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Rumination and Mental Health among Parents of Differently-Abled Children

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Abstract

Ample research has been done on rumination and mental health. However, minimum effort has been exerted to investigate these variables among parents of differently-abled children. The presented study investigates the relationship between rumination and mental health among parents of differently-abled children. The study also aimed to revisit the psychometric characteristics of the rumination scale. Two hundred parents were selected from different rehabilitation schools of the Kashmir Valley. The mean age and standard deviation of the respondents were 40.04 and 5.31, respectively. Results of the Confirmatory Factor Analysis (CFA) indicated that model fit for the rumination scale was poor (c2 /*df* = 2.33; CFI = .65; AGFI; .76; RMSEA; .08; TLI; .61), whereas the model fit of the mental health was excellent. A negative relationship was found between rumination and mental health on the composite score as well as on their dimensions.

Keywords: *rumination, parents, differently-abled children, mental health*

Introduction

The birth of a child in the family is a moment of great pleasure and happiness. It may result in a catastrophe to them in the case the child is diagnosed as disabled. Then the parents go through enormous challenges in dealing with the conditions of their child and experience a range of stressors and stress reactions in response

to their child's disability. The presence of a disabled child in the family is both restrictive and disruptive in nature, as it affects them multifariously, i.e., socially, economically, emotionally, psychologically and physically (Ali, 2012).

Parents consider their disabled children as a burden on them. In the past, such parents reported that their social interaction got affected due to their wards. They continuously worry about their child's life. Moreover, they sometimes blame themselves for their child's disability. Also, they undergo recurrent thoughts, which act as a burden in their lives. Studies also suggest that mothers report a greater level of anxiety and depression and are low in terms of cognitive emotion regulation (like positive reappraisal, positive refocusing, putting into perspective and refocus on planning) as compared to fathers (Kumar, 2016).

Researchers have also revealed that parents having physically disabled children are less stressed and have better psychological well-being as compared to parents having intellectually disabled children (Gull & Nizami, 2015; Panchal & Joshi, 2016). This may be due to threat appraisals, poorer physical health and lower family satisfaction, which is associated with depression. Studies have also shown that adolescents who ruminate more show more depressive symptoms as compared to non-ruminators (Nolen-Hoeksema, Larson, & Grayson, 1999).

Rumination is a multidimensional and multifaceted construct that has been studied in a variety of contexts. It results in the development of depression and anxiety. Rumination is a cognitive process in which a person thinks repeatedly about unpleasant experiences which are very difficult to characterize, measure, or predict. This type of thinking involves rehearsing on the causes and consequences of negative emotional experiences, which in no way leads to active problem-solving. As a result, people who ruminate continuously suffer from problems without taking any action or decision in their life (Noeln-Hoeksema, 1991).

According to Martin and Tesser (1989), any recurring set of thoughts that revolve around a common instrumental theme is called rumination. They were of the opinion that rumination may be positive or negative and may focus on either goal attainment or discrepancies between goals and current processes.

Further, according to Martin and Tesser (1996, p. 7), "Rumination is a class of conscious thoughts that revolve around a common instrumental theme and that recur in the absence of immediate environmental demands requiring the thoughts. Although the occurrence of these thoughts does not depend on direct cueing by the external environment, yet indirect cueing by the environment is likely given the high accessibility of the goal related concept. Although the external environment may maintain any thought through repeated cueing, the maintenance of these ruminative thoughts is not dependent upon such cueing".

Rumination leads to negative thinking about the past, present, and future. People who are prone to rumination report that it interferes with their problem solving skills, diminishes their instrumental behavior, and reduces social support (Nolen-Hoeksema, Wisco, & Lyubomirsky, 2008). Rumination has a strong correlation with a variety of maladaptive cognitive styles, like negative inferential, dysfunctional attitudes, hopelessness, pessimism, self-criticism, dependency, neediness, and neuroticism (Ciesla & Roberts, 2002; Flett, Madorsky, Hewitt, & Heisel, 2002). It partially mediates the relationship between depression and negative inferential styles, dysfunctional attitudes, self-criticism, dependency, and neediness (Ito & Agari, 2002; Nolan, Roberts, & Gotlib, 1998; Nolen-Hoeksema, Parker, & Larson, 1994).

