

SOCIO-DEMOGRAPHIC PROFILE AND MENTAL HEALTH OF MOTHERS HAVING CHILDREN WITH DISABILITIES

V. Sivakumar¹, Dr. J. M. Asgarali Patel², Dr. Neeradha Chandramohan³

¹ Research Scholar, Department of Psychology, Annamalai Nagar, Annamalai University, Tamil Nadu

² Professor and Head, Department of Psychology, Annamalai University, Tamil Nadu

³ Associate professor and Head (Retd), Department of Clinical Psychology, National Institute for Empowerment of Persons with Multiple Disabilities (Divyangjan), East Coast Road, Muttukadu, Kovalam Post, Chennai, Tamil Nadu, India

Abstract

Mothers are the primary caregivers for children with disabilities in the Indian context are prone to various mental health problems. Socio-demographic variables also impact their mental health. This paper focusing on the mental health of mothers having children with disabilities and its relation to socio-demographic variables. The objectives are to study the mental health among mothers of children with disability and the relationship between demographic variables and mental health in mothers of children with disability. This is cross sectional descriptive study done on 50 mothers of children with disability who are receiving services from NIEPMD were selected randomly. A Socio-demographic sheet and mental health scale (MHQ) developed by Dr. Kamlesh Sharma and Dr. B.R.A. was used to collect data. The results indicate that mental health ranged from very good to very poor. There were no significant relation with mental health of mothers other than socioeconomic status.

Keywords: Disability, Mental health, Mothers health

Corresponding Author :

V. Sivakumar, Research Scholar, Department of Psychology, Annamalai Nagar, Annamalai University, Tamil Nadu

Introduction

India has nearly 20.42 lakh children with disability among them 1.49 lakh have multiple disabilities as per the census of 2011. Over 10 years, from 2002 to 2011 the percentage of person with disabilities has increased by 22.4%. According to WHO, disability is any restriction or lack of ability perform an activity in the manner or within the range considered normal for a human being. Children who deviates from normal population in physical or mental characteristics to an extent that s/he highly dependent on others for daily living activities and need related supports such as special education, therapeutic services etc. are considered as children with disabilities. Parenting is always stressful especially in situation of parenting a child with disability will be an additional stress. Parents may have difficulties such as accepting the child, adapting to the situation, complying with disability, coping the emotional aspects and practical needs and to provide proper care, education and treatment for the child. Further they have concern about the child's future. There are evidences that disability not only affect the children but also disturbs their family members (Gardiner & Larocci, 2012; Terra et al., 2011) especially the parents/ caregivers who are more stressed as they have to take care of the children (Karande & Kulkarni, 2009). It depends on the type of disability and its severity, related behaviour problems and need

