E-ISSN: 2706-8927
P-ISSN: 2706-8919
www.allstudyjournal.com
IJAAS 2021; 3(1): 439-442
Received: 07-11-2020
Accepted: 19-12-2020

Dr. Geetha A
Assistant Professor, Department of Psychology, Maharani Women's Arts Commerce and Management College, Seshadri Road, Bengaluru, Karnataka, India

Corresponding Author:
Dr. Geetha A
Assistant Professor, Department of Psychology, Maharani Women's Arts Commerce and Management College, Seshadri Road, Bengaluru, Karnataka, India

Attention deficit hyper activity among tribal and urban children: An economic perspective

Dr. Geetha A

Abstract
Objective: Mental health can be directly related to economics by the potential of affected individuals to contribute as human capital. Common childhood mental health problems may alter the human capital accumulation of affected children. Studies have indicated that prevalence of ADHD is more in the urban area than rural area. In this background an attempt has been made to study the difference in attention deficit and hyper activity symptoms as identified on Conner's rating scale between tribal and urban children and understand the economic perspective of the same.
Methodology: The sample considered for the study was children aged between 6 to 8 years studying in 2nd standard to 4th standard from tribal ashrama schools and private schools. A purposive sampling and between group design was considered for the study. The parents or teachers of children were administered Conner's rating scale. Parents and teachers of children identified as probable case of attention deficit hyperactive disorder i.e. above the cutoff point on rating scale were called in for focused group discussion to understand qualitatively the impact of such children of/on the environment and economy. The results were analyzed by computing 't' test to study the difference between the mean scores of tribal and rural children on Conner's rating scale. The content on focused group discussion was qualitatively analyzed.
Results: The results indicated that tribal children showed significantly less symptoms of attention deficit hyperactive disorder on Conner's rating scale when compared to urban school children. Qualitative analysis indicted a great influence of specific environment as risk for developing attention deficit hyperactive disorder and huge time, energy and economic burden.
Conclusion and implication: In this study tribal children showed significantly less symptoms of attention deficit hyperactive disorder when compared to urban children. Hence there is a need for changing the prevailing urban environment for promotion of healthy behavior in general and specifically avoiding increase of ADHD in children which directly and indirectly increasing the economic cost and burden of the society.

Keywords: Attention deficit hyper activity, economic perspective, tribal and urban children

1. Introductions
Mental health is an integral part of health (WHO, 2012) [19]. Most mental disorders have their onsets during childhood or adolescence. 75% of all adult mental disorders begin before 24 years, and 50% of these by the age of 14 years. Good mental health is essential for all children to thrive and grow to their full potential. Children's mental health is one of the most important investments any society can make (Belfer, 2008; Patel, Flisher, Nikapota, and Malhotra, 2008; Hysenbegasi, Hass and Rowland, 2005; Srinath, Kandasamy and Golhar, 2010) [2, 13, 7, 14]. Child and adolescent mental health is essential for the building and maintenance of stable societies.
Attention-deficit hyperactivity disorder (ADHD) is one of the most common chronic conditions of childhood, with many negative consequences that could persist through adolescence into adulthood. The major primary symptoms of ADHD include poor attention span with distractibility, hyperactivity and impulsivity which is seen in terms behaviours like failing to finish the things started, shifting from one uncompleted activity to other, easily distracted to external stimuli, often loosing things, failure to sustain attention-follow instructions and forgetting daily course of activity, fidgeting, difficulty in sitting still at one place for long, Moving about here and there, talking excessively and interfering in other peoples activity, acting before thinking, on the spur of the movement and difficulty in waiting for turn at work/play.
The secondary symptoms of ADHD include low academic performance, low self esteem, sleep related problems, difficulty in social interaction (especially with peers) and fluctuation

in performance. It seems to be occurs in about at least 3% of school going children, some studies indicating up to 15% of school going children. Studies have also shown that the ADHD children and adolescents have correlation with repeating a grade, drop out from school, teen age related complications, alcohol and substance abuse, getting into risky behaviours, being arrested and as adult being fired from job repeatedly.

The World Health Organisation's definition of Health has been amplified to include the ability to lead a "socially and economically productive life" (WHO, 1978) [17]. Poor social and academic success due to childhood illness has far reaching economic consequences. Mental health can be directly related to economics by the potential of affected individuals to contribute as human capital. Common childhood mental health problems may alter the human capital accumulation of affected children. The burden of Mental, Emotional and Behavioural disorders among children and adolescents is 10- 20% of the population in developing countries (Srinath, Kandasamy and Golhar, 2010) [14]. Women and children are known to bear a greater burden and cost due to mental illnesses, especially in developing countries (Chandra, Kommu and Rudhran, 2012) [3]. The burden of illness associated with ADHD is high for affected individuals, their families, and society at large.

