

Attitudes of Community Health Workers toward Children with Developmental Delays

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Abstract

Developing countries are experiencing a significant reduction in mortality of children, which in turn give rise to large numbers of surviving children with developmental delays and disabilities. Early identification of children with developmental delays is important in the primary care settings. The attitudes of Community health workers play a pivotal role in the quality of the patient care experience; especially in the care of children with developmental delays. The survival of persons with disability is even today threatened by attitudes, prejudices and beliefs common among non-disabled people. There is an urgent need to understand the prevalence of positive and negative attitudes and which group of people holds them is crucial. In this study, an attempt was made to find out the attitude of Community health workers regarding the early identification of developmental delays in young children. A total of 529 Community health workers like Junior Health Assistants, Accredited Social Health Activists and Anganwadi Workers of Mysore Taluk were randomly selected as respondents. A self-structured questionnaire on socio-demographic conditions and Likert scale on the attitude was administered. The results revealed that CHWs had a positive attitude towards children with developmental delays. The education, income and work experience exert significant influence on attitude of CHWs who are working as interface between the community and health care systems. There is a greater need for investigating the attitude and awareness of people involved with children during early childhood years to develop effective strategies and sustained approach to enhance the quality of life of children with developmental delays.

Key Words: *Community Health Worker, Attitude, Children with developmental delays*

Introduction

Early childhood is the period from prenatal development to eight years of age (WHO, 2012) which is a crucial phase of growth and development which is influenced greatly by both biological endowment and environment factors. Hence it has been extremely important in child development research to determine whether the person reaches his or her full potential. Child development is a dynamic process through which children progress from dependence in all areas of functioning towards growing independence from infancy through adulthood (WHO, 2012). Developmental milestones are a set of behaviours, skills, or abilities that are demonstrated by specified ages during infancy and early childhood in typical development. Developmental delay (DDs) occurs when a child exhibits a significant delay in the acquisition of milestones or skills, in one or more domains of development (Poon, et.al. 2010).

Developing countries are experiencing a significant reduction in mortality of children, which in turn give rise to large numbers of surviving children with developmental delays and disabilities. According to UNICEF (2016) a number of 93 million i.e. 1 in 20 are the children with disabilities in the world and according to UN report 2.9 million children with disabilities are in India (First Post, 2015). According to earlier studies, the prevalence of 1.5% to 2.5% of developmental delay in children especially less than 2 years of age are observed in India (Nair and Radhakrishnan, 2004; Nair, et.al. 2009; Poon, et.al. 2010). Despite the alarmed percent of incidence of developmental delays in and around the country, the early identification of such problem remains difficult.

Early identification has assumed importance in reducing the high incidence of disabled children. A number of developmental disorders are preventable and substantial proportion can be suitably rehabilitated if identified at an early period. Early identification of children with developmental delays is important in the primary care settings. Developmental assessment and screening of children for developmental delays is usually done by professionals and licensed personnel in health areas by using standard screening test. Early detection of disability though most important

in preventing permanent disability cannot be left entirely on doctors alone. Therefore the role of Community Health Workers (CHWs) in identification and prevention of disability in children below 6 years is very important (Mathur, et.al. 1995).

The grass root level workers more commonly known as community health workers (CHWs) like the Auxiliary Nurse Midwives (ANMs) (recently ANMs are called as Junior Health Assistants), Anganwadi workers (AWWs), Accredited Social Health Activists (ASHAs) workers etc. are hands in the glove with the Indian community (NCPCR, 2010). Attitudinal barriers are the most recognized impediment to health care for children with disabilities (Greiner and Knebel, 2003; Cervasio Kathleen, 2012).

The attitudes of CHWs play a pivotal role in the quality of the patient care experience; especially in the care of children with developmental delays. Theoretically, attitudes characterize what an individual views as positive, negative, or neutral. Attitudes are a complex collection of beliefs, feelings, values and dispositions which characterize the way individuals think or feel about certain people or situations (Aiden and McCarthy, 2014). Attitudes are comprised from affective, behavioural, and cognitive responses and can be transformed by persuasion and experience (Cervasio and Fatata-Hall, 2013). Hence, it is necessary to measure the attitude of people involved especially with children of DDs to promote the quality of patient care. Earlier studies highlighted both negative/unfavourable attitude and positive/favourable attitude towards people with disabilities among health care students and professionals (Satchidanand, et.al. 2012). More studies have been focused on nursing students and professionals, teachers and parents while few studies have been carried out on medical students and professionals, occupational therapists. A study on the attitude of nurse toward the mental illness in Bhutan found that there was a positive attitude towards mental illness (Pelzang Rinchen 2009), it is also suggested that the theoretical training and clinical placement in a psychiatric unit creates a positive attitude in nurses towards mental illness as well as increased interpersonal contact with patients/ person with mental illness that are associated with improved attitude of health care professionals as a whole. According to UNICEF (2003) report the attitude of teachers towards the children with disabilities was positive

