child's developmental outcomes (Kochanska, Clark, & Goldman, 1997). It has been found that personality traits of mothers had a stronger impact on the children as compared to the fathers (Belsky, Crnic, & Woodworth, 1995). In Pakistani culture the role of mothers is well defined and influential in bringing up a child with intellectual disability as compared to the role of a father. One of the objectives of the present research is to measure the effect of maternal personality and resilience on the adaptive functioning of their children with intellectual disability.

According to the Double ABCX Model developed by McCubbin and Patterson (1982, 1983), the stressor elements consist of many stressful situations which the family has to face in order to meet the demands and needs. Coping acts as a bridging concept in these situations, which in turn keeps a balance in stressful events. In this study the coping mechanism is taken as resilience of mothers in coping with stress regarding the brought up of their intellectually disabled children. Resilience refers to the elastic qualities, the ability to successfully adapt to the changing environment and also the quality of hardiness and invulnerability (Ramanaiah, Sharpe, & Byravan, 1999). It also refers to the capacity of the individuals to withstand the

stressors without manifesting psychopathological conditions (Annalakshmi, 2008). The mothers face difficulties in everyday situations which not only effect their mental functioning but also the consequences can be seen how they cope up with the everyday demands. However, the resilient mother has the ability to adapt these changes in her life with great ease. Personality is the integral part of one's self and is largely influential while dealing with major challenges of life. Reviewed literature implies that the personality traits are the important aspect of resilience and act as important antecedent of resilience. Others suggest that resilience represents personal qualities that enable a person to thrive the face of adversity with stable personality (Connor & Davidson, 2003). Resilience in mothers strengthens the mother child relationship because of the presence of at least one caring and emotional person, in the individual's life at any point of life (Dyer & McGuinness, 1996) whcih inturn have a positive impact onthe children.

Keeping in mind the role of mothers as primary caregivers in the brought up their children in Pakistani culture, the significance of the present research is highlighted. As an understudy area there is a need to highlight the problems and get a better understanding of these issues. As the Pakistani perspective remains unexplored concerning these domains, the present study has aimed to test the contributing factors of maternal personality on the adaptive functioning of children with intellectual disability. Findings of the present research would be an attempt to improve the adaptive functioning of the intellectually disabled children by probing into the personality of their mothers. The purpose of studying the children with intellectually disability is that these children are neglected not only in schools but also by their parents, which as a result causes problems in their ability to cope with the daily functioning and with people around them. Another purpose of the study is also to observe the role of resilience as a moderating factor between personality traits of mothers and adaptive functioning of their children. In Pakistani culture mothers of children with intellectual disability have to face a great deal of stress because of their child's inappropriate behaviors. They have to pay more attention and time to them. The social support system in Pakistan also poses a great deal of restrictions on the mothers due to which mothers become more stressful. It's what the personality of the mothers is and how resilient they are in such circumstances make them cope with such situations. By reviewing the previous researches it is hypothesized that:

1. Neuroticism personality trait of mothers is negatively related with adaptive functioning of their children with intellectual disability.
2. Extraversion, openness to experience, agreeableness, and conscientiousness personality traits of mothers are positively related with adaptive functioning of their children with intellectual disability.
3. Resilience act as moderator on the relationship between maternal personality traits and adaptive functioning of children with intellectual disability.

Method

Sample

The sample consisted of 60 children with intellectual disability age ranging from 6 to 14 years ($M = 12.03$; $SD = .66$) and their mothers. There were 48 children falling in mild and 12 children falling in the moderate category of intellectual disability. The sample was drawn after administering Draw a Person Test. The sample was obtained from special education schools of Rawalpindi and Islamabad. Convenient sampling was used to collect the data.