One of the most influential and well-investigated theories of rumination is the Response Style Theory (Nolen-Hoeksema, 1991). This theory states that rumination consists of repetitive thinking about the causes, consequences, and symptoms of one's negative feelings. It does not lead to active problem solving, and people who ruminate remain fixed on their problems and feelings without taking any action. According to this theory, the severity of these symptoms can be determined from the individual's response to low mood. Nolen-Hoeksema (1987, 1991) suggested two key responses to low mood, i.e., rumination and distraction. In rumination, individuals repetitively focus on various dimensions of a person's depression, whereas in distraction, the person's thoughts and behaviors are completely diverted towards pleasant thoughts and enthralling activities capable of providing positive reinforcement. The theory further states that people who ruminate are actually repeatedly focused on their thoughts. This fetters them from solving problems consequently trapping them in a vicious cycle of remunerative thinking. Further, the author outlined three key mechanisms through which rumination could lead to low mood.

a) Rumination increases negative cognition regarding the past, present, and future.
b) It interferes with effective problem solving and makes thinking more pessimistic and fatalistic, and
c) Reduces motivation to engage in mood-alleviating activities.

Besides these three mechanisms, Schwartz and Thomas (1995) suggested a fourth mechanism based on the outline evidence of Nolen-Hoeksema, Wisco, and Lyubomirsky (2008). According to this mechanism, rumination increases depression after causing relationship difficulties, which may ultimately reduce social support. On the one hand, rumination makes people aware of their problems, on the other hand, it simultaneously fails to generate a good outcome, thereby

aggravating the problems. Parents of differently-abled children are engaged in long-term cyclic depression with respect to their children's disability. They are caught in a cycle of passivity and hopelessness and engage in spontaneous or unwise attempts. Therefore, it becomes direly important to break the vicious cycle of ruminative thinking. This will not only help them get a fresh perspective on their situation, but also empower them in gathering potential resources and acting wisely. However, breaking the cycle stands secondary, as one primarily needs to acknowledge that one's thought processes have become ruminative. Therefore, the presented research aimed at revisiting the psychometric characteristics of the rumination reflection questionnaire. Further, the study examined the relationship between rumination and mental health among the parents of differently-abled children. In line with the previous research conducted, the presented study hypothesized that the relationship between rumination and mental health along with their respective dimensions will be negative.

Research Methodology

Research Design

Correlational research design was adopted for the present study.

Participants and procedure

Participants in this study comprised two hundred biological parents (108 fathers and 92 mothers) of children with disabilities. More specifically, those parents were included who willingly agreed to participate and whose children were up to the age of 14 and were professionally diagnosed. Potential parents were contacted through their respective special schools (Chotay Taray Foundation School Rawat Pora Baghat, Srinagar; Zaiba Aapa Institute of Inclusive Education, Bijbehara and Kamraz School for differently-abled children, Baramulla) in which their children were enrolled. The age of the participants ranged from 27 to 52 years, with a mean age of 40.03 years (SD = 5.31). The vast majority of the sample consisted of parents of children with moderate to severe level of disabilities (83%). The sample was selected through the purposive sampling technique. Following the selection of the participants, rapport was established. Thereafter, informed consent was acquired and the participants were asked to complete the Rumination Reflection Questionnaire (RRQ) and Mental Health Scale (MHS).

Table 1. Sample characteristics

Variables	Group/Category	Frequency	Percentage
Parent's Gender	Male	108	54.0%
	Female	92	46.0%
Type of Disability	Autistic	11	5.5%
	Visual Impairment	4	2.0%
	Cerebral Palsy	6	3.0%
	Down Syndrome	16	8.0%
	Intellectual Disability	71	35.5%
	Locomotor Disability	19	9.5%
	Microcephaly	5	2.5%
	Multiple Disability	42	21.0%
	Seizure Disorder	10	5.0%
	Speech Problem	16	8.0%
Level of severity	Mild	34	17.0%
	Moderate	107	53.5%
	Severe	59	29.5%

Ethical considerations

Before participating in the study, informed consent was obtained from the participants. Further, the study protocol obtained ethical clearance from the institutional ethics committee of Aligarh Muslim University, Aligarh, India.

Tools Used

Rumination Reflection Questionnaire (RRQ)

The Reflection and Rumination Questionnaire (Trapnell & Campbell, 1999) was used to measure the self-reflection and self-rumination levels of the participants. The scale consisted of 24 items, with 12 items for each dimension. The scoring of the items was of 5-point Likert-type, ranging from "strongly disagree" to "strongly agree". Although previous studies have shown adequate reliability, in this study the internal consistency of the scale was found to be .68. This value of internal consistency indicated that the scale has questionable reliability as per the rule of thumb ("≥ .9 – Excellent, ≥ .8 – Good, ≥ .7 – Acceptable, ≥ .6 – Questionable, ≥ .5 – Poor, ≤ .5 – Unacceptable") given by George & Mallery (2003, p. 231). Hence, it seems better here to go for confirmatory factor analysis.