and friendly. Teachers were aware of the right of every child to have access to education. Many teachers expressed the need for technical support from resource teachers. A study was carried out on knowledge, attitude and practices of community people regarding mental illness in Dang district Nepal and revealed that community people have a positive attitude towards mental health and disorders related to it (Das Rubby, et.al. 2013). The attitudinal barrier has been observed during the historic period and literature clearly indicated that children with obvious deviations or congenital physical malformation were rejected or killed upon birth or severely retarded children were abandoned on riverbanks or near the sea (Munyi, 2012). The survival of persons with disability is even today threatened by attitudes, prejudices and beliefs common among non-disabled people. Hobbs states that, the message that a child with a disability receives about himself from his environment determines to a large extent his feelings about who he is, what he can do and how he should behave (Munyi, 2012). International research has greatly concentrated on the attitudes of healthcare professionals towards adults and children with disabilities. There is an urgent need to understand the prevalence of positive and negative attitudes and which group of people holds them is crucial (Aiden and McCarthy 2014). There is scanty research in India especially in Karnataka state on attitudes of health care professionals towards children with developmental delays. From this back drop the current study was carried out among CHWs with the main objective of studying their attitude towards children with DDs.

Methodology

A cross sectional study was carried out on the attitude of Community Health Workers (CHWs) towards children with developmental delays in Mysore taluk of Mysore district. A total of 529 CHWs working in Government sectors such as Anganwadi Workers (AWWs) of Department of Women and Child Development, Accredited Social Health Activists (ASHAs) and Junior Health Assistants (JHAs) of Department of Health and Family Welfare. More than 90% CHWs at Primary Health Centres (PHCs) and Anganwadi Centres (AWCs) of urban and rural areas of Mysore taluk were randomly included as the respondents of the study. The investigator sought the permission from the Heads of concerned departments at taluk and district level before starting the data collection. The investigator personally visited the PHCs and AWCs and primary data was collected through self-structured interview schedule. The interview schedule included

socio-demographic profile and infrastructural facilities availed at the PHCs and AWCs. The attitude of CWHs was assessed through self-developed, pre-tested Likert scale endorsed by subject experts. This scale consisted of 34 items aimed at knowing attitudes towards children with developmental delays with rating on 5 points such as 'strongly agree', 'agree', 'neutral', 'disagree' and 'strongly disagree'. Of the total items, 17 items were negatively worded and 15 items were positively worded and 2 items were included as lie score to check whether the respondents were attempting to control their responses. The responses of respondents on positively worded items were scored with 4, 3, 2, 1, and 0 for 'strongly agree', 'agree', 'neutral', 'disagree' and 'strongly disagree' respectively and negatively worded items were scored vice versa i.e. 0, 1, 2, 3 and 4 for 'strongly agree', 'agree', 'neutral', 'disagree' and 'strongly disagree'. The sum of score ranges between 0-128 indicates the attitude of CHWs towards children with developmental delays. The higher scores indicated positive attitude while the lower scores indicated negative attitude. The collected data was statistically analyzed using SPSS 16.0 version for windows. The frequency distribution and percentage was calculated for qualitative data. The mean and standard deviation (SD) was computed for attitude score based on study variables. The t-test and ANOVA test was applied to check the significant difference between variable groups and the level of attitude. The findings of the study are presented and discussed in the following.

Results

Of the total respondents (CHWs), majority (77.12%) of the respondents working as AWWs followed by 11.72% working as ASHA workers and 11.15% working as JHAs. The socio-demographic profile of AWWs, ASHAs and JHAs is presented in Table 1. Of the total, 59.2% CHWs belonged to rural areas while 40.8% belonged to urban areas. Nearly 55% AWWs belonged to rural areas while 45% AWWs belonged to urban areas. Cent percent of ASHAs belonged to rural areas since ASHA workers are not employed in urban areas. Among JHAs, 54.2% belonged to urban areas while 45.8% belonged to rural areas. With reference to age groups, majority of the CHWs were in the age group of 30 to 40 years (31.8%) and 40 to 50 years (31.4%) respectively. Remaining percentages of CHWs were in the age group of 20 to 30 years (18.7%) and 50 to 60 years (18.1%) respectively. The highest percent of ASHAs (58.1%)

were in the age group of 30 to 40 years while highest percent of AWWs (35%) and JHAs (40.7%) were in the age group of 40 to 50 years and 50 to 60 years respectively.