for long-term care that affects parents/caregivers quality of life. Generally the caregiver role is always identified with female. Across the world, in different cultures its women by default (the mother) are the primary caregivers for the child with disability in a family (Ones, Yilmaz, Citinkaya & Caglar, 2005). Literature reveals that compare to other family members it is mothers who undergo more psychological distress. There are differences in experiencing parenting of a child with disability between fathers and mothers. The way the problem is perceived and strategy to cope with that always differs in them (Tamres et al., 2002). There are evidences for higher parental stress and depression in mothers than fathers (Bristol et al., 1988; Pelchat et al., 1999). In a study of parents of children with disabilities from various countries found that increased rate of depressive symptoms were revealed in mothers. This was criticized by Olsson & Hwang (2001) with regard to sample size and measurement used in the study. However, there are studies that show no difference in depression among parents of child with disabilities and parents of child without disabilities (Glidden & Schoolcraft, 2003). Despite critics some studies indicating more stress in parents of child with disabilities (Karande & Kulkani, 2009). While dealing with the child's disability it's the mother who gets affected greater than the fathers (Oh & Lee, 2009; Ones et al.). It had been suggested that this may due to less involvement of father in caregiving. Generally mothers take care of these children in addition to household chores, fulfilling role as wife, daughter-in-law etc. In the midst of these social constructs the efforts taken by the caregiver (mother) would always result in physical and mental exhaustion (Neves & Cabral, 2008). Caregiving mothers are more stressed and often worried about the child's future than non-caregiving mothers (Peker & Kaur, 2013). It had been found that the mothers of children with disability often denies or ignores the stressors. They also involve more in caregiving and neglect their personal care that impact their well-being and quality of life. When compared to mothers of normal children it had been found that they show less psychological strength and lower levels of well-being (Eroglu, Ozcan & Peker, 2015). Many studies have confirmed that parents of children with disability prone to mental health problems. Psychiatric morbidity such as depression, anxiety and stress are not uncommon in mothers of children with disability. Higher level of depression were reported in mothers of children with epilepsy (Ferro, M.A., & Speechley, K.N. 2009), developmental disabilities (Singer, G.H. 2006) and psychological distress among parents of children with pervasive developmental disabilities (Yamada, A., et al. 2007). The greater the care or assistance provided for a child with disability greater the impact on the caregivers' mental health and well-being. More over the presence of mental health problems in parents of child with disability might decrease the care/support provided to the child which in turn might affect the child's well-being and it's a vicious cycle (Wright, 1993; Glasscock, 1997). Former studies have revealed that depression in mothers showed increased link with the child's emotional and behaviour problems (Ferro, M.A., & Speechley, K.N. 2009; Goodman, S.H., 2010). Mothers who were depressed exhibited negative parenting behaviour and poor supervision on children (Lovejoy, M.C., et al., 2000; Phelan, K.J., et al., 2014). Studies have evidenced that certain other factors such as education level, economic and marital status and the intensity of child's disability will lessen the chances for depression in parents (Breslau, Staruch & Mortimer, 1982; Olsson & Hwang, 2001; Floyd & Gallagher, 1997). Meanwhile the support for the family including financial support, opportunity for social inclusion, access to information and services that are necessary for child can reduce the stress acquired by the child's condition (Green, 2007; Resch, et al., 2010; Worcester, et al., 2008). While taking care of these children many other socio-demographic factors can influence it either positively or negatively. Factors such as socioeconomic status, religion etc., may interrupt the process of caregiving (Oh & Lee, 2009). Mothers of children with autism who were poor compared with mothers of children without disabilities showed high tendency to develop stress and have poor physical and mental

health wellbeing (Herring et al., 2006). In Indian context, the mothers are burdened with the responsibility to take care of these deprived children. Therefore these mothers are highly prone to mental health problems. According to World Health Organisation (WHO), mental health is defined as state of wellbeing in which an individual realises his/her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his/her community. The wellbeing of any individual and the effective functioning of a society always depends on each individual's mental health. Hence it's significant to study the mental health of mothers in relation to other socio-demographic factors for the benefit of children with disability.

Aim and objectives:

- To study the mental health among mothers of children with disability
- To study the relation between demographic variables and mental health in mothers of children with disability

Materials and methods :

Procedure

This descriptive and cross-sectional study was conducted between November 2019 to January 2020. The study was conducted in the National Institute for Empowerment of Persons with Multiple Disabilities, Chennai providing services for persons with multiple disabilities. The sample population consisted of mothers of children with disabilities who are attending services in NIEPMD. A total of 50 mothers visiting the institution for services was randomly selected to participate in the study.

Inclusive criteria

- Mothers who had children with special needs (any disability as per RPWD, Act 2016) from 0-18 years of age
- Mothers without any disability.

Ethical considerations

This study is a part of doctoral research in Psychology. All the participants were explained about the purpose of the study and written consent were taken from them. The participants were ensured about confidentiality and the freedom to quit at any time.

Measures

For the purpose of data collection a socio-demographic details sheet was used. That included details pertaining to age, gender, religion, income, socio-economic status, details of their child and their residence.