Recent studies have indicated that prevalence of ADHD is more in the urban area than rural area and reasons being the environmental conditions in terms of attitude of parents and teachers in terms of upbringing of children, their involvement and prevailing space and environment provided for children's activity. In this background an attempt has been made to study the difference in attention deficit and hyper activity symptoms between tribal and urban children and the impact on/of economics.

2. Methodology

The problem was to study the attention deficit and hyper activity symptoms among tribal and urban children and understand an economic impact of the same. The objective was to study the difference in attention deficit and hyper activity symptoms as identified on Conner's rating scale between tribal and urban children. The sample consisted of children aged between 7 to 8 years studying in 3rd standard to 4th standard from tribal ashrama schools and private schools in Bangalore were considered for the study. Both girls and boys were considered for the study. Children with co-morbidity of probable conduct disorder and learning disability as identified on Developmental Psychopathology Checklist (DPCL) were not considered for the study. Children not being regular to school (< 80% attendance) were not considered for the study. A between group design with purposive sampling was opted for the study. Later, Parents and teachers of children identified as probable case of attention deficit hyperactive disorder i.e. above the cut-off point on rating scale were called in for focused group discussion to understand qualitatively the impact of such children of/on the environment and economy.

2.1 Tools

2.1.1 Developmental Psychopathology Checklist (DPCL) (Kapur, Barnabus, Reddy, Rozorio and Uma, 1994) [8]

DPCL is a 124 item comprehensive tool to assess psychopathology in children below the age of 16 years. Inter-rater reliability of the Developmental Psychopathology Checklist (DPCL) shows a correlation of 0.968 indicating a high correlation at 0.01 level. The Developmental Psychopathology Checklist (DPCL) was used as a screening tool to identify probable case of conduct disorder and learning disability among children in this study.

2.1.2 Conner's' Rating Scales-Revised (Conner, 2000) [4]

A paper and pencil screening questionnaires designed to be completed by parents and teachers to assist in evaluating children for attention-deficit/hyperactivity disorder (ADHD).

The teachers' short version contains 28 items, with 4 point rating scale scores ranged between 0-3. Maximum score being 84, and cut off score of 28 indicating possible case of ADHD

2.1.3 Focused group discussion (devised for the study)

The Focused group discussion consisted of questions related to the impact of such children of/on the environment and economy. E.g. Items included aspects like school functioning, need for tutorials, number of individuals need to care for child; …..

2.2 Procedure

The tribal and urban school children were screened on DPCL (administered on teachers) to identify probable case of Conduct disorder and Learning disability. The parents or teachers of children of tribal and urban school children were administered Conner's rating scale. Parents and teachers of children identified as probable case of attention deficit hyperactive disorder i.e. above the cut-off point on Conner's rating scale were called in for focused group discussion to understand qualitatively the impact of such children of/on the environment and economy.

2.3 Analysis of results

The results were analyzed by computing t test to study the difference between the mean scores of tribal and rural children on Conner's rating scale. The focused group discussion was qualitatively analyzed.

3. Results and discussion

Table 1: Showing the demographic details of the sample:

Sample characteristics	Tribal		Urban	
	Boys	Girls	Boys	Girls
Sex	52	13	48	17
Total Number	100		100	
Type of school	Ashrama school		Private school	
Number of schools	8		2	
Class	Studying in 3 - 4th standard			
Age	7 - 8 years			

Table 2: Showing the mean, standard deviation and t ratio on Conner's rating scale for tribal and rural children:

	Mean	SD	t ratio
Tribal	9.66	6.68	7.67**
Urban	17.90	8.40	
**P = 0.01 Level (Significant at 0.01 level)			

Table 3: Showing the percentage of children above cut off point on Conner's rating scale for tribal and urban children:

	Boys	Girls	Total
Tribal	3	0	3
Urban	11	4	15

3.1 Demographic details of the sample
As indicated in table 1 hundred each of tribal and rural children were considered for the study. Among tribal group 52 and 13 individuals were boys and girls respectively. In the same manner for urban group 48 and 17 individuals were boys and girls respectively. Tribal children were studying in ashrama schools and urban children were studying in private schools. These children were studying in 3rd to 4th standard in their respective schools, and they were aged between 7 to 8 years.