As regards to the educational qualification, majority (68.8%) of the respondents studied up to 10th Standard followed by 26.5% studied up to PUC and 4.7% studied up to degree level. Majority of ASHA (85.5%) and AWWs (70.3%) studied up to 10th Standard while the highest percent of JHAs studied up to PUC (50.8%) level. The highest percentage (76.4%) of respondents were drawing the monthly income up to Rs.5,000/- followed by 12.5% were drawing the monthly income of Rs. 5001 to Rs. 10,000/- and 11.1% were drawing above Rs. 10,000/-. Cent percent of ASHAs were drawing the monthly income up to Rs. 5000/- while Cent percent of JHAs were drawing the monthly income above Rs. 10,000/-. Majority of AWWs were drawing the monthly income up to Rs. 5000/- (83.8%) while minority of AWWs drawn the monthly income Rs. 5001 to 10,000/- (12.5%). As regard to the religion, 91.5% respondents belonged to Hindu religion while 8.5% respondents belonged to Non-Hindu religion group. The highest percent of JHAs (11.9%) than ASHAs (1.6%) and AWWs (9.1%) belonged to Non-Hindu religion. With regard to the duration of work experience by community health workers, the highest percent of respondents had work experience for 10 to 20 years (33.6%) followed by 24% experienced up to 5 years, 22.3% experienced for 5 to 10 years and 20% experienced for above 20 years. More than 50% ASHAs (51.6%) and JHAs (52.5%) served for 5 to 10 years and above 20 years as CHWs respectively. The highest percent of AWWs (38.7%) served for 10 to 20 years as CHWs. According to chi-square values, socio-demographical characteristics such as areas of working, age, education, income and duration of work experienced was significantly associated at 0.1% level with type of CHWs. On the whole, it may be understood that socio-demographic profile of JHAs was better especially in education and monthly income than their respective counterparts.

The attitude of CHWs is crucial aspect in early identification of children with DDs. The attitude of CHWs towards children with DDs was assessed using self-structured Likert scale. The minimum and maximum possible attitude score being 0-128 and higher score indicates positive

attitude while lower score indicates negative attitude. Table – 2 depicts the mean attitude score of CHWs involved in the present study towards children with development delays. The mean attitude score 88.10 with standard deviation ± 9.50 clearly indicated that the CHWs had positive attitude towards the children with DDs.

Table – 3 depicts the mean attitude score of community workers distributed based on socio-demographic variables such as occupation, area of working, age, education, religion, income and duration of work experience. With reference to attitude score towards the children with DDs among CHWs of different occupational groups such as AWWs, ASHAs and JHAs (Fig - 1), the mean attitude score of JHAs (88.88 ± 8.948) and AWWs (88.38 ± 9.856) was higher than ASHAs (85.52 ± 7.075). But the mean difference was statistically insignificant. The attitude score of urban CHWs (mean= 87.65 ± 9.333) was slightly higher than that of rural CHWs (mean= 88.75 ± 9.581). However the mean difference was statistically insignificant. This clearly indicates that CHWs from both the urban and rural areas showed same level of attitude towards the children with DDs. With regard to attitude among different age groups of community health workers, the CHWs in the age group of 20 to 30 years showed higher mean attitude score (90.05 ± 10.06) while CHWs in the age group of above 40 years showed comparably lesser mean attitude score (40 to 50 years= 87.13 and 50 to 60 years= 87.25). This helps to understand that young aged CHWs have higher level of positive attitude compare to middle aged CHWs. However the mean difference was insignificant between the CHWs of different age groups.

Among CHWs with different educational background (Fig 2), the CHWs educated up to 10th standard depicted lesser mean attitude score (87.03) while CHWs educated up to degree showed higher mean attitude score (91.84). The CHWs with Pre University Education showed the mean attitude score (90.21) and their score was higher than that of CHWs educated up to 10th standard and lesser than that of CHWs educated up to degree. This clearly indicates that as educational level of CHWs increased their attitude has also increased. A highly significant mean difference at 0.1% level (F-value= 7.891) clearly confirms that higher the educational background among CHWs, higher level of positive attitude could be noticed towards children with DDs. Among

