Original Research Paper SOCIAL SCIENCE

A Study on Special Educators' Views on Sensory Issues of Children with Autism Spectrum Disorder (ASD)

Nandita Chakrabarty — Research Scholar, Faculty of Disability Management and Special Education, Ramakrishna Mission Vivekananda University

Dr. Sudha A — Assistant Professor in Special Education, Faculty of Disability Management and Special Education, Ramakrishna Mission Vivekananda University

ABSTRACT

Present study explores the views of special educators' on the sensory responses of the children with Autism Spectrum Disorder (ASD). Survey method has been employed for data collection of this present study. The sample covered 100 special educators who are working with the children with ASD in and around Coimbatore district. Data was collected though a three point rating scale, developed by the researcher. Before hand validity and reliability of the questionnaire was established. The collected data was analyzed qualitatively. The study has confirmed the fact of unusual sensory responses of the Children with ASD. Study throws light on need of identifying, evaluating sensory issues to make out the pattern of the behavior, so that proper intervention can be provided. Hence the present study strongly argues for a proper method to identify and assess sensory issues of CWASD

KEYWORDS Sensory response, Children with Autism Spectrum Disorder (CWASD)

Introduction:
Mind and body of human beings are unified to meet the demands of the world. The complex actions of brain are responsible behind every action, thought and feelings. The process of environmental and internal information has a major impact on actions, thoughts and feelings. Therefore slightest change in processing can influence adaptive behavior (Barua, 2009). Sensory integration is the neurological process of organizing information from the environment through sensory stimuli. (Kranowitz, 1998). The brain also possesses the remarkable ability to regulate sensory information to the demands of the environment and its current needs. A variety of sensory features are often reported in children with autism spectrum disorder (ASD) (Baranek, et al. 2006; Ben Sasson, et al., 2009; O'Donnell, et al. 2012), and are associated with core characteristics of the disorder (Boyd et al., 2010; Lane, et al., 2010; Watson, et al., 2011). Sensory features are often described as constellating into distinctive behavioral constructs or sensory response patterns across modalities; these may include: hyporesponsiveness (HYPO); hyperresponsiveness (HYPER); sensory interests, repetitions, and seeking behaviors (SIRS); and enhanced perception (EP). (Ausderau et al. 2014). The sensory issues and problem behavior of the CWASD are interconnected. Hence comprehensive evaluation of the children with ASD is needed. (O'Donnell et al. 2012). Sensory scores and severity of autism symptoms correlates (Rogers, 2003). It is also reported about sensory modulation difficulties among CWASD (Adamson, 2006; Sasson, 2009).

Objective:
To find out the perception on sensory issues of children with ASD among special educators with regards to their gender, age, professional qualification and experience.

Research question:
Is there any difference in perception on sensory issues of children with ASD among special educators with regards to their gender, age, qualification and experience?

Methodology:
Under the descriptive research design survey method has been employed for data collection of this present study.

Variables
In the present study following variables are examined- age, gender, qualification and experiences.

Sample selection and sample size
Hundred special educators who are working with the children with ASD in and around Coimbatore district were selected purposively under non probability sampling technique.

Sample characteristics:
The categorization of the samples based on the background variables, gender, age, qualification and experience are given in the following table.

Table 1: Detail presentation about the samples selected for the study

Gender		Age			Qualification			Experience		
Male	Female	Below 30 yrs	31-40 yrs	41 yrs and above	D.Ed	B.Ed	M.Ed	Upto 5 yrs	5-10 yrs	10 yrs and above
23	77	32	48	20	29	60	11	46	44	10

Figure 1, 2, 3 and 4 illustrate the distribution of special educators according to gender, qualification, age, and experience. Out of 100 special educators 23 were males (23%) and 77 were females (77%). The number of special educators who are aged below 30 yrs is 32 (32%). Between 31 and 40 yrs of aged special educators were 48 (48%). 20 (20%) special educators were under 41 and above age. Among 100 special educators, 29 (29%) are Diploma holders, 60 (60%) bachelors and 11 (11%) masters. Out of 100 there were 46 (46%) special educators were having less than 5 years of experience while 44 (44%) had 5- 10 years of experience. Only 10 (10%) special educators had more than 10 years experience.