To assess the mental health of the mothers the mental health scale (MHQ) developed by Dr. Kamlesh Sharma and Dr. B.R.A. was used. There are 60 items, each item has three alternative responses as 'yes', 'indefinite' and 'no'. The participants has to choose only one response. The 60 items were framed as positive and negative statements each 30 items. On positive statements it is 2 marks for 'yes', 1 mark for 'indefinite' and 0 for 'no', whereas on negative statements it is reverse scoring 2 marks for 'no', 1 mark for 'indefinite' and 0 for 'yes'. The test-retest and spilt half reliability coefficient was found as .86 and .88 respectively and the validity was found as .79

	Statements
Positive	1,2,6,10,11,14,15,17,19,21,23,26,28,29,30,32,35,38,39,42,43,44,46,48,50,53,55,58,59,60
Negative	3,4,5,,8,9,12,13,16,18,20,22,24,25,27,31,33,34,36,3,40,41,45,4,49,51,52,54,56,57

Data Analysis

Data were entered into MS Excel and analysed by using SPSS statistics version no 20. The data were expressed in frequency, percentage and to find association with other socio-demographic variables, the statistical methods used were Pearson product-moment correlation for continuous demographic factors and for categorical variables chi-square test.

Results

A total of 50 mothers of children with various disabilities were studied. It has been found that 30% of mothers expressed their mental health as very good, 28% as moderate, 24% as good, 14% as poor and 4% as very poor.

Figure 1: shows percentage of mother's mental health in the study.

Table: 1 Distribution of Socio-demographic characteristics of mothers on classification of their mental health

Variables	Mental health of mothers					Total N (%)
	Very poor	Poor	Moderate	Good	Very good	
Type of disability in child						
Multiple disability						
Unique disability	1	4	4	5	8	22 (44.0%)
Total	1	3	10	7	7	28 (56.0%)
	2	7	14	12	15	50
Child's gender						
Male	2	6	9	9	12	38 (76.0%)
Female	0	1	5	3	3	12 (24.0%)
Total	2	7	14	12	15	50
Type of family						
Joint family	0	2	5	7	2	16 (32%)
Nuclear family	2	5	9	5	13	34 (68%)
Total	2	7	14	12	15	50
Religion						
Hindu	1	4	11	11	12	39 (78.0%)
Muslim	0	2	0	0	1	3 (6.0%)
Christian	1	1	3	1	2	8 (16.0%)
Total	2	7	14	12	15	50
Residence						
Rural	0	4	3	5	4	16 (32.0%)
Semi-urban	1	1	5	1	3	11 (22.0%)
Urban	1	1	6	6	8	23 (46.0%)

Total	2	7	14	12	15	50
Income						
8989 – 13494	0	6	11	9	8	34 (68.0%)
13495 – 17999	1	1	0	1	1	4 (8.0%)
18000 – 36016	0	0	1	0	2	3 (6.0%)
>36017	1	0	2	2	4	9 (18.0%)
Total	2	7	14	12	15	50
SES**						
Lower	0	3	8	4	5	20 (40.0%)
Upper lower	1	0	0	0	1	2 (4.0%)
Lower Middle	0	4	3	6	2	15 (30.0%)
Upper Middle	0	0	3	2	6	11 (22.0%)
Upper	1	0	0	0	1	2 (4.0%)
Total	2	7	14	12	15	50
$X^2(4, N = 50) = 2.429, p = .657$; $X^2(4, N = 50) = 2.185, p = .702$; $X^2(4, N = 50) = 7.294, p = .121$; $X^2(8, N = 50) = 10.745, p = .217$; $X^2(8, N = 50) = 6.857, p = .552$; $X^2(12, N = 50) = 14.163, p = .290$ $**X^2(16, N = 50) = 36.473, p = .002$						

Table 1 shows summary of socio-demographic characteristics of the mothers in the study. Out of 50 children with disability, 38 (76%) were males and 12 (24%) were female. With regard to their type of disability children are classified as multiple and unique disabled. Of 50 children 22 (44%) were with multiple disabilities and 28 (56%) were with unique disability. Maximum reported income was less than Rs.13,494 (n= 34; 68%) and majority of them belong to low socio-economic status (n= 20; 40%). More participants belong to the Hindu religion (n= 39; 78%) and from urban locality (n = 23; 46%).