Confirmatory Factor Analysis (CFA) was conducted in order to evaluate the best goodness-of-fit for the original model of the rumination reflection questionnaire (RRQ). The following criteria were considered: CFI >.95, AGFI >.80, TLI >.90 and RMSEA < .06 (Hu & Bentler, 1999). The factorial validity of the items was analyzed by standardized factor weight (l=0.5) and by individual reliability (*r*2 ≥ 0.25). Discriminant validity was assessed through a chi-square difference test. Moreover, the assumption of normality was evaluated by the coefficients of skewness and kurtosis (Kline, 1998). Kline (1998) suggests that skewness and kurtosis indices should not be higher than an absolute value of 3 and 8, respectively. As per this, criteria of the absolute values of skewness and kurtosis of the construct in our study did not indicate a violation of the normality of assumption.

So as to attain the best goodness-of-fit for the RRQ, three confirmatory factor analyses (CFAs) were performed. Results indicated that the goodness-of-fit for the first model was poor (Table 2, Model 1) as the factorial validity of the items was analyzed. All the items presented an adequate factor weight except items no. 10, 17, 20, and 24 (Table 3). Besides that, Modification Indices (MI) analysis revealed that higher LM (Lagrange Multipliers) occurred between the covariance of items 11 and 12; 5 and 12; 4 and 5; 1 and 2; and 1 and 7. Therefore, the covariance between error terms associated with these items was added.

Furthermore, second CFA was carried out. This model revealed a more satisfactory goodness-of-fit (Table 2, Model 2) than the earlier one. Although all the items showed an acceptable factor weight (l> 0.5) and individual reliability (r2> .25), the fit was still weak. However, according to the analysis of the Modification Indices, Lagrange Multiplier still existed. Higher LM was noted for the variance between item 5 and item 4 with the reflection dimension. However, the items showed content related similarity, so variance between these terms was also added.

Thereafter, a third and last analysis was performed. This model revealed the best goodness-of-fit (Table 2, Model 3; Figure 1).

Table 2. Confirmatory Factor Analysis of the Rumination-Reflection Questionnaire and goodness- of-fit indexes

Unifactorial model of RRQ	c2	Df	c2 /df	CFI	AGFI	RMSEA	TLI
Model 1	586.70	251	2.33	.65	.76	.08	.61
Model 2	332.81	162	2.05	.80	.82	.07	.76
Model 3	295.62	161	1.83	.95	.96	.05	.78

Note: CFI: Comparative Fit Index; AGFI: Adjusted Goodness of fit; RMSEA: Root mean square error of approximation; TLI: Tucker-Lewis Index