3.2 't' ratio on Conner's rating scale for tribal and rural children
On Conner's Rating Scale as shown in table 2 the tribal and urban school children has mean scores of 9.66 and 17.90 respectively and t ratio being 7.67 which was significant at 0.01 level. The mean score were significantly less for tribal school children, indicating that urban children had significantly more symptoms of ADHD when compared to tribal school children.

3.3 Percentage of children above cut off point on Conner's rating scale for tribal and urban children
In the present study as shown in table 3 the percentage of children above cut off point on Conner's rating scale for tribal and urban children were 3 and 15 respectively, indicating that the percentage of children identified as probable case of ADHD on rating scale was extremely more in urban area than the tribal area. In gender comparison it can be seen that for both tribal and urban area the boys have more percentage of probable case of ADHD than girls.

3.4 Qualitative analysis
The qualitative analysis indicated the following aspects more for urban children when compared to tribal students:

- More academic home work.
- Tuitions to attend after class hours.
- Had to keep quite most of the time.
- Follow instructions given by teachers.
- Was evaluated repeatedly on academics.
- Not allowed to play for long.
- Parents insisted not to go out of house and play.
- Was stopped from manipulating things.
- Punished many time for the behaviour
- Labeled as naughty person.
- Not allowed to play with neighborhood as the child had complaints from neighborhood.
- Had many structured toys to play with.
- Often given negative feedback about behaviour.
- Given many assignments at school.
- Long class room hours.
- Was put into extracurricular activity- singing, drawing etc.
- Visited physician related to increases activity.
- Emphasis more on writing and reading.
- Decreased food intake and eating more junk food
- Complaints that child was not serious about studies and may be lazy only for academic activity……..

The qualitative analysis indicated the following aspects for tribal children and studies have indicated that such situations are ideal for children with ADHD:

- No academic pressure
- Acknowledged for talking more
- Large space to play
- No evaluation pressure
- Play time even after school
- Allowed to manipulate materials around house
- Neither labeled nor punished by teachers
- No structured play articles
- No assignments from school
- No emphasis of writing

3.5 Discussion
In the present study on Conner's Rating Scale for identification of symptoms of ADHD the mean score were significantly less for tribal school children than urban school children which indicated that urban school children had significantly more symptoms of ADHD when compared to tribal school children. Also the percentage of children identified as ADHD based on the cut-off point on Conner's rating scale was more for urban than tribal school going children. Qualitative analysis indicted a great influence of specific environment as risk for developing attention deficit hyperactive disorder and huge time, energy and economic burden.

Mental health can be directly related to economics by the potential of affected individuals to contribute as human capital. Common childhood mental health problems may alter the human capital accumulation of affected children. Problems associated with ADHD which increase economic burden on individual, family & society. Attention-deficit hyperactivity disorder (ADHD) is one of the most common chronic conditions of childhood, with many negative consequences that could persist through adolescence into adulthood. Thus, the burden of illness associated with ADHD is high for affected individuals, their families, and society at large.

Mental, Emotional and Behavioural disorders like ADHD are a serious threat to national security and economy. Healthy working environments, safe living conditions, are seriously compromised by mental, emotional and behavioural disorders (WHO, 2012) [19]. Thus the impact of mental illnesses on the nation's/world economy is huge. Some of the losses can be measured while others cannot be quantified. Health care costs alone do not account for the full economic costs of mental illnesses. Indirect costs are more than direct costs with regards to mental illness and behavioural issues (Teh-wei Hu, 2012).

Articles have been reviewed and information about ADHD-associated utilization of healthcare resources, direct medical costs, and the costs or cost effectiveness of pharmacological interventions has been updated. Published estimates suggest that direct medical costs for youth with ADHD are approximately double those for youth without ADHD. Cross-sectional studies suggest that ADHD-associated costs are highest for mental health services and pharmaceutical costs, and are greatest for youth with co-morbid psychiatric conditions (Cynthia L. Leibson & Kirsten Hall Long, 2003) [5]. Andrew Lloyd & others (2011) [1] attempted to estimate

the cost effectiveness of attention-deficit hyperactivity disorder (ADHD) treatments in the past have reported a small gain in health-related quality of life. Intervention for hyperkinetic children include changes to be brought about in the environmental conditions to at school, home and surrounding, involving children in attention enhancing tasks, performing motor coordination activities to using behavioural techniques.

Number of studies in children with attention deficit/hyperactivity disorder (ADHD) who were trained in attention and working memory report significant gains following several weeks of daily or every-other-day training (Kerns *et al*. 1999, Klingberg *et al*. 2002) [9, 10]. Leibson (2001) [11] showed that the nine-year median medical costs for children with a diagnosis of ADHD were US$ 4306, compared with US$ 1944 for those without this disorder, owing to higher rates of emergency health care and visits for outpatient care to primary care clinicians. These costs did not include those for psychiatric or other mental health professional care.