The association of the socio-demographic variables and the scores of mental health scale of mothers were analysed using chi square test (significance level $p = .05$). The only variable that shows significance is socio-economic status ($X^2(16, N = 50) = 36.473, p = .002$). Other demographic variables such as type of disability in children, child’s gender, type of family, religion, residence and income didn’t show any statistical significant relationship in mother’s mental health.

Relationship between mother’s mental health with regard to their age and child’s age:

Table 2: Pearson correlation between mother’s age and child’s age in relation to scores of mental health

Characteristics	Mental health of mother	
	r	(p)
Age of mother $M=36.6, SD = 7.10$	0.198	0.168
Child’s age $M=10.6$	0.132	0.361

$SD = 5.11$		
-------------	--	--

$p < .05$ (2 tailed)

The mean age of the mothers were 36.6 years (7.10 SD) and of their children were 10.6 years (5.11SD). In table 2 the relationship between mental health scores of mothers with regard to their age and their children's age was computed using Pearson correlation. The above table indicates that there was a positive correlation between mental health and age of the mothers ($r = .198$; $p = .168$) but not significant. Similarly with regard to child's age the mental health of mother was positively correlated ($r = .132$; $p = .361$) not statistically significant.

Discussion

This cross sectional descriptive study was designed to measure the mental health of mothers who are the primary caregivers of children with disabilities and the relation between various demographic variables and their mental health. This study revealed that the scores of mental health of mothers spread across all the classification from very good to very poor. Out of 50 mothers majority of the mothers are between 31-40 years of age ($n = 27$; 54%) and majority scores are high indicating very good mental health ($n = 15$; 30%). Only few reported very poor mental health ($n = 2$; 4%); remaining respondents fall in other category such as good mental health ($n = 12$; 24%), moderate mental health ($n = 14$; 28%) and poor mental health ($n = 7$; 14%). There are literature suggesting that mothers of children with disabilities were highly vulnerable to parental stress, burden and depression which may affect their overall mental health. However the mother's score on the mental health scale distributed on all categories. Majority of them report their mental health as very good, good and moderate. Despite evidence that several other demographic factors reduce the stress and enhance the mental health of primary caregivers. Another important finding in the study is statistically significant relation between socio-economic status and the mental health of mothers [$X^2 (16, N = 50) = 36.473, p = .002$]. But other variables such as child's gender, type of disability in children, type of family, religion, income and residence shows no significant relation in terms of mother's mental health.

Similarly the mother's age and the child's age doesn't show any significant relation with mental health scores of mothers. But there exist positive correlation between them. This may be because of their adaptation to their child's disability over years (Kearney & Griffen, 2002). Therefore their score on mental health were not so poor and there is no significant relation with socio-demographic variables other than socio-economic status.

Limitations

This study was conducted with only small group of participants who were attending NIEPMD for clinical services. There is need to investigate the mental health of mothers of children with disability as this is not uncommon problem in our country. Future studies in this area with intervention programmes for mothers would not only enhance the mental health of such mothers but also improve their parenting which in turn have impact on the welfare of the children with disabilities.

Conclusion

In conclusion this study found that majority of the mothers reported their mental health ranging from moderate to very good mental health and mostly they are within age group of 31 – 40 years. Most of them have male children and unique disability in their children. Families are mostly nuclear in nature with low socio-economic status. The study findings suggests that no significant relation in mental health of

mother's having children with disabilities and their demographic variables other than socio-economic status. Additionally this study supports positive correlation between mental health scores of mothers in terms of their age and child's age.