Figure 1: Gender

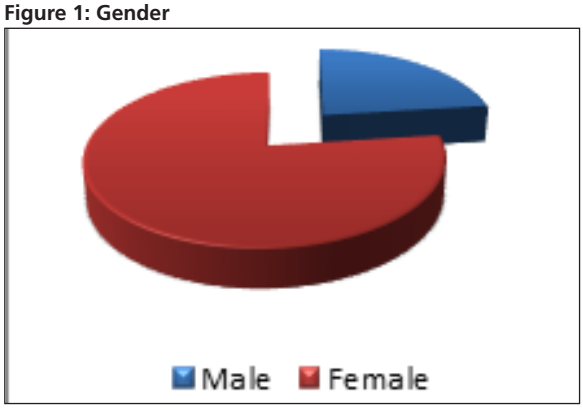


Figure 2: Age

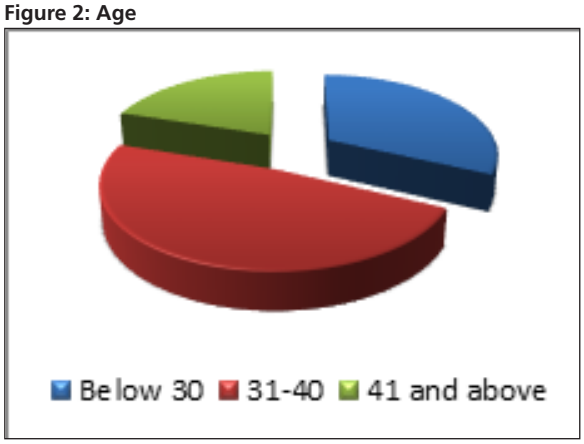


Figure 3: Qualification

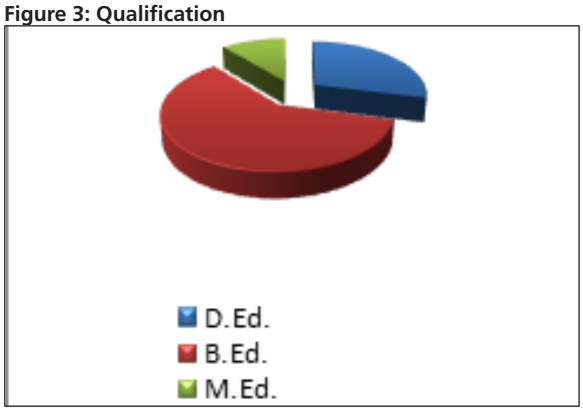


Figure 4: Experience

Development of Tools

Objective of the study was to find out the perception about the sensory responses of CWASD among the special educators. A three point rating scale was formed related to sensory issues of CWASD, after taking opinions from five field experts. The first part of the tool consisted of the background details of the samples and second part contained the questions on sensory issues.

Data collecting procedure:

Informed consent was collected from the samples before data collection. After getting permission from the Course Coordinators/ Principals, researcher distributed the tools among special educators of different special schools of having students with ASD. The filled questionnaires were collected.

Data Analysis:

The collected data was entered on excel and percentages were calculated to find out the perception of the special educators on sensory issues of CWASD.

Result and Discussion:

Table 2: Overall responses about the perception of sensory issues of CWASD

Sl. no	QUESTION	Yes	Unsure	No
1.	Have you observed unusual response of CWASD towards various sensory stimuli?	90%	4%	6%
2.	Do you think that the assessments of the sensory issues of CWASD are needed to identify with appropriate assessment tool?	79%	7%	14%
3.	Do you think that the assessment of the sensory issues of CWASD needs to be intervened / evaluated with proper assessment tool?	77%	3%	20%
4.	Can you identify the common patterns of the behavior of CWASD towards various sensory stimuli?	65%	7%	28%
5.	Do you relate the patterns of behavior of CWASD with any other condition?	36%	5%	59%
6.	Do you need an assessment tool specifically to address all the sensory issues of the CWASD	84%	0%	16%
	Total	72%	4%	24%

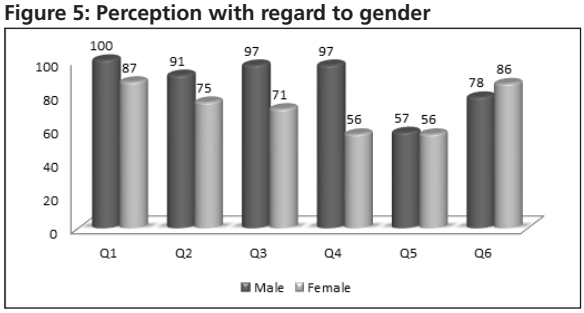
Discussion:

There were six questions in the three point rating scale to find out the responses of the special educators regarding the perception of the sensory issues of CWASD. 90% special educators opined that they have observed unusual responses of CWASD towards various sensory stimuli. 77% special educators have said that the assessment of the sensory issues of CWASD needs to be intervened / evaluated with appropriate assessment tool. Based on their observation 65% special educators identified to classify the common patterns of the behavior of CWASD towards various sensory stimuli as hyper and hypo. Only 36% special educators can relate the patterns of behavior with any other condition. In response to the questionno.6 special educators expressed that there is a need of a new assessment tool for assessing sensory issues.