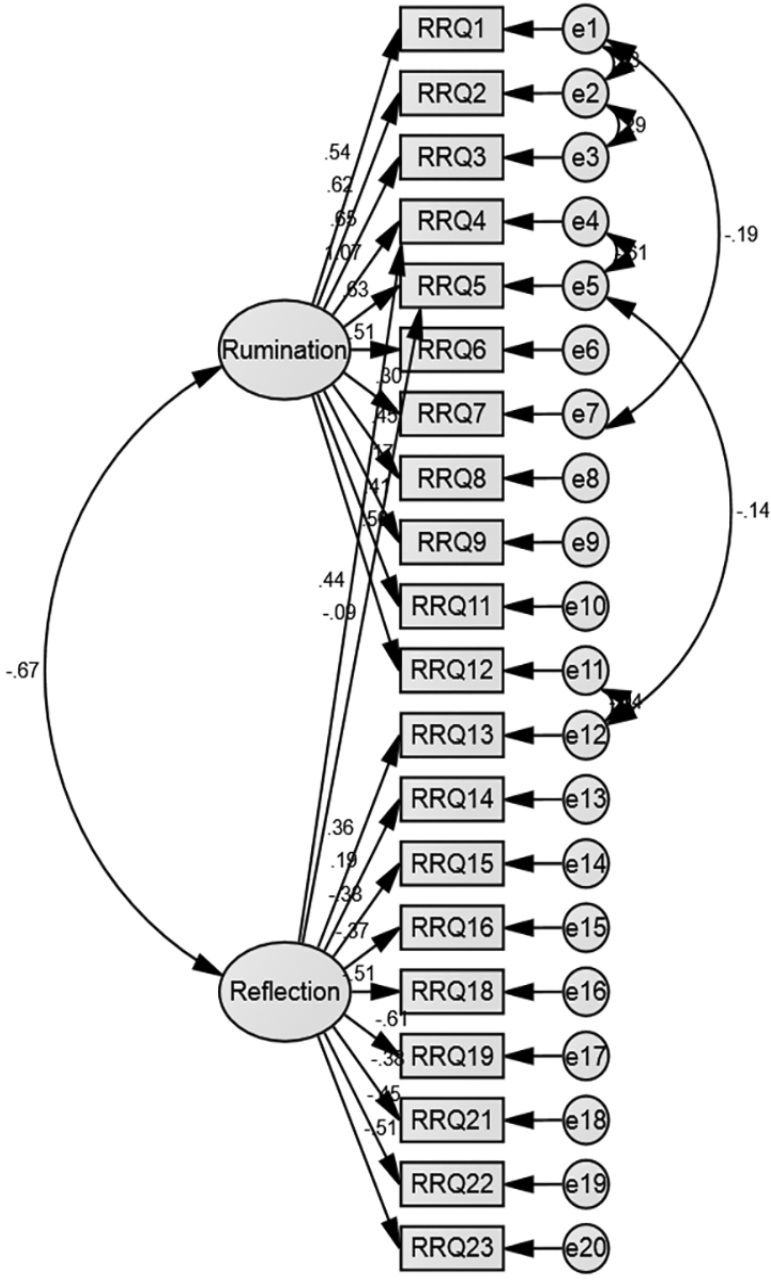

Figure 1. Measurement of the model of Rumination Reflection Questionnaire

After CFA, the reliability of the 20 items of the RRQ scale was rechecked and was found to be .722, which indicates that the scale has acceptable reliability (George & Mallery, 2003, p. 231).

Mental health scale

The mental health scale developed by Gull and Husain (2019) was used to measure the mental health among the parents of differently-abled children. It is a 20-item measure based on a 5-point Likert scale, with responses ranging from strongly agree to strongly disagree. The total score ranged from 20 to 100, with higher scores indicating lower mental health. The internal consistency of the mental health scale for this study was calculated as $\alpha = .84$.

Principal axis factoring was applied to the present study. Unrestricted factor analysis yielded 4-factor solutions with Eigen values greater than one, which recovered 60.83% of sample variance (Dismaying Insufficiency = 24.05, State of Tribulation = 18.31, Socio-emotional Despondency = 10.32, and Dire Straits = 08.14). Filed (2005) suggests that there should be at least 50% of variance which could be explained by common factors to be considered as reasonable. The communalities of the items were ≥ 0.05. In order to undertake the most appropriate interpretation, the loading values were carefully examined using the Hair, Anderson, Tatham, and Black's (1998) guidelines and Steven's guideline of sample size. They suggested factor loading of ±0.3 as minimum significance, ±0.4 as more important, and ±0.5 as significant while, as Steven (2002) suggested, statistically significant loading for 200 participants as ≥.40. The factor loadings and their factor weights are shown in Table 3.

Table 3. Factor structure of the Mental Health Scale

Items		Factors			
		1	2	3	4
Dismaying Insufficiency		**Loadings**			
Q9.	Unhealthy lifestyle	.911			
Q7.	Physical ill health	.896			
Q8.	Psychosocial stress	.864			
Q14.	Chronic/acute life stressors	.847			
Q10.	Poor coping strategies	.797			
Q4.	Disturbed sleep	.777			
Q13.	Stigma	.760			
Q11.	Poverty	.727			

Items		Factors			
		1	2	3	4
Q20.	Guilt	.480			
State of Tribulation			**Loadings**		
Q2.	Anxiety and tension		.879		
Q3.	Anger		.858		
Q5.	Helplessness		.799		
Q1.	Adverse life circumstances		.797		
Q6.	Lack of support		.682		
Socio-emotional Despondency				**Loadings**	
Q16.	Reduced support resources			.803	
Q15.	Lack of social interaction			.771	
Q12.	Social and emotional abuse			.725	
Dire Straits					**Loadings**
Q19.	Spouse divorce/separation				.790
Q18.	Marital Conflict				.789
Q17.	Poor relationship with children				.766
Percent of Variance		24.05	18.31	10.32	8.14
Cum. Percent of Variance (CPV)		24.05	42.37	52.69	60.83

The percent of variance accounted by factors varies from 8.14 to 24.05. Summing up all four factors explained 60.83% of the total variance. The factorial validity of the scale is excellent and clearly established.