CHWs of different religious background, there was negligible mean difference between Hindu (88.14 ± 9.621) and Non-Hindu (87.71 ± 8.264) CHWs with regard to their attitude towards children with DDs. This clearly confirms that almost all the CHWs irrespective of their religions showed the same attitude towards the children with DDs. The CHWs of different income groups exhibited significantly different attitude towards children with DDs (Fig 3). The CHWs with higher income level (above Rs.10,000/-) as well low income level (Up to Rs.5000/-) showed lower mean attitude score (87.29 ± 8.924 and 88.88 ± 8.948) respectively while the CHWs with middle income level (Rs. 5,000/- to Rs. 10,000/-) showed higher mean attitude score (92.39 ± 12.063). This indicates the level of income has highly significant influence ($F=8.652$ and $P<0.001$) on the attitude of CHWs. Among CHWs with different duration of work experience (Fig 4), the CHWs with 5 years and less experience showed a higher mean attitude score (90.14) compared with CHWs with more than 5 years of work experience. The F-value of 2.626 at 5% level of significance confirms that duration of work experience significantly influenced the attitude of CHWs. Out of all the four groups the least mean score was exhibited by the group of CHWs with 20 years and above experience. During the beginning years, the CHWs showed higher attitude and as years of work experience increased their attitude score decreased.

Discussion

The present study revealed that CHWs had a positive attitude towards children with DDs. This result is consistent with findings of earlier studies. The similar finding was noticed in the study conducted in Andhra Pradesh on Community Based Rehabilitation (CBR) workers and their attitude resulted positive towards disability (Rao Allu Jeevan, et.al. 2003).

According to the present study, there was no significant difference between CHWs belonging to different categories of occupation such as ASHAs, AWWs and JHAs. Since all these CHWs may have same degree of contact with children of DDs and they are the interface between public and health care systems, they might have shown almost same level of attitude. The present study also revealed that the attitudes of CHWs were also not affected by age and area. The similar findings were found out in the earlier studies (Paterson, 1999; Rao Allu Jeevan, et.al. 2003).

The respondents of this study were educated enough to serve the community or reaching the health care facilities to the people. Majority (68.8%) of the respondents studied up to 10th Standard followed by 26.5% studied up to PUC and 4.7% studied up to degree level. The different level of attitudes among CHWs of different education level was observed. The CHWs educated up to degree exhibited significantly higher level of positive attitude than the CHWs educated up to 10th standard. This clearly indicates that as educational level of CHWs increased, their attitude has also increased. International healthcare researchers have suggested that education influence the attitudes of healthcare professional students, therefore affecting patient care outcomes (Rao, 2004; Cervasio, 2012).

In view of the fact that the respondents of the present study included three different types of community workers, it is quite obvious that their monthly income differ from each others. Cent percent of ASHAs and majority (83.8%) of AWWs were drawing the lower income (up to Rs. 5000/-) while Cent percent of JHAs were drawing the higher income (above Rs. 10,000/-). Only 12.5% of AWWs were drawing the middle income Rs. 5001 to 10,000/-. The CHWs of different income groups exhibited significantly different attitude towards children with DDs (Fig 3). The CHWs with higher income level (above Rs.10,000/-) as well low income level (Up to Rs.5000/-) showed significantly lower attitude than the CHWs with middle income level (Rs. 5,000/- to Rs. 10,000/-) who exhibited higher attitude. But no sustaining studies were found with regard to CHWs attitude towards children with DDs. However, a study among rural and urban communities of Andhra Pradesh revealed that the supernatural beliefs about disability exist to a greater extent among lower economic groups (Rao Allu Jeevan, et.al. 2003).

In the present study, more than 50% ASHAs and JHAs served for 5 to 10 years and above 20 years respectively while higher percentage of AWWs (38.7%) served for 10 to 20 years. The CHWs with 5 years and less experience showed significantly a higher attitude compared to CHWs with more than 5 years of work experience. This indicates that during the beginning years of their service the CHWs undergoes job training, which might have influenced their attitude. This finding is inconsistent with the results of earlier study carried out on attitudes of CBR

workers towards people with disabilities. Neither contact with people with disabilities nor the work experience variables were significant to the CBR workers attitude score (Paterson, 1999).

Conclusion

The CHWs play an important role in early identification of children with developmental delays. The attitudes and role played by CHWs is vital in the primary care settings, since a number of developmental disorders are preventable and substantial proportion can be suitably rehabilitated if identified at an early period. The CHWs such as ASHAs, AWWs and JHAs exhibited positive attitude towards children with DDs. The education, income and work experience exert significant influence on attitude of CHWs who are working as interface between the community and health care systems. As rightly pointed out by Massie (2006) attitudes to disability are the major barrier to disabled peoples' full participation. There is a greater need for investigating the attitude and awareness of people involved with children during early childhood years to develop effective strategies and sustained approach to enhance the quality of life of children with developmental delays.