Table 3: Description of response on perception about sensory issues of CWASD with regard to gender

		Q1	Q2	Q3	Q4	Q5	Q6
Gender	Male	23(100%)	21(91%)	22(97%)	22(97%)	13(57%)	18(78%)
	Female	67 (87%)	58 (75%)	55(71%)	43(56%)	43(56%)	66(86%)

Figure 5: Perception with regard to gender



Discussion:
From above table and figure 5, it is found that there is a difference in opinion on sensory issues among special educators with regard to their gender. Male special educators' response is more than females in question no. 1, 2, 3 and 4 except question no. 6. However no significant difference was found in response to question no five.

Table 4: Description of response on perception about sensory issues of CWASD with regard to age

		Q1	Q2	Q3	Q4	Q5	Q6
Age	A1	29(91%)	25(78%)	25(78%)	24(75%)	16(50%)	25(78%)
	A2	44(92%)	38(79%)	36(75%)	31(65%)	13(27%)	42(88%)
	A3	17(85%)	16(80%)	16(80%)	10(50%)	7(35%)	13(65%)

Discussion:
Table 4 and figure 6 present the perception of special educators with regard to their age. In response to question number 1, 2 and 3 difference in opinion is not found much. However variation in opinion was found question number 4, 5 and 6

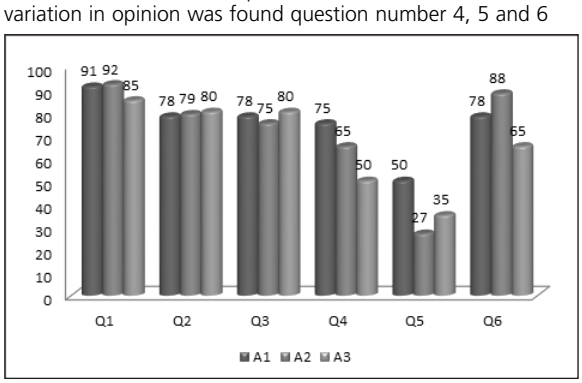


Figure 6: Perception with regard to age

Table 5: Description of response on perception about sensory issues of CWASD with regard to qualification

		Q1	Q2	Q3	Q4	Q5	Q6
Qualification	D	26(90%)	19(66%)	20(69%)	16(55%)	11(38%)	21(72%)
	B	53(88%)	49(82%)	46(77%)	38(63%)	22(37%)	53(88%)
	M	11(100%)	11(100%)	11(100%)	11(100%)	3(27%)	10(91%)

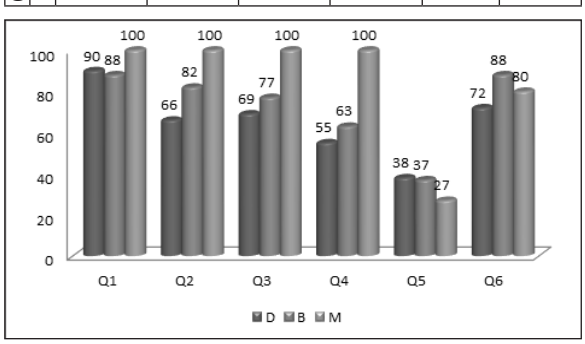


Figure 7: Perception with regard to qualification

Discussion:
With regard to qualification it was found that the special educators who have done masters expressed highest views on sensory issues of CWASD except question number 5. From the above table and following figure it was found that the perception varies most between the diploma holders and masters' degree holders. Between diploma groups and bachelors group, perception did not vary much.