Table 4. Reliability of the Mental Health Scale and its Dimensions.

Dimensions	Items	Number of Items	Cronbach α
1. Dismaying Insufficiency	9,7,8,14,10,4, 13, 4, 20	09	.91
2. State of Tribulation	2, 3, 5, 1, 6	05	.88
3. Socio- emotional Despondency	16, 15, 12	03	.78
4. Dire Straits	19, 18, 17	03	.69
Total		20	.84

Operational definitions

Dismaying insufficiency

This facet of mental health is associated with the concern and distress caused by the loss of an attribute that is essential for healthy survival. Due to impinging time crisis and psychological poverty, one is most likely to suffer from lack of confidence in carrying out daily chores and leading a satisfying life. This scarcity leading to mismanagement in life wreaks havoc and thus a state of dismaying insufficiency.

State of tribulation

This dimension of mental health corresponds to the emotional and circumstantial turmoil one has to go through. This makes life circumstances adverse and is often accompanied by a lack of support, which further causes difficulty in adjustment. Human beings are liable to face adverse conditions in their life and it causes a state of mixed negative emotions such as anxiety, anger, tension, and helplessness. Therefore, the load becomes the unbearable cause of trouble or suffering, thus leading to a state of tribulation.

Socio-emotional despondency

This dimension of mental health is related to the socio-emotional development process of an individual. However, if the early experiences of an individual are troublesome it will lead to a withdrawn personality, where the individual will suffer from grief of social and emotional abuse throughout their life. If this abuse is followed by reduced support resources then the person will become devoid of forming suitable social interactions. These aspects may change the way one perceives relationships, regulates emotions and shapes personality, thus lowering their spirits, hope and courage causing socio-emotional despondency.

Dire straits

This dimension of mental health refers to vulnerable situations that cause extreme worries and deeply distressing experiences, which are usually difficult to deal with. These straits include issues related to spouse divorce/separation, marital conflict, and poor relationship with the child.

Confirmatory Factor Analysis (CFA) was conducted in order to evaluate the best goodness-of-fit for the model. While performing the confirmatory factor analysis, the results indicated an excellent goodness-of-fit for the model (Table 5, Model 1) as the factorial validity of the items was analyzed.