Measures

NEO Five-Factor Inventory (NEO-FFI). The Urdu version of NEO-FFI developed by Costa and McCrae (1985) and translated by Chishti (2002) and was used in the study to assess the personality traits of the mothers. It is a short form of the NEO-Personality Inventory. Each of the five factors was measured using 12 items for a total of 60 items. A five-point Likert scale was used ranging from (1) *strongly disagree* to (5) *strongly agree*. It is used to assess the five personality traits as described by Five Factor Model, Openness, Conscientiousness, Extraversion, Agreeableness, and Neuroticism. 5 items of neuroticism, 4 items of extraversion, 6 items of openness, 8 items of agreeableness and 4 items of conscientiousness subscale were reverse scored. The score range for each subscale is 12-60. Higher scores in each subscale indicates high personality traits.

Vineland Adaptive Behavior Scale (Interview Edition Survey Form). It is used to assess personal and the social sufficiency of the individuals. Survey Form was used in this research. It was developed

by Sparrow, Balla, and Cicchetti (1984). English version of the scale was for this research. It consists of 297 items which provides a general assessment of adaptive behavior and is useful for determining the areas of weakness and strength. Survey form was administered on mothers, they were requested to report adaptive functioning of the intellectually disabled children. The adaptive behavior is divided into domains and their sub domains including communication domain with the sub domains of receptive, expressive and written having 67 items, the daily living skills domain with sub domains of personal, domestic and community having 92 items. The socialization domain consists of interpersonal relationships, play and leisure time, coping skills having 66 items. The motor skills domain consists of fine and gross motor having 36 items. There are no reverse scored items. Higher score on each subdomain indicates better adaptive functioning in that specific domain.

Ego Resiliency Scale. Ego-Resiliency Scale by Block and Block (1980) and translated in Urdu by Nangiana (2002) was used in the present study to find out how resilient the mothers were in bringing up their children with intellectual disability. It is a 14 item self reported inventory. Each of the 14 items in the questionnaire requires response on the following 4 point scale, (1) “does not apply at all”, (2) “applies slightly, if any at all”, (3) “applies somewhat”, and (4) “applies very strongly”. A response of 4 represents a high ranking on the scale. The maximum possible score is 56 indicating high ego resilience and the minimum possible score is 14 indicating less ego resilience.

Goodenough Draw- A- Person test (DAP). Draw A Person test is a culturally fair test standardized by Goodenough (1926). It was administered to 66 children and their mental ages were attained. The mental ages were then used in the calculation of their IQs with the help of the formula (i.e., $IQ = MA/CA \times 100$). A total of 60 children with 35 falling in mild and 25 falling in moderate category (IQ ranging from 39-69) were taken for the study.

Procedure

The study was conducted after taking the consent from the head of the institutes and the mothers of the children with intellectual disability. All the participants were assured of the confidentiality and that the information taken is for the research purposes. They were asked to follow the instructions given with the questionnaires and were helped out in case of any difficulty. The mothers were asked to fill in the demographic form to get their demographic details. To

categorize the children into mild and moderate category Draw A Person test was administered to the children. For the assessment of personality and resilience, the mothers were asked to fill in the Urdu version of the NEO Five Factor Inventory and Ego Resiliency scale respectively. To get information regarding the adaptive functioning of the children, the Interview Edition Survey Form of Vineland adaptive Behavior scale was filled out.

Results

Table 1

Psychometric properties and Correlation among variables (N=60)

Variables	1	2	3	4	5	6	7
1. Adaptive Functioning	-	.54**	.51**	.47*	.38*	.53**	-.21*
2. Resilience		-	.53**	.40**	.57*	.58**	-.17*
3. Conscientiousness			-	.32*	.40**	.14*	.37**
4. Agreeableness				-	.24	.16*	.12*
5. Openness to experience					-	.36**	.49**
6. Extraversion						-	.15*
7. Neuroticism							-
<i>M</i>	49.80	43.55	40.23	38.61	41.16	43.35	41.88
<i>SD</i>	7.86	4.89	5.14	4.88	4.62	4.71	4.55
Items No.	297	14	12	12	12	12	12
Range	36-65	37-56	26-32	20-28	23-27	20-35	15-34

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

Findings presented in Table 1 show that Resilience was significantly correlated with neuroticism, extraversion, openness to experience, agreeableness and conscientiousness personality trait of mothers (.58, .57 .40, .53 respectively). Adaptive functioning was positively correlated with personality traits of extraversion, openness to experience, agreeableness, conscientiousness, resilience, while neuroticism personality trait of mothers is negatively correlated with the adaptive functioning of their children. Above stated results confirm the hypotheses no. 1 and 2.