Table 6: Description of response on perception about sensory issues of CWASD with regard to experience

		Q1	Q2	Q3	Q4	Q5	Q6
Experience	E1	38(83%)	35(77%)	35(77%)	29(63%)	20(43%)	37(80%)
	E2	41(93%)	34(77%)	32(73%)	30(68%)	12(27%)	37(84%)
	E3	10(100%)	10(100%)	10(100%)	6(60%)	4(40%)	10(83%)

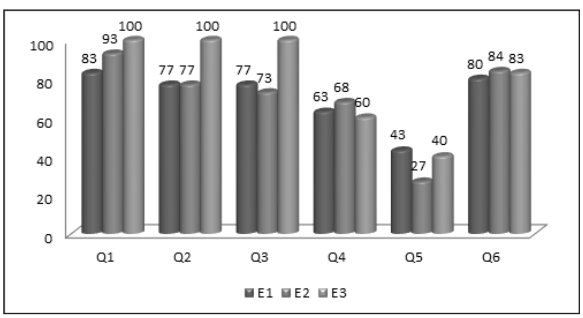


Figure 8: Perception with regard to experience

Discussion:
Above table and figure8 presents perception of special educators with respect to their experience. The special educators with more years of experience have expressed more on sensory issues. This shows that there is a relation between the years of experience in the field and their perception on sensory issues of CWASD.

Conclusion:
Findings of the study shows unusual responses of CWASD towards various sensory stimuli. Samples under investigation expressed that assessment of the sensory issues are needed to identify and intervened with proper assessment tool. The result shows that special educators can identify the common patterns of the behavior of CWASD towards various sensory stimuli as hyper and hypo, though they cannot relate the patterns of behavior with other condition very much. Thus present study throws light on the need of proper assessment tool to address all the sensory issues of the CWASD. The result of this study coincides with the previous studies [Ranjan (2013), Rinner (2002)] of developing a sensory assessment tool for better understanding the CWASD so that appropriate intervention can be provided.

References:

1. Adamson, A., O' Hare, A., & Graham, C. (2006). Impairments in sensory modulation in children with Autistic Spectrum Disorder. ***British Journal of Occupational therapy,*** 69 (8), 357 - 367
2. Ausderau et. al. (2014). Sensory subtypes in children with autism spectrum disorder: Latent profile transition analysis using a national survey of sensory features. Journal of Child's Psychology and Psychiatry.
3. Baranek GT, David FJ, Poe MD, Stone WL, Watson LR. (2006). Sensory experiences questionnaire: Discriminating sensory features in young children with autism, developmental delays, and typical development. Journal of Child Psychology and Psychiatry. 2006;47(6):591–601.
4. Barua, M. (2009). DSE (ASD) Manual. Therapeutics. RCI, Kanishka Publishers. New Delhi. P – 83.
5. Ben-Sasson A, Hen L, Fluss R, Cermak SA, Engel-Yeger B, Gal E. A meta-analysis of sensory modulation symptoms in individuals with autism spectrum disorders. Journal of Autism and Developmental Disorders. 2009;39(1):1–11. doi: 10.1007/s10803-008-0593-3. [PubMed] [Cross Ref

6. Boyd BA, Baranek GT, Sideris J, Poe MD, Watson LR, Patten E, Miller H. (2010). Sensory features and repetitive behaviors in children with autism and developmental delays.Autism Research. 3(2):78–87.
7. Kranowitz, Carol Stock (1998) Out of Sync Child, Berkley Publication, New York.
8. Lane AE, Young RL, Baker AEZ, Angley MT. (2010) Sensory processing subtypes in autism: Association with adaptive behavior. Journal of Autism and Developmental Disorders. 40(1):112–122.
9. O'Donnell S, Deitz J, Kartin D, Nalty T, Dawson G. (2012). Sensory processing, problem behavior, adaptive behavior, and cognition in preschool children with autism spectrum disorders. AJOT: American Journal of Occupational Therapy. 66:586–594.
10. Ranjan, R. (2013). "Comparative analysis of responses towards sensory stimuli among children with mental retardation, learning disabilities and autism spectrum disorders in educational setting". Unpublished Ph. D. thesis. Faculty of Disability Management and Special Education, Coimbatore. p 262-63
11. Rinner, L. (2002). Sensory Assessment for Children and Youth with Autism Spectrum Disorders. Assessment for Effective Intervention, Fall-Winter 2002; vol. 27, 1-2: pp. 37-46.
12. Rogers S. J, Hepburn S, Wehner E. (2003) Parent reports of sensory symptoms in toddlers with autism and those with other developmental disorders. Journal of Autism and Developmental Disorders. 33(6):631–642.
13. Watson LR, Patten E, Baranek GT, Poe M, Boyd BA, Freuler A, Lorenzi J. (2011). Differential associations between sensory response patterns and language, social, and communication measures in children with autism or other developmental disabilities. Journal of Speech, Language, and Hearing Research. 54(6):1562–1576.