Bibliography

- Ahmadzadeh, Z., Rassafiani, M., Khalili, M.A., & Mirmohammadkhani, M. (2015). Factors Associated with Quality of Life in Mothers of Children with Cerebral Palsy in Iran. *Hong Kong Journal of Occupational Therapy*, 25, 15-22. doi:<http://dx.doi.org/10.1016/j.hkjot.2015.02.002>
- Akmese, P.P., Mutlu, A., & Kayhan, N. (2012). Perception of family needs in mothers of children with physical disabilities. *Procedia- Social and Behavioural Sciences*, 46, 1122-1124. doi:10.1016/j.sbspro.2012.05.259
- Ali, N. A. M., Mohamad, M., Muhammad, N., Yusoff, H. M., & Omar, N. (2016). The Impact of Social Climate on Life Satisfaction of Drug-Abuse Inmates in Malaysia Prison. *IJABER*, 14, 9453-9464.
- Al-Kuwari, M.G. (2007). Psychological health of mothers caring for mentally disabled children in Qatar. *Neurosciences*, 12(4), 312-317. Retrieved from <https://www.researchgate.net/publication/51586374>
- Amri Kamarudin, M.K., Toriman, M.E., Abdullah, N., ...Che Ani, N.S. (2018). Assessment of Demographic Variables on Mental Illness in Malaysia. *International Journal of Engineering & Technology*, 7(3.14), 16-19. doi: 10.14419/ijet.v7i3.14.16855
- Baker, D.B., & Mc Cal, K. (1995). Parenting Stress in parents of children with attention deficit hyperactivity disorder and parents of children with learning disabilities. *Journal of Child and family studies*,4(1):57-68. doi.org/10.1007/BF02233954
- Breslau, N., Staruch, K. S., & Mortimer, E. A. (1982). Psychological distress in mothers of disabled children. *American Journal of Diseases of Children*, 636, 682-686.
- Bristol, M., Gallagher, J., & Schopler, E. (1988). Mothers and fathers of young developmentally disabled and nondisabled boys: Adaptation and spousal support. *Developmental Psychology*, 24,441-451.
- Bristol, M.M., Galagher, J.J., & Schopler, E. (1988). Mothers and Fathers of Young Developmentally Disabled and Non-disabled Boys: Adaptation and Spousal Support. *Developmental Psychology*, 24(3), 441-51.
- Budak, M.I., Kucuk, L., & Civelek, H.Y. (2018). Life Experiences of Mothers of Children with an Intellectual Disability: A Qualitative Study. *Journal of Mental Health Research in Intellectual Disabilities*, 11(4), 301-321. doi: 10.1080/19315864.2018.1518502
- Cramm, J. M., & Nieboer, A. P. (2011). Psychological well-being of caregivers of children with intellectual disabilities: Using parental stress as a mediating factor. *Journal of Intellectual Disabilities*, 15(2), 101-13. doi: 10.1177/1744629511410922.
- Cuskelly, M., Pullan, L., Hayes, A. Parenting and employment decision of parents with a preschool child with disability. *Journal of Intellect Dev Disabil*, 23, 319-32.
- Emerson, E. (2003). Mothers of children & adolescents with intellectual disability: social and economic situation, mental health status & the self-assessed social and psychological impact of the child's difficulties. *Journal of Intellectual Disability Research*, 47, 385-399.