Multiple Regression analysis is computed on personality traits as predictor variables and adaptive functioning as criterion variable. The results in Table 2 indicated that personality traits have significant effect on the adaptive functioning. The R^2 values indicate 63%, 77%, 68%, 57%, and 59% variance in the dependent variable can be accounted for by the predictor variables of neuroticism, extraversion, openness, agreeableness and conscientiousness, respectively.

Table 2

Multiple Regression Analyses predicting maternal personality traits as predictors of adaptive functioning of intellectually disabled children (N=60)

Predictors	R ²	Adaptive Functioning	
		ΔR^2	β
Step 1		.13*	
Control variables			
Step 2		.15**	
Neuroticism	.63		-.21**
Extraversion	.77		.63**
Openness	.68		.58*
Agreeableness	.57		.37**
Conscientiousness	.59		.62**

Note. * $p < .05$, ** $p < .01$; Control variables = Education, income, child's age, gender, birth order.

Table 3 shows the moderating effect of resilience in relationship between maternal personality traits and adaptive functioning of their children. The interaction effects of personality traits and resilience show that personality traits of extraversion and conscientiousness are statistically significant indicating resilience acts as a moderator between these two personality traits and adaptive functioning.

Table 3

Moderating effect of Resilience in relationship between Maternal Personality traits and Adaptive functioning of intellectually disabled children (N=60)

Variables	Adaptive Functioning	
	Model 1	Model 2
	B	β
Neuroticism (Constant)	.21**	.79**
Resilience	-.67*	-.78**
Neuroticism x Resilience		-.17*
R ²	.23	.24
ΔR^2		.01
F		4.86*
Extraversion (Constant)	.63**	.31
Resilience	.77**	.36
Extraversion x Resilience		.51*
R ²	.13	.16
ΔR^2		.03
F		5.86*

Continued...

Variables	Adaptive Functioning	
	Model 1	Model 2
	B	β
Openness to experience (Constant)	.58*	.35
Resilience	.68**	.01
Openness to experience x Resilience		.34
R^2	.12	.14
ΔR^2		.02
F		3.87*
Agreeableness (Constant)	.37**	.16
Resilience	.57*	.25
Agreeableness x Resilience		.12
R^2	.22	.23
ΔR^2		.01
F		3.87
Conscientiousness (Constant)	.62**	.23
Resilience	.59*	.20
Conscientiousness x Resilience		.84*
R^2	.13	.14
ΔR^2		.01
F		3.12*

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

Modgraph (Figure 1) shows that with high level of resilience there is a negative relationship between neuroticism personality trait of mothers and adaptive functioning of their children which indicates that the higher the resilience of mothers with negative personality traits there will be better the adaptive functioning of their children.

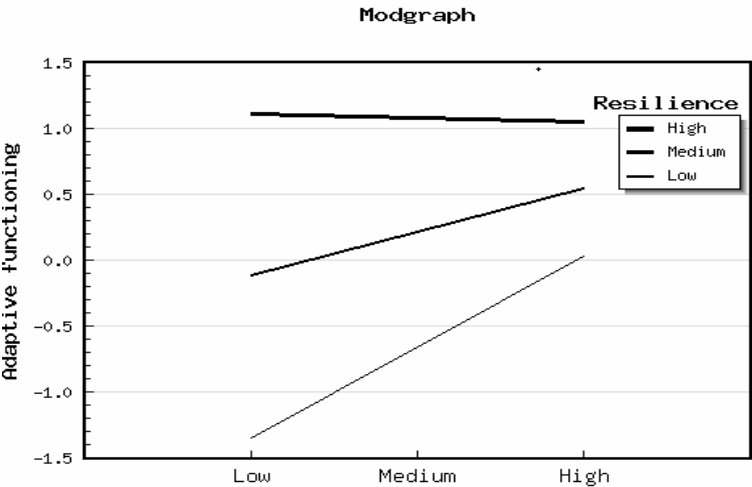


Figure 1. Modgraph showing the moderating role of resilience on the relationship between neuroticism personality trait of mothers and adaptive functioning of their children with intellectual disability.

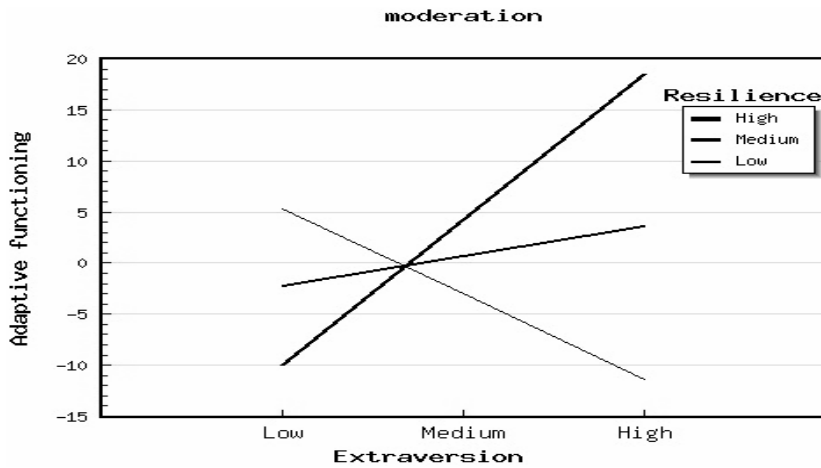


Figure 2. Modgraph showing the moderating role of resilience on the relationship between extraversion personality trait of mothers and adaptive functioning of their children with intellectual disability.

Modgraph (Figure 2) shows that with high level of resilience there is a positive relationship between extraversion personality trait of mothers and adaptive functioning of their children which indicates that the higher the resilience of mothers with extraversion personality traits the better will be the adaptive functioning of their children.

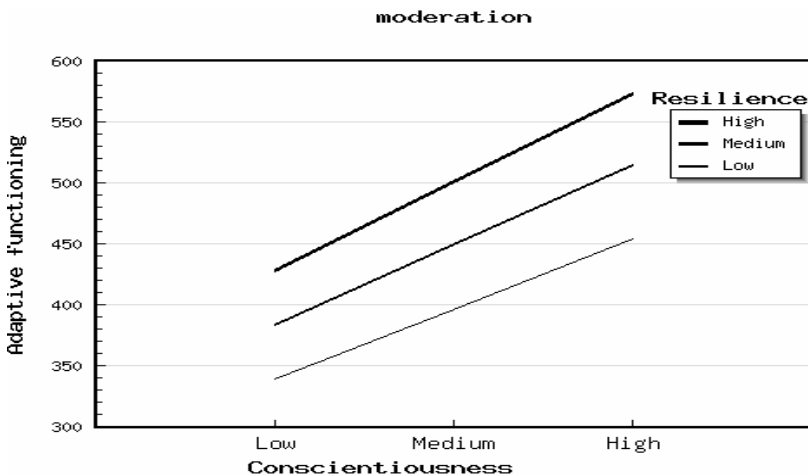


Figure 3. Modgraph showing the moderating role of resilience on the relationship between conscientiousness personality trait of mothers and adaptive functioning of their children with intellectual disability.

Modgraph (Figure 3) shows that with high level of resilience there is a positive relationship between conscientiousness personality

trait of mothers and adaptive functioning of their children which indicates that the higher the resilience of mothers with Conscientiousness personality traits the better will be the adaptive functioning of their children.

Discussion

The study explored that the effect of personality traits of mothers adds substantial value to the children with intellectual disability and their adaptive functioning. It has been found that maternal personality traits of extraversion, openness, agreeableness and conscientiousness lead to a child's better adaptive functioning and higher neuroticism personality trait of mothers lead to lower adaptive functioning of the child. The results also indicated that resilience significantly moderated the relationship of extraversion and conscientiousness personality traits of mothers and their child's adaptive functioning.

Personality traits of parents play a major role in overcoming these challenges thus resulting in many changes including changes in their parenting practices which affects the developmental outcome of children and their adaptive functioning. The first hypothesis referring to the assumption that mothers with high neuroticism personality trait will lead to low adaptive functioning of their children with intellectual disability children is supported. In the past researches it is found that neuroticism and negative emotionality was related to less positive, responsive and adaptive parenting which results in lower adaptive functioning of their children (Clark, Kochanska, & Ready, 2000). Low scorers on the neuroticism trait mean were less depressed, less anxious, and had impulsive personality characteristics. This might also be due to the effect of high resilience in mothers, as resilience did not moderate the effect of Neuroticism personality trait of mothers and adaptive functioning of their children.

The second hypothesis stating that high extraversion, openness to experience, agreeableness, and conscientiousness personality traits of mothers will lead to better adaptive functioning of their children was supported in the current research. Children whose mothers display more positive emotions or who have responsive behavior in early years of life develop better social skills. Openness is related to positive features of parenting (Metsäpelto & Pulkkinen, 2003). Mothers in this research scored better in openness trait which resulted in better adaptive functioning of their children. Parental conscientiousness and agreeableness has been linked to more adaptive parenting (Losoya, Callor, Rowe, & Goldsmith, 1997).

An important concept to understand individual differences in reaction to stressful situations is resilience. Personality factors have been linked to resilience in parents of children with Intellectual Disability. With the help of the data analysis it is concluded resilience moderated the effect of the personality traits of mothers like extraversion and conscientiousness and adaptive functioning of their children with intellectual disability whereas resilience did not act as a moderator between the personality traits of neuroticism, openness and agreeableness and adaptive functioning. This might be due to the fact that the individuals hesitate to reveal their true personality when answering the self-report inventories. Mothers too in this research might have not answered the personality inventory too well. As for neuroticism it could be concluded that since neuroticism refers to negative and vulnerable aspect of personality and it has already been supported by several researches that resilient person is less likely to exhibit neuroticism therefore resilience did not moderate the relationship. As supported by literature resilience in mother's effects the mother child relationship because of the presence of at least one caring and emotional person, in the individual's life at any point of life (Dyer, & McGuinness, 1996) which inturn have a positive impact on the children. The personality traits of openness and agreeableness were not found to be moderated by resilience regarding adaptive functioning of children that needs further exploration and investigation. There might be several factors suspected to be influencing the effects which are important to be highlighted through a detail analysis and is being suggested for future researches.

Limitations and Suggestions

Though the present research was done with utmost input and intent of best possible accuracy, but certain weaknesses were identified at the end of the study. Primarily the sample used in this present research was restricted and was collected from a few institutes of Rawalpindi and Islamabad that limits the ability to generalize the results to the larger population. Gathering data from a large and diversified sample would yield more reliable results. Since the data regarding the adaptive functioning was gathered from the mothers only it would be more beneficial to include whole family and teachers as well which could provide more valuable information.

Conclusion

The research literature examining the children with intellectual disability and the factors affecting their overall adaptive functioning

including social skills, daily living skills and communication skills is underdeveloped in Pakistan. From the perspective of the present findings it can thus be concluded that this research can be helpful for the mothers by providing counseling relating to improvement of their personality characteristics. This counseling and psychological guidance can consequently enhance their personality and develop resilience which as a result will improve the adaptive functioning of their children. The findings of the research can also be implemented educational settings which can help develop intervention plans for mothers with children with intellectual disability.

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