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Table – 1: Personal Characteristics of Community Health Workers

Personal Information			ASH A (n ₁ =62)	AWWs (n ₂ =408)	JHAs (n ₃ =59)	Total (N=529)	χ^2 value Sig.
Area	Rural	No	62	224	27	313	50.248** (d.f=2) P<0.001
		%	100.0	54.9	45.8	59.2	
	Urban	No	0	184	32	216	
		%	.0	45.1	54.2	40.8	
Age Groups	20 to 30 years	No	21	73	5	99	68.020** (d.f=6) P<0.001
		%	33.9	17.9	8.5	18.7	
	30 to 40 years	No	36	120	12	168	
		%	58.1	29.4	20.3	31.8	
	40 to 50 years	No	5	143	18	166	
		%	8.1	35.0	30.5	31.4	
	50 to 60 years	No	0	72	24	96	
		%	.0	17.6	40.7	18.1	
Education Qualification	Degree	No	1	19	5	25	30.353** (d.f=4) P<0.001
		%	1.6	4.7	8.5	4.7	
	PUC	No	8	102	30	140	
		%	12.9	25.0	50.8	26.5	
	Up to SSLC	No	53	287	24	364	
		%	85.5	70.3	40.7	68.8	
Salary Groups	Up to Rs 5000/-	No	62	342	0	404	542.133* * (d.f=4) P<0.001
		%	100.0	83.8	0.0	76.4	
	Rs. 5001 to 10,000/-	No	0	66	0	66	
		%	.0	16.2	0.0	12.5	
	Above Rs.10,000/ -	No	0	0	59	59	
		%	0.0	0.0	100.0	11.1	
Religion	Hindu	No	61	371	52	484	4.806NS (d.f=2) P<0.090
		%	98.4	90.9	88.1	91.5	
	Non- Hindus	No	1	37	7	45	
		%	1.6	9.1	11.9	8.5	
Duration of Work Experience	Up to 5 years	No	28	95	4	127	113.39** (d.f=6) P<0.001
		%	45.2	23.3	6.8	24.0	
	5 to 10 years	No	32	81	5	118	
		%	51.6	19.9	8.5	22.3	
	10 to 20 years	No	1	158	19	178	
		%	1.6	38.7	32.2	33.6	
	20 years and above	No	1	74	31	106	
		%	1.6	18.1	52.5	20.0	

Table – 2: The Attitude Score of Community Health Workers towards children with Developmental Delays

Subject (N)	Mean	SD
529	88.10	9.507

Table – 3: The Attitude Scores of Community Health Workers towards the Children with developmental delays based on study variables

Variables		N	Mean	SD	F / t value
Occupation	Anganwadi workers	408	88.38	9.856	2.686NS (d.f=2, 526) P>0.069
	ASHAs	62	85.52	7.075	
	Junior Health Assistants	59	88.88	8.948	
Areas	Rural	313	87.65	9.444	-1.312NS (d.f=1, 527) P>0.190
	Urban	216	88.75	9.581	
Age groups	20 to 30years	99	90.05	10.063	2.290NS (d.f=3, 525) P>0.077
	30 to 40 years	168	88.40	8.811	
	40 to 50 years	166	87.13	10.125	
	50 to 60 years	96	87.25	8.764	
Educational groups	Up to 10 th Std	364	87.03	9.533	7.891** (d.f=2, 526) P<0.001
	PUC	140	90.21	9.146	
	Degree	25	91.84	8.439	
Religion groups	Hindus	484	88.14	9.621	0.288NS (d.f=1, 527) P<0.773
	Non-Hindus	45	87.71	8.264	
Income groups	Up to Rs. 5000/-	404	87.29	8.924	8.652** (d.f=2, 526) P>0.001
	Rs. 5001 to 10000/-	66	92.39	12.063	
	Above Rs. 10,000/-	59	88.88	8.948	
Duration of work Experience	Up to 5 years	127	90.14	9.351	2.626* (d.f=3, 525) P<0.050
	5 to 10 years	118	87.63	9.295	
	10 to 20 years	178	87.49	10.117	
	20 years and above	106	87.21	8.603	

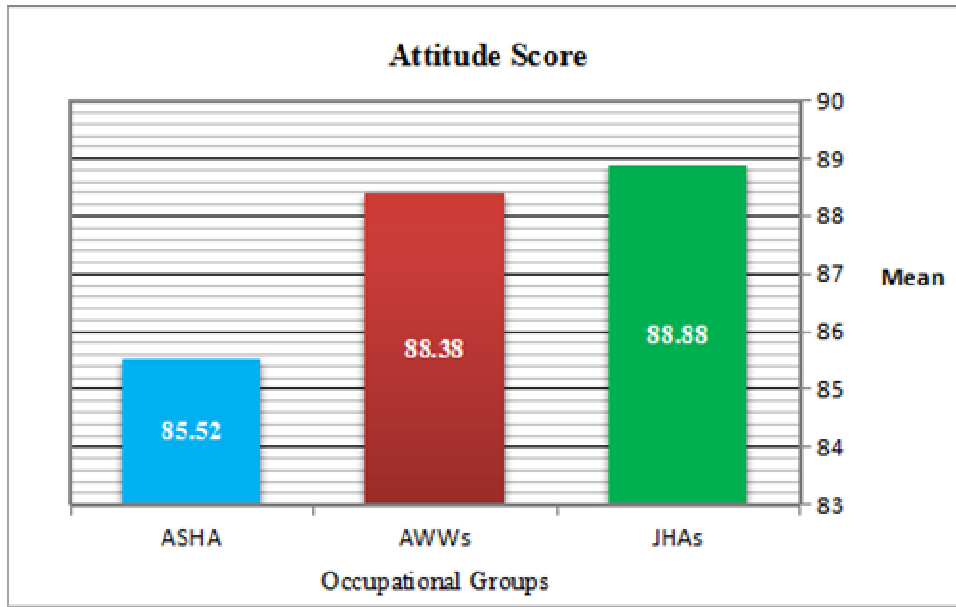


Fig – 1: Attitude scores towards Children with Developmental Delays among different Community Health Workers

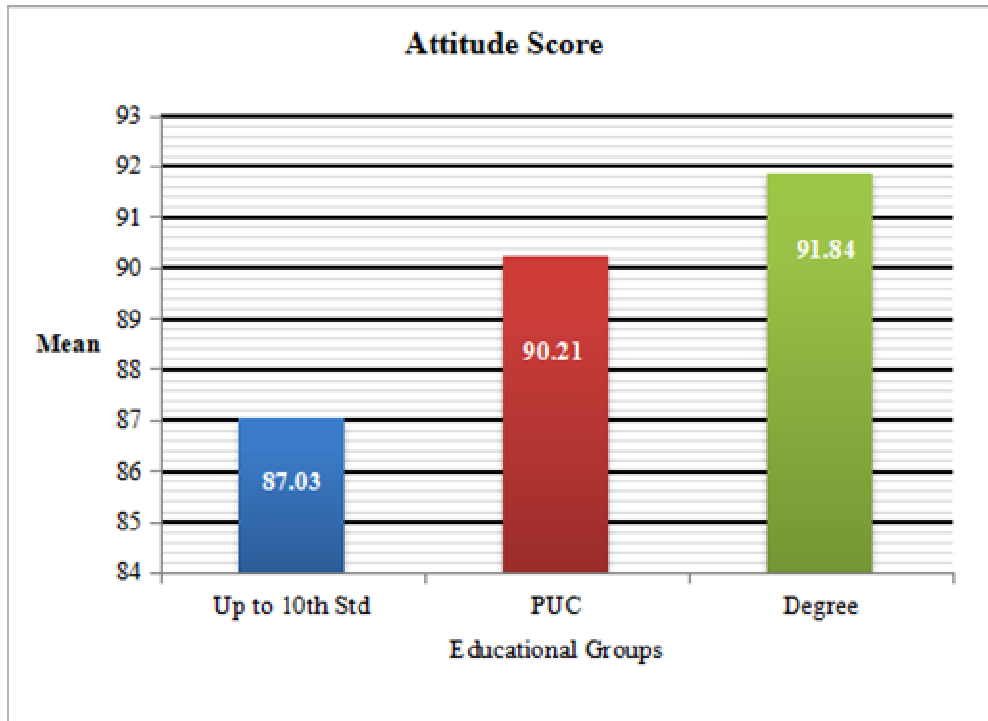


Fig – 2: Attitude Scores towards the Children with developmental delays among different Educational Groups of Community Health Workers

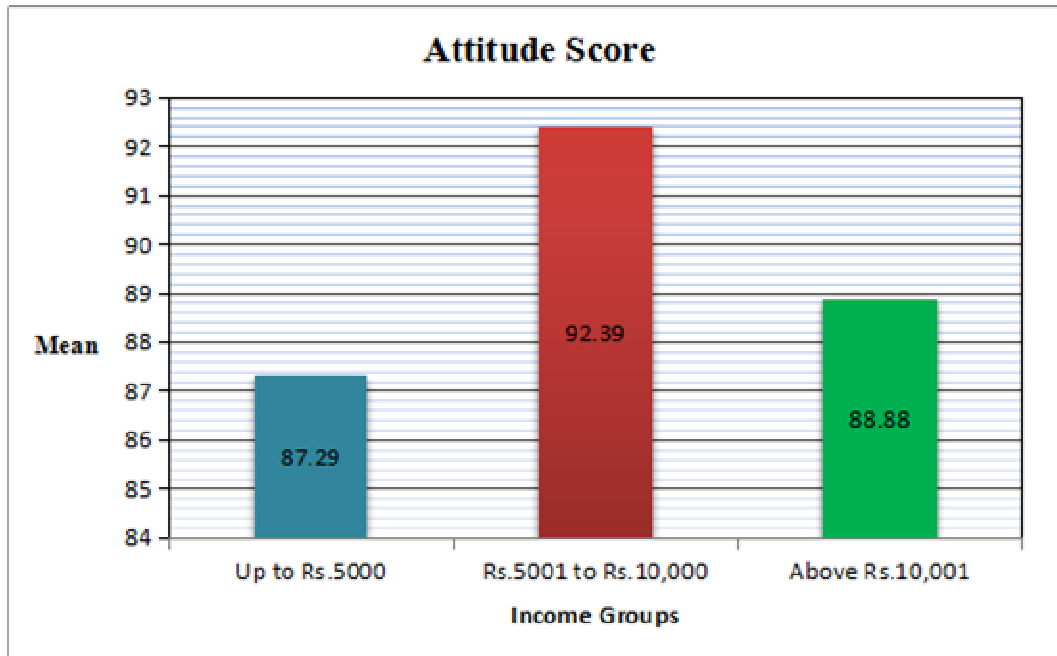


Fig – 3: Attitude Scores towards the Children with developmental delays among different Income Groups of Community Health Workers

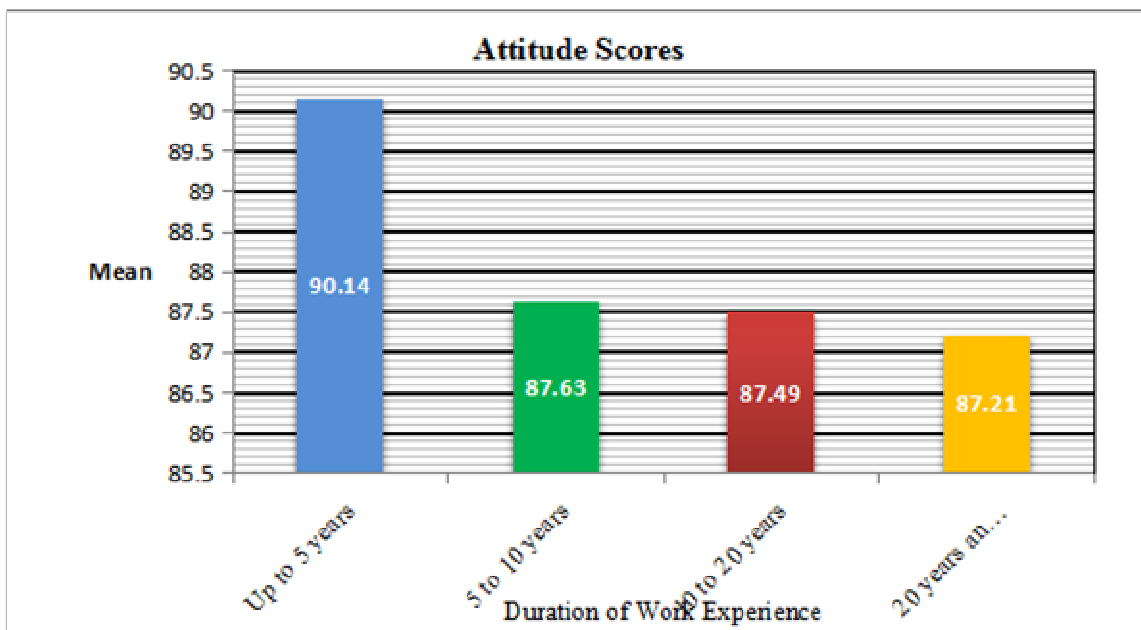


Fig – 4: Attitude Scores towards the Children with developmental delays among Community Health Workers of different duration of Work Experience

Reference

- Aiden Hardeep and McCarthy Andrea (2014) Current attitudes towards disabled people, Scope About disability, UK <http://www.scope.org.uk>
- Cervasio Kathleen (2012) Attitudes of Nurses Caring for Children with Disabilities, Journal of Nursing & Care, Vol. 1 (3): 1000e103, <http://dx.doi.org/10.4172/2167-1168.1000e103>
- Cervasio Kathleen and Fatata-Hall Kimberley (2013) Attitudes of Nurse toward Children with Disabilities: The Attitudes of Nursing Students toward Children with Disabilities: An Experimental Design, International Journal of Physical Medicine & Rehabilitation, Vol. 1(5): 140. doi:10.4172/2329-9096.1000140
- Das Rubby, Adhikari Phanindra, Sharma Bhogendra (2013) Knowledge, Attitude and Practice Survey of Community People Regarding Mental Illness: Evidence from Dang District of Nepal, Journal of Young Medical Researchers, Aug-Feb, Vol. 1(1): e1
- First Post (2015) In India, high percentage of kids with disabilities still out of school: UN Report, F. India, Jan 21, <http://www.firstpost.com/living/india-makes-progress-bringing-children-schools-un-2056745.html>
- Greiner Ann C. and Knebel Elisa (2003) Health Professions Education: A Bridge to Quality. Institute of Medicine, Washington DC: National Academies Press
- Massie, B. (2006) 'Participation – have we got an Attitude Problem?' Paper presented in the NDA 5th Annual Conference Civic, Cultural and Social Participation: Building an Inclusive Society, Dublin, Ireland, 16th November, www.nda.ie/publications/attitudes/
- Mathur G.P., Mathur Sarla, Singh, Y.D, Kushwaha K.P. and Lele S.N. (1995) Detection and Prevention of Childhood Disability with the Help of Anganwadi Workers, Indian Pediatrics, Vol. 32 (7): 773-777
- Munyi Chomba Wa (2012). *Past and Present Perceptions towards Disability: A Historical Perspective*. Disability Studies Quarterly Vol 32, (2)
- Nair M.K. and Radhakrishnan S.R. (2004) Early childhood development in deprived urban settlements, Indian Pediatrics, March, Vol. 41(3): 227-237
- Nair M.K., George B., Padmamohan J., Sunitha R.M., Resmi V.R. and Prasanna G.L. and Leena M.L. (2009) Developmental delay and disability among under-5 children in a rural ICDS Block. Indian Pediatrics, Jan Suppl. Vol. 46: 75-78.
- National Commission for Protection of Child Rights (2010) Report of Consultation on Identifying Best Practices in Early Detection and Intervention for Children with Disabilities , organized by NCPCR at Vigyan Bhavan, New Delhi on 17th Feb 2010, <http://www.ncpcr.gov.in>

- Paterson John (1999) Community Based Rehabilitation Workers of South India: Their Attitude and their education, Asia Pacific Disability Rehabilitation Journal, Vol. 10: (1), <http://www.dinf.ne.jp/doc/english/asia/resource/apdrj/z13jo0300/z13jo0307.html>
- Pelzang Rinchen (2009), Attitude of Nurses towards Mental Illness in Bhutan, Journal of Bhutan Studies, Vol. 22: 60-76
- Poon Jennifer K, Angela C. Larosa and Pai G Shashidhar (2010) Developmental Delay: Timely Identification and Assessment, Indian Pediatrics May, Vol. 47: 415-422
- Rao Allu Jeevan, Sharmila Mallenini and Rishita N. (2003) Awareness of and Attitudes to Disability in Rural and Urban Communities of Andhra Pradesh, India, International Journal of Disability Community and Rehabilitation, Vol.2(1). http://www.ijdc.ca/VOL02_01_CAN/articles/sharmila.shtml
- Rao Shaila (2004) Faculty attitudes and students with disabilities in higher education: A literature review, College Student Journal, Vol. 38(2): 191-199
- Satchidanand Nikhil, Gunukula Sameer K., Yim Lam Wai, McGuigan Denise, New Isaiah, Symons Andrew B., Withiam-Leitch Matthew and Akl Elie A. (2012) Attitudes of Healthcare Students and Professionals Toward Patients with Physical Disability - A Systematic Review, American Journal of Physical Medicine & Rehabilitation, June, 91:(6): 533-545, doi: 10.1097/PHM.0b013e3182555ea4
- The Malta Independent (2011) The Effect of negative attitudes towards the person with disability, The Malta Independent News, Wednesday, 11th May 2011, <http://www.independent.com.mt/articles/2011-05-11/news/the-effect-of-negative-attitudes-towards-persons-with-disability-292143>
- United Nations Children's Fund (2003) Examples Of Inclusive Education India, UNICEF, Regional Office for South Asia, Nepal, <http://www.unicef.org/rosa/InclusiveInd.pdf>
- United Nations Children's Fund (2016) What if we said 'no' to stigma and discrimination? UNICEF, 18th April, www.unicef.org/disabilities
- World Health Organization (2012) Early Childhood Development and Disability: A discussion paper, WHO and UNICEF, WHO Press, Geneva