- Eroglu, Y., Ozcan, N., & Peker, A. (2015). Differences in resilience, flourishing, and happiness between mothers of children with special needs and mothers of children with typical development. *Sakarya University Journal of Education*, 5(3), 142–150.
- Ferro, M.A., & Speechley, K.N. (2009). Depressive symptoms among mothers of children with epilepsy: A review of prevalence, associated factors, and impact on children. *Epilepsia*, 50(11), 2344–54. doi: 10.1111/j.1528-1167.2009.02276.x
- Floyd, F. J., & Gallagher, E. M. (1997). Parental stress, care demands, and the use of support services for school-age children with disabilities and behavior problems. *Family Relations*, 46, 359–371.
- Gardiner, E., & Iarocci, G. (2012). Unhappy (and happy) in their own way: A developmental psychopathology perspective on quality of life for families living with developmental disability with and without autism. *Research in Developmental Disabilities*, 33(6), 2177–2192.
- Glasscock, R.F. (1997). The Experience of Being a Mother of a Child with Cerebral Palsy: A Phenomenological Study. *Louisiana State University Medical Ctr*, 117.
- Goodman, S.H., Rouse, M.H., Connell, A.M., Broth, M.R., Hall, C.M., Heyward, D. (2011). Maternal depression and child psychopathology: A meta-analytic review. *Clinical child and family psychology review*. 14(1), 1–27. doi: 10.1007/s10567-010-0080-1
- Green, S. E. (2007). “We’re tired, not sad”: Benefits and burdens of mothering a child with a disability. *Social Science and Medicine*, 64,150–163.
- Hastings, R.P. (2003). Child behaviour problems and partner mental health as correlates of stress in mothers and fathers of children with autism. *J Intellect Disabil Res*,47, 231-7.
- Herring, S., Gray, K., Taffe, J., Tonge, B., Sweeney, D., & Einfeld, S. (2006). Behaviour and emotional problems in toddlers with pervasive developmental disorders and developmental delay: Associations with parental mental health and family functioning. *Journal of Intellectual Disabilities Research*, 50(12), 874-882. doi: 10.1111/j.1365-2788.2006.00904.x
- Karande, S., & Kulkarni, S. (2009). Quality of life of parents of children with newly diagnosed specific learning disability. *Journal of Postgraduate Medicine*, 55(2), 97-103.
- Leung, C.Y.S, & Li-Tsang, C.W.P. (2003). Quality of Life of Parents who have Children with Disabilities. *Hong Kong Journal of Occupational Therapy*, 13, 19-24.
- Lovejoy, M.C., Graczyk, P.A., O'Hare, E., & Neuman, G. (2000). Maternal depression and parenting behavior: A meta-analytic review. *Clinical psychology review*, 20(5), 561–92.
- Moes, D., Koegel, R.L., Schreibman, L., Loos, L.M. (1992). Stress profiles for mothers and fathers of children with autism. *Psychol Rep*, 71, 1272-4.
- Mohamad, M., Kamarudin, M. K. A., Juahir, H., Ali, N. A. M., Ka-rim, F., Badarilah, N., & Ridzuan, M. S. M. (2018). Development of Spatial Distribution Model using GIS to Identify Social Support Index among Drug-Abuse Inmates. *International Journal of Engineering & Technology*, 7(2.15), 1-7.
- Nagarkar, A., Sharma, J.P., Tandon, S.K., & Goutam, P. (2014). The clinical profile of mentally retarded children in India and prevalence of depression in mothers of the mentally retarded. *Indian Journal of Psychiatry*, 56(2), 165-170. doi: 10.4103/0019-5545.130500
- Narmada, H., Pushpa, B., Khadi. (2012). Parenting stress of normal and mentally challenged children Karnataka .*J. AgricSci*,25(2), 256-259