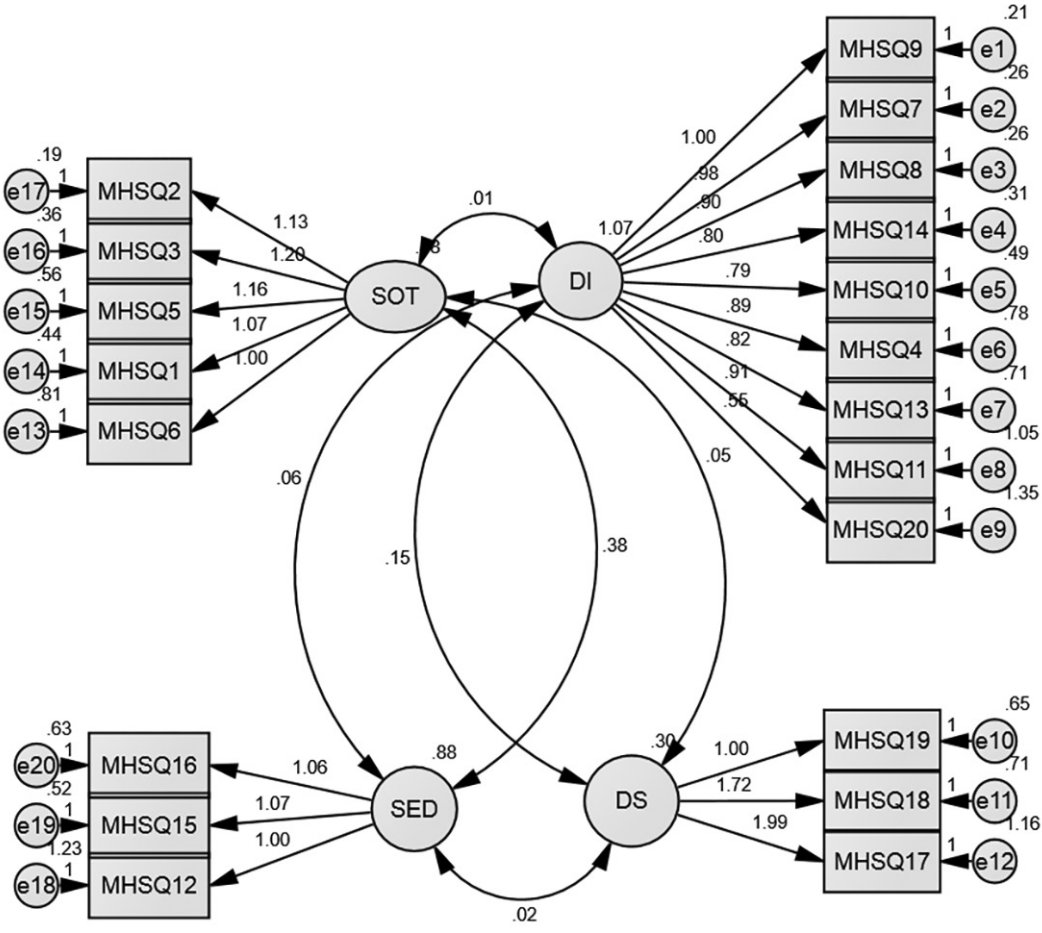

Figure 2. Measurement of the Model of Mental Health Scale

Table 5. Confirmatory Factor Analysis of the Mental Health Scale and goodness-of-fit Indexes

Unifactorial model of MHS	χ^2	*Df*	χ^2/df	CFI	AGFI	RMSEA	TLI
Model 1	296.88	164	1.81	.940	.840	.064	.931

Note: CFI: Comparative Fit Index; AGFI: Adjusted Goodness of fit; RMSEA: Root mean square error of approximation; TLI: Tucker-Lewis Index

Data Analysis

Appropriate statistics like descriptive statistics (mean, SD, range, minimum, maximum, skewness, and kurtosis), Cronbach's alpha, Confirmatory Factor Analysis, and Pearson's product moment correlation coefficient were applied to analyze the data. Descriptive statistics were used to describe the basic features of the data in the study. Confirmatory factor analysis was used to test how well the measured variable represents the construct. Pearson's correlation was used to analyze the relationship between the predictor and the criterion variable.

Results and Discussion

Before applying any statistical technique, the data were assessed for tests of normality and homogeneity. As it is worth mentioning mean, standard deviation, skewness and kurtosis scores on the scales, the assumption of normality was calculated by the coefficients of Skewness (*sk*) and Kurtosis (*ku*) (Kline, 1998). Table 6 indicates the descriptive statistics of the rumination reflection questionnaire and mental health scale along with their dimensions.

Table 6. Descriptive statistics of observed variables

	N	Mean	SD	Range	Min.	Max	Skewness	Kurtosis
Rumination	200	44.54	5.28	31.00	24.00	55.00	-.715	1.195
Reflection	200	32.39	3.05	21.00	18.00	39.00	-.939	2.331
Rumination (RRQ)	200	76.93	6.88	40.00	53.00	93.00	-.681	1.515
Dismaying Insufficiency	200	20.95	7.05	32.00	9.00	41.00	.699	-.006
State of Tribulation	200	10.63	4.52	20.00	5.00	25.00	1.169	1.321
Socio-emotional Despondency	200	7.22	2.49	12.00	3.00	15.00	.465	-.287
Dire Straits	200	7.24	2.39	12.00	3.00	15.00	.450	-.037
Mental Health Scale (MHS)	200	50.70	11.86	57.00	25.00	82.00	.471	-.299

The presented study was one of the first ones to examine the association between rumination and mental health in parents of differently-abled children. As shown in Table 7, there is a statistically significant negative relationship between rumination and mental health among the parents of differently-abled children (r= -.220, p<.01). Hence, our hypothesis was confirmed. It can be said that the parents who ruminate more about their children with a disability score lower on mental health. The parents consistently think about the future of their children in the context of their daily activities (feeding, eating, and toileting). What will they do after they die? How will they take care of themselves? These negative thoughts frequently hit the minds of such parents. This ruminative type of thinking significantly affects their mental as well as their physical health. The findings of this study suggest that the parents who ruminate more (think carefully and deeply about unpleasant events) score lower on mental health as compared to the parents who ruminate less. These results can be supported by the findings of Wilkinson, Croudace, and Goodyer (2013), who aimed to measure the depressive symptoms, anxiety symptoms and rumination among healthy adolescents. They found that the ruminative style of responding to low mood was not helpful, rather, it increases the risk of developing depressive disorders, besides promoting high symptom loads. The results of this study also corroborate the findings of Veek, Kraaij, and Garnefski (2009), who aimed to examine the relationship between cognitive coping strategies and parental stress among the parents of children with Down syndrome. After studying such parents for eight months, researchers revealed a significant positive relationship between stress and acceptance, rumination, positive refocusing, refocusing on planning, and catastrophizing, whereas using positive reappraisal was related to less stress more often. A similar pattern of results was also obtained by Nolen-Hoeksema, Larson, and Grayson (1999), Nolen-Hoeksema, Parker, and Larson (1994). They reported that adults who are ruminators score higher on depression as compared to those who do not ruminate. The results of this study are in line with the response style theory of rumination (Nolen-Hoeksema, 1991), according to which the ruminative type of thinking does not lead to active problem-solving. It further suggests that people who ruminate remain fixed to their problems and feelings without taking any action. Also, these ruminative thoughts hinder their ability to solve problems and eventually entrap them in a cycle of ruminative thinking. As a result, people who are victims of such thoughts are caught in a cycle of passivity and hopelessness and engage in spontaneous or unwise attempts which further perturb their mental health.

Table 7. Intercorrelations among observed variables

		Mean	SD	X1	X2	X3	Y1	Y2	Y3	Y4	Y5
X1	Rumination	44.54	5.28	1	.313**	.907**	-.207**	-.196**	-.078	-.239**	-.203**
X2	Reflection	32.39	3.05		1	.684**	-.124	-.104	-.113	-.021	-.145*
X3	Rumination Total	76.93	6.88			1	-.214**	-.196**	-.110	-.193**	-.220**
Y1	Dismaying Insufficiency	20.95	7.05				1	.174*	.463**	.322**	.835**
Y2	State of Tribulation	10.63	4.52					1	.479**	.343**	.547**
Y3	Socio-emotional Despondency	7.22	2.49						1	.430**	.698**
Y4	Dire Straits	7.24	2.39							1	.576**
Y5	Mental Health Total	50.70	11.86								1

**. Correlation is significant at the 0.01 level
*. Correlation is significant at the 0.05 level

Furthermore, the findings of this study revealed a statistically significant negative relationship between the dimensions of rumination (rumination & reflection) and the dimensions of mental health, i.e., dismaying insufficiency, state of tribulation, socio-emotional despondency, and dire straits. Hence, the hypothesis has been confirmed.

According to the findings of the presenedt study, a significant negative relationship was found between rumination and dismaying insufficiency (r= -.207, p<.01). The parents of differently-abled children experience different economic, social and psychological problems. It can be said that these parents suffer from lack of confidence in carrying out their day-to-day jobs due to their time crises and poverty, which further leads to mismanagement and wreaks havoc in their lives.

A significant negative relationship was also found between rumination and state of tribulation (r=-.196, p<.01). The parents of differently-abled children who ruminate more experience a range of stressors and stress reactions (depression, anxiety, hopelessness, helplessness) in response to their children's disability. These stressors significantly impact on their mental health. A significant negative relationship was also found between rumination and dire straits (r=-.239, p<.01). Based on the findings of the study, it may be assumed that due to their children's disability such parents often experience marital conflict or even divorce.

Conclusions

The presented study demonstrated a significant negative association between rumination and mental health among the parents of differently-abled children. Therefore, the study expands the understanding of the metacognitive model of depression by examining the factors associated with metacognitive beliefs of rumination in parents of differently-abled children. The findings provide a preliminary foundation for follow-up work in designing novel and effective prevention against parent depression from metacognitive and developmental perspectives.

Limitations

As the study sample was limited to parents only, we cannot generalize our findings on other caregivers/family members.

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References

Ali, B.A. (2011). Professional challenges to counseling intervention for families of exceptional children. In *Conference proceedings of the Annual National Conference of the Counselling Association of Nigeria (CASSON)* held Kano, pp. 27–39.

Ciesla, J.A., & Roberts, J.E. (2002). Self-directed thought and response to treatment for depression: A preliminary investigation. *Journal of Cognitive Psychotherapy*, *16*(4), 435–453.

Field, A. (2005). *Discovering statistics using SPSS (2nd ed.).*Thousand Oaks, CA: Sage.

Flett, G.L., Madorsky, D., Hewitt, P.L., & Heisel, M.J. (2002). Perfectionism cognitions, rumination, and psychological distress. *Journal of Rational-Emotive and Cognitive-Behavior Therapy*, *20*(1), 33–47.

George, D., & Mallery, P. (2003). Reliability analysis. *SPSS for Windows, step by step: a simple guide and reference* (14th ed.) Boston: Allyn & Bacon, 222–232.

Gull, M., & Husain, Akbar. (2019). *Mental Health Scale*. New Delhi: Prasad Psycho Corporation.

Gull, M., & Nizami, N. (2015). Comparative study of hope and psychological well-being

among the parents of physically and intellectually disabled children. *International Journal of Modern Social Sciences, 4*(42), 143–152.

Hair, J.F., Black, W.C., Babin, B.J., Anderson, R.E., & Tatham, R.L. (1998). *Multivariate data analysis*, *5*(3), 207–219. Upper Saddle River, NJ: Prentice hall.

Hu, L.T., & Bentler, P.M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modelling: A Multidisciplinary Journal*, *6*(1), 1–55.

Ito, T., & Agari, I. (2002). A prospective study of the relationship between negative rumination and a depressive state. *Japanese Journal of Counselling Science*, *35*(1), 40–46.

Kline, R.B. (1998). *Principles and practice of structural equation modelling* (3rd ed., pp. 230–298.) New York: Guilford Press.

Kumar, D. (2016). A comparative study of depression and anxiety of the mothers of disabled children and ways of their cognitive emotion regulation. *Online International Interdisciplinary Research Journal*, *6*(I), 380–385.

Martin, L.L. & Tesser, A. (1989). Toward a motivational and structural theory of ruminative thought. In: J.S. Uleman & J.A. Bargh (eds.), *Unintended Thought* (pp. 306–326). New York: Guilford Press.

Martin, L., & Tesser, A. (1996). Some ruminative thoughts. In R.S.Wyer (Ed.), *Advances in Social Cognition 9* (pp. 1–48). Hillsdale , NJ : Lawrence Erlbaum.

Nolan, S.A., Roberts, J.E., & Gotlib, I.H. (1998). Neuroticism and ruminative response style as predictors of change in depressive symptomatology. *Cognitive Therapy and Research*, *22*(5), 445–455.

Nolen-Hoeksema, S. (1987). Sex differences in unipolar depression: evidence and theory. *Psychological Bulletin*, *101*(2), 259–282.

Nolen-Hoeksema, S. (1991). Responses to depression and their effects on the duration of depressive episodes. *Journal of Abnormal Psychology, 100*(4), 569–582.

Nolen-Hoeksema, S., Larson, J., & Grayson, C. (1999).Explaining the gender difference in depressive symptoms. *Journal of Personality and Social Psychology*, *77*(5), 1061–1072.

Nolen-Hoeksema, S., Parker, L.E., & Larson, J. (1994).Ruminative coping with depressed mood following loss. *Journal of Personality and Social Psychology*, *67*(1), 92–104.

Nolen-Hoeksema, S., Wisco, B.E., & Lyubomirsky, S. (2008). Rethinking rumination. *Perspectives on Psychological Science*, *3*(5), 400–424.

Panchal, D., & Nishi, J. (2016). Anxiety of parents of adolescents with different disabilities. *International Journal for Technological Research in Engineering*, *3*(5), 1070–1074.

Schwartz, J.L., & Thomas, A.M. (1995). Perceptions of coping responses exhibited in depressed males and females. *Journal of Social Behavior and Personality*, *10*(4), 849.

Stevens, J.P. (1992). *Applied multivariate statistics for the social sciences* (2nd edition). Hillsdale, NJ:Erlbaum.

Trapnell, P.D., & Campbell, J.D. (1999). Private self-consciousness and the five-factor model of personality: distinguishing rumination from reflection. *Journal of Personality and Social Psychology*, *76*(2), 284–304.

Van der Veek, S.M., Kraaij, V., & Garnefski, N. (2009). Cognitive coping strategies and

stress in parents of children with Down syndrome: a prospective study. *Intellectual & Developmental Disabilities*, *47*(4), 295–306.

Wilkinson, P.O., Croudace, T.J., & Goodyer, I.M. (2013). Rumination, anxiety, depressive symptoms and subsequent depression in adolescents at risk for psychopathology: a longitudinal cohort study. *BMC Psychiatry*, *13*, 250.