Instead of working on intervention which is again an economic burden promoting healthy behavior has to be encouraged by changing the prevailing urban environment. The WHO Atlas project (WHO, 2005) [18] has documented that 23% of countries have no programmes for children. It is also noted that only 10–15% of young people with mental health problems receive help from the existing child mental health services. Economists have suggested that improvements could be made by promoting more active dissemination of mental health economic analysis and employing greater use of knowledge brokers. Hence there is a need for changing the prevailing urban environment for promotion of healthy behavior in general and specifically for avoiding increase of ADHD in children at urban areas which directly and indirectly increasing the economic cost and burden of the society.

4. Conclusions

Urban children had significantly more symptoms of ADHD when compared to tribal school children. Qualitative analysis indicted a great influence of specific environment at urban areas as risk for developing attention deficit hyperactive disorder and huge time, energy and economic burden. Promoting healthy behavior has to be encouraged by changing the prevailing urban environment.

5. Implications

The study identified that urban school children are more prone to be ADHD than tribal children, and environment playing a vital role in the same. The economic perspective is an integral part of thinking through mental health system development. Too much is at stake to ignore this economic dimension of mental health care, whether measured in terms of lost health gains, misallocated monies or unfair financing mechanisms. Hence there is a need for changing the prevailing urban environment for promotion of healthy behavior in general and specifically avoiding increase of ADHD in children which directly and indirectly increasing the economic cost and burden of the society.

6. References

1. Andrew Lloyd, Paul Hodgkins, Rahul Sasane, Ron Akehurst, Edmund Sonuga-Bark JS. Estimation of Utilities in Attention-Deficit Hyperactivity Disorder for Economic Evaluations 2011.
2. Belfer ML. Child and adolescent mental disorders: the magnitude of the problem across the globe. J Child Psychol Psychiatry 2008;49(3):226-36.
3. Chandra PS, Kommu JV, Rudhran V. Schizophrenia in women and children: A selective review of literature from developing countries. Int Rev Psychiatry 2012;24(5):467-82.
4. Cornner. Conners' Rating Scales-Revised Technical Manual. North Tonawanda, New York: Multi Health System 2000.
5. Cynthia Leibson L, Kirsten Hall Long. Economic Implications of Attention-Deficit Hyperactivity Disorder for Healthcare Systems 2003.
6. Green CS, Bavelier D. Action video game modifies visual selective attention. Nature 2003;423:534-537.
7. Hysenbegasi A, Hass SL, Rowland CR. The impact of depression on the academic productivity of university students. J Ment Health Policy Econ 2005;8(3):145-51.
8. Kapur M, Barnabar I, Reddy MV, Rozasio J, Uma H. Development of a checklist for assessment of childhood psychopathology in the Indian setting. Indian Journal of clinical psychology 1994;21:40-52.
9. Kerns KA, Eso K, Thomson J. Investigation of a direct intervention for improving attention in young children with ADHD. Developmental Neuropsychology 1999;16(2):273-295.
10. Klingberg T, Forssberg H, Westerberg H. Training of working memory in children with ADHD. Journal of Clinical and Experimental Neuropsychology 2002;24(6):781-791.
11. Leibson CL *et al*. Use and costs of medical care for children and adolescents with and without attention-deficit/hyperactivity disorder. Journal of the American Medical Association 2001;285(1):60-66.
12. Mental health atlas-Geneva, World Health Organization 2005.
13. Patel V, Flisher AJ, Nikapota A, Malhotra S. Promoting child & adolescent mental health in low and middle income countries. J Child Psychol Psychiatry 2008;49(3):313-34.
14. Srinath S, Kandasamy P, Golhar TS. Epidemiology of child and adolescent mental health disorders in Asia. Curr Opin Psychiatry 2010;23(4):330-6.
15. Teh-wei Hu. Disease Control Priorities Project. Working paper No. 31 October. An International review of the economic costs of mental illness 2004.
16. Thara R, Kamath S, Kumar S. Women with schizophrenia and broken marriages--doubly disadvantaged? Part I: patient perspective. Int J Soc Psychiatry 2003;49(3):225-32.
17. World Health Organization. Declaration of Alma-Ata International conference on primary health care, Alma-Ata, USSR, 6-12 September 1978.
18. World Health Organization. Mental health atlas 2005, 1-45.
19. World Health Organization. Investing in mental health 2012. Available from: http://www.who.int/mental_health/media/investing_mnh.pdf (accessed 10 August 2012).