- Oh, H., & Lee, E. (2009). Caregiver burden and social support among mothers raising children with developmental disabilities in South Korea. *International Journal of Disability, Development and Education*, 56(2), 149-167.
- Olsson, M. B., & Hwang, C. P. (2001). Depression in mothers and fathers of children with intellectual disability. *Journal of Intellectual Disability Research*, 45, 435–443.
- Ones, K., Yilmaz, E., Cetinkaya, B., & Caglar, N. (2005). Assessment of the quality of life of mothers of children with cerebral palsy (primary caregivers). *Neuro-rehabilitation and Neural Repair*, 19(3), 232-237.
- Pelchat, D., Bisson, J., Ricard, N., Perreault, M., & Bouchard, J.M. (1999). The Longitudinal Effects of an Early Family Intervention Program on the Adaptation of Families of Children with a Disability. *International Journal of Nursing Studies*, 36(6), 465–77.
- Pelchat, D., Lefebvre, H., & Perreault, M. (2003). Differences and similarities between mothers' and fathers' experiences of parenting a child with a disability. *Journal of Child Health Care*, 7, 231-247.
- Pelchat, D., Levert, M.J., & Bourgeois-Guerin, V. (2009). How do mothers and fathers who have a child with disability describe their adaptation/ transformation process? *Journal of Child Health Care*, 13(3), 239-259. doi: 10.1177/1367493509336684
- Phelan, K.J., Morrongoiello, B.A., Khoury, J.C., Xu, Y., Liddy, S., Lanphear, B. (2014). Maternal supervision of children during their first 3 years of life: the influence of maternal depression and child gender. *Journal of pediatric psychology*. 39(3), 349–57. doi: 10.1093/jpepsy/jst090
- Resch, J. A., Mireles, G., Benz, M. R., Zhang, D., Peterson, R. L., & Grenweldge, C. (2010). Giving parents a voice: A qualitative study of the challenges experienced by parents of children with disabilities. *Rehabilitation Psychology*, 55, 139– 150.
- Resch, J.A., Elliott, T.R., & Benz, M.R. (2012). Depression Among Parents of Children with Disabilities. *Families, Systems and Health*, 30(4), 291-301. doi: 10.1037/a0030366
- Saluja, K., & Kaur, T. (2013). A study of subjective well-being, social support, hope, stress and coping among the mothers of mentally challenged children (caregivers) and normal children (non-caregivers). *Journal of Indian Health Psychology*, 8(1), 9–19.
- Shyam, R., Kavita & Govil, D. (2014). Stress and Family Burden in Mothers of Children with Disabilities. *International Journal of Interdisciplinary and Multidisciplinary Studies*, 1(4), 152-159.
- Siddique, A.F. (2014). Sociodemographic profile of families with mentally retarded children and its relation to stress. *Bangladesh Journal of Medical Science*, 13(4), 378-382.
- Singer, G.H. (2006). Meta-analysis of comparative studies of depression in mothers of children with and without developmental disabilities. *American Journal of Mental Retardation*, 111(3), 155–69. doi: 10.1352/0895-8017(2006)111[155:mocsod]2.0.co;2
- Tamres, L.K., Janicki, D., & Helgeson, V.S. (2002). Sex Differences in Coping Behavior: A Meta-analytic Review and an Examination of Relative Coping. *Personality and Social Psychology Review*, 6(1), 2–30.
- Terra, V. C., Cysneiros, R. M., Schwartzman, J. S., Teixeira, M. C., Arida, R. M., & Cavalheiro, E. A. (2011). Mothers of children with cerebral palsy with or without epilepsy: A quality of life perspective. *Disability and Rehabilitation*, 33(5), 384-388.
- Weiss, J.A., Sullivan, A., & Diamond, T. (2003). Parent stress adaptive functioning of individuals with developmental disabilities. *Journal on Developmental Disabilities*, 10, 129-135.

- Worcester, J. A., Nesman, T. M. Raffaele Mendez, L. M., & Keller, H. R. (2008). Giving voice to parents of young children with challenging behavior. *Exceptional Children*, 74, 509–525.
- Wright, P.S. (1993). Parents' perceptions of their quality of life. *Journal of Pediatric Oncology Nursing*, 10, 139–145.
- Yamada, A., Suzuki, M., Kato, M., Suzuki, M., Tanaka, S., Shindo, T. (2007). Emotional distress and its correlates among parents of children with pervasive developmental disorders. *Psychiatry and Clinical Neurosciences*. 61(6), 651–7. doi: 10.1111/j.1440-1819.2007.01736.x
- Yamaoka, Y., Tamiya, N., Moriyama, Y., Sandoval Garrido, F.A., Sumazaki, R., & Noguchi, H. (2015). Mental Health of Parents as Caregivers of Children with Disabilities: Based on Japanese Nationwide Survey. *Plos ONE*, 10(12), 1-14. doi: 10.1371/journal.pone.0145200
- 71% of Disabled Kids in rural India. (2014). *The Economic Times, Politics*. Retrieved from <https://economictimes.indiatimes.com/news/politics-and-nation/71-of-disabled-kids-in-rural-india/articleshow/45614259>.
- World Health Organization.(2004). Promoting mental health: concepts, emerging evidence, practice (Summary Report) Geneva: