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Does Attention Deficient & Hyper Activity Disorder Among Children Is Caused Through a Familial Factor.

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ABSTRACT

The present study titled as does attention deficient & hyper activity disorder among children is caused through a familial factors was conducted in Psychiatry ward of Khyber Teaching Hospital, Lady Reading Hospital and Hayatabad Medical Complex, Peshawar. A sample size of 127 patients, were randomly selected and data was collected therein. A conceptual frame work composed of attention deficit and hyper activity disorder among children (dependent variable) family environment (independent variable). Data were gathered through a well design interview schedule while ensuring the incorporation of each aspect of the study. Dependent variable was cross tabulated and indexed for ascertaining the relationship through association of chi-square test x^2 was put into exercise. At bi-variate analysis the study found that parental refusal can harm the condition of ADHD ($p<0.05$); parent quarrel in normal routine which can worsen the severity of ADHD ($p<0.05$); having ADHD patient in the family, the family always focus special attention ($p<0.05$) . The study concluded that intra family marriages if avoided, ADHD children were treated as normal being and Parents need to be trained with coping strategies about major disorders i.e. ADHD and they should refrain from quarrelling in front of their child at home were put forwarded some of the recommendations in the light of present study.

KEYWORDS: *Attention Deficit Hyperactivity Disorder, Family environment, Chi-squre, Peshawar.*

INTRODUCTION

Attention Deficient Hyperactivity Disorder (ADHD) refers to a *behavioral disorder which could easily be identified by an observer by tracing child who suffering from it*. According to the Convention on the Rights of the Child (CRC) stated that, whoever comes under the range of 18 years of age to be called as a child unless the state's law interprets him or her above the prescribed age range of child. ADHD is confined to children and such symptoms are prominently associated with disorder such as deficient in attention, mood swing, increase muscle-and-nerve acts and high impulsiveness. ADHD in a very early age severely effects child's all aspect of life particularly cognitive, educational, emotional, social and developmental perspectives (Rader, McCauley and Callen, 2009). It is believed that ADHD is prevalent in general population with the range of 5% to 20% depending on the environment they are living in. Similarly, it is

prevalent among children only and their functional deficient may persist till their adulthood (Barbaresi et al., 2002 & Polanczyk et al., 2014).

The concept of Attention Deficient Hyperactivity Disorder (ADHD) was used by Dr. Heinrich Hoffman in 1845. He was firmly interested in elaborating the psyche of children. His prior-intent was to understand his own 3 years old son. The interesting turn came in his contribution when he collected books regarding poems pertaining with children particularly which eventually led him to do comprehensive wok on the psyche problems or disorders related to children as the very area of psychiatry was untouched. This was his son whose problem turned Dr. Heinrich Hoffman to work more extensively on ADHD. Since there are thousands of scientific-based papers have been published on ADHD which have empirical understanding (Still, 1902).

Likewise, from the dawn of the 20th century, the main scientific metaphor of ADHD and its symptoms are believed to be existing in children. It is believed that ADHD is confined to children only. Similarly, another study depicts that it is not necessarily accepted that those children who are intellectually sound are not vulnerable to be identified with ADHD while several studies revealed that these children with normal intellectual grasping capacity could also be caught with ADHD as in very early age it is often difficult to be diagnosed before any clinical sitting (Still, 1902). It has been noted that early age head injury could trace or lead to hyperactivity in children as severe damage to the brain which results ADHD respectively (Blau, 1938 and Strecker & Ebaugh, 1924).

Contemporary scenario of World Health Organization (WHO) estimated in its report that 3% to 4% of adults worldwide have ADHD, out of which 4.5% in the United State only. All of those who are caught by this psychiatric disorder, among them a large proportion of patients, almost 8 million to 10 million are not going through any clinical sitting or testing for systematic diagnosis. Very sadly round about millions of ADHD patients did not seek any quality of treatment due to their ignorance or low level of awareness in initial phase of occurrence of the very disorder (Barkley et al., 2008).The WHO study also reported that large portion of adults with ADHD are usually absent from organization where they serve their respective duties. The Centers for Disease Control and Prevention reported that their absence from workplace leads to break the plane environment or cycle of profits although in a result organization face losses about $ 3.7 billion (Centers for Disease Control and Prevention, 2009).

The commonness of ADHD has been noticed in Pakistan about 2.49% (Karim et al., 1998). Boys has significantly higher ratio with ADHD than girls, but ratio varies remarkably from 2:1 to 9:1. Gender difference is less distinct and prominent for being not attentive type of ADHD. Boys are more exposed to hostile and antagonistic behavioral problems (Gaub& Carlson, 1997). Children with ADHD contribute 30-40% of consultation to child mental health physicians (Barkley, 1998).

FAMILY ENVIRONMENT

Socio-demographic factors pertaining with ADHD i.e. insufficient income, low level of schooling and large families etc. have been inquired by researchers, as well as features related to family environment given to children i.e. parental emotional support, parents' socialization style and family functioning (Biederman et al; 1995; Rutter et al; 1975). It is reported that defective

socialization and dysfunctional families may smoothens way to the emersion of ADHD (Scahill et al; 1975). Schroeder & Kelley (2009)have drawn the attention that it has been evident from the past researches that children with ADHD within a family environment that was not well-organized in term of its daily functioning and chronic family conflict than that of organized group. Johnson & Mash (2001) revealed in their review paper, have proposed that the presence of ADHD in children is directly associated with various degrees of problems in the family and in marital functioning.

Consistent violence in family is considered as psychosocial factor that has been added to the literature about ADHD, with pointing out that parent of children with psychiatric disorder most often use physical methods to affirm them (Alizadeh et al; 2007). In Iran parents of ADHD children used corporal punishment without good sense or judgment to get their children to the line of conformity. Another study asserts that the psychosocial contribution of environment to ADHD is rapidly growing. Similarly, terrible marital fight between parents or guardians of ADHD children leaves worse effect on the mental development of their children (Sandberg, 2002). It is claimed that family environment exerts primary influence on mental capacity or cognitive development level of the child with ADHD. Violence at family level is considered most vulnerable factor for child's emergence of mental health that obstructs his capacity to interpret the world logically (Jaffe et al., 2004). Based on the above literature, this study is designed to highlight a burning issue of ADHD among children's in *Pukhtun* society; along with to see that whether there is any association of family environment with ADHD-through application of Chi-square test.

MATERIALS AND METHODS:

Three hospitals were the universe of the devised study i.e. Lady Reading Hospital (LRH), Khyber Teaching Hospital (KTH) and Hayatabad Medical Complex (HMC) at Peshawar, Khyber Pakhtunwa. ADHA patients at psychiatric wards of the aforementioned hospital were key respondents of the study. Overall population of ADHD patients at abovementioned three hospitals was 185. The required sample size for each hospital was came to be 127 as per Sekaran, (2003) criteria. Data was collected through structured interview schedule by the researcher by adopting direct inquiry. Then sample size was proportionally assigned to each single unit (hospital) by adopting proportion allocation method as given below; the formula of proportional allocation method is given below, ni= (Ni/N) x n (Chaudry, 1996).

ni = (Ni/N)x n

n = total sample size required.

N = Total population in study area.

Ni = Total population in each hospital.

ni = Sample size required for each hospital.

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Table no. 1: Proportional allocation of sample size as per hospitals

S.No	Name of the Hospital	Population Size(Patients) (N)	Sample Size (n)
1	Lady Reading Hospital	46	31
2	Khyber Teaching Hospital	74	51
3	Hayatabad Medical Complex	65	45
	GRAND TOTAL	**185**	**127**

Source: *Lady Reading Hospital (LRH), Medical Ward, Khyber Teaching Hospital (KTH), and Hayatabad Medical Complex (HMC) Peshawar (2018).*

A conceptual framework comprised of dependent variable "ADHD" and independent variable 'family environment"; along with dependent variable was indexed and cross tabulated by the virtue of Chi-Square test (x^2) as outlined by McCall and Rober (1975) which as follow;

$$\chi^2 = \sum_{i=1}^{r}\sum_{j=1}^{c}\frac{(O_{ij}-e_{ij})^2}{e_{ij}}$$

RESULTS AND DISCUSSIONS

Attention Deficient Hyperactivity Disorder (ADHD) refers to a behavioral disorder which could easily be identified by an observer by tracing child who suffering from it. ADHD is confined to children and such symptoms are prominently associated with disorder such as deficient in attention, mood swing, increase muscle-and-nerve acts and high impulsiveness. ADHD in very early age severely affects child's all aspects of life particularly cognitive, educational, emotional, social and developmental perspectives.

Table No 2 describes the frequency and percentage distribution of ADHD. Majority 80.3% of the respondents agreed that ADHD is behavioral disorder with particularly be found in children, followed by 19.7% were not sure about the statement. Furthermore, 81.1% of the respondents confessed that in initial phase of ADHD are very hard to be diagnosed, 18.9% were uncertain about the initial phase of ADHD. Likewise, majority 79.5% of the respondents agreed that ADHD has affected their cognitive and emotional capacitive strength. While 20.5% negated from the statement. Early age explanation over activities of a child is difficult to be monitored. Any act deviance on non-participation also either be situational or personal. However, frequency of occurrence of such acts through proper monitoring is not being owned by the concerned family, rather treated it occasional. Rader, McCauley and Callen(2009) acknowledged that ADHD is actually behavioral disorder and it seems difficult the child to be identified with disorder in its initial surge. Being ADHD patients children are more prone to be destabilized emotionally.

Moreover, majority 80.3% of the respondents agreed that ADHD is prevalent in adults as well and 19.7% negated the statement. Similarly, majority 80.3% of the respondents had the opinion that symptoms of ADHD changes as child grow up whereas 19.7% of the respondents showed disagreement with the statement. These findings of the study are supported by Barbaresi et al,. (2002) & Polanczyk et al,. (2014) who were stated that, it is prevalent among children only and their functional deficient may persist till their adulthood. Similarly, majority 59.8% of the

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respondents exposed that the impact of ADHD is alarming and challenging. While 20.5% of the respondents were not sure that whether ADHD is alarming or easily curable and followed by 19.7% of the respondents who negated from the statement. Likewise, majority 69.3% of the respondents had the view that ADHD is a familial disorder, having signs of spreading to others. Whereas, 20.5% of the respondents disagreed with the same statement and 10.2% of the respondents had no clue. It is either biological or social, yet to be ascertained. However in some of the cases, it is treated as transferable. These findings of the study are in consonance with the study of Baria (2013) who revealed that ADHD is very challenging and familial disorder and sometimes it is noticed that it often spread from one person to another. Likewise, majority 80.3% of the respondents urged that coping patients with ADHD is a social and psychological challenge. While 19.7% of the respondents had the opinion that coping ADHD patients has no serious concerns both socially and psychologically. These findings of the study are supported by Kaidar et al., (2003) who explained that for both parents and counseling professionals it is quite perplexing and problematic to cope ADHD psychologically and socially.

Table 3: Frequency and Percentage Distribution on the basis of ADHD

S.No	Attributes	Yes	No	Uncertain	Total
1	ADHD is behavioral disorder with particularly be found in children	102(80.3)	00(00.0)	25(19.7)	127(100.0)
2	In initial phase of ADHD is very hard to be diagnosed	103(81.1)	00(00.0)	24(18.9)	127(100.0)
3	ADHD effects the cognitive and emotional capacitive of child	101(79.5)	26(20.5)	00(00.0)	127(100.0)
4	ADHD is also prevalent in adults as well	102(80.3)	25(19.7)	00(00.0)	127(100.0)
5	The symptoms of ADHD changes as child grow up	102(80.3)	25(19.7)	00(00.0)	127(100.0)
6	The impact of ADHD is alarming and challenging	76(59.8)	25(19.7)	26(20.5)	127(100.0)
7	ADHD is a social dys-functionalism	90(70.9)	37(29.1)	00(00.0)	127(100.0)
8	ADHD is a familial disorder, having signs of spreading to others	88(69.3)	26(20.5)	13(10.2)	127(100.0)
9	ADHD is a psychological disorder, with signs of readdressed after particular period of time	101(79.5)	13(10.2)	13(10.2)	127(100.0)
10	Coping patients with ADHD is a social and psychological challenge	102(80.3)	25(19.7)	00(00.0)	127(100.0)

**Values in the table represent frequencies while values in the parentheses present percentage*

Respondents Perceptions with regards to Family Environment{Independent variable}

Table 4 depicts the family environment of the ADHD patients. Majority 59.1% of the respondents disclosed that they have not given desirable environment by family. Similarly, 40.9% claimed that they have given an adequate environment at home. In addition, majority 69.3% of the study respondents negated the statement by claiming that their family members

often do not pay keen attention to them. It could be attributed to this finding that patients complications pertaining to the effectees of ADHD and social environment were often over looked by the family members. These findings are further supported by Biederman et al.(1995) and Rutter et al. (1975).

Moreover, 60.6% of the respondents revealed that, their parents quarrel in normal routine which can worsen severity of ADHD, while 39.9% of the respondents opposed the statement. In addition, 69.3% of the study respondents viewed that, they often bother of their parents when they shout at each other, whereas 30.7% of the respondents disagreed with the statement. A sound and stable social and marital relationship at home would provide congenial environment. However, contrary to it, the patient prevalent situation as family was between their spouses. Sandberg(2002) believes that terrible marital fight between parents or guardians of ADHD children leaves worse effect on the mental development of their children.

Likewise, majority 69.3% of the respondents explained that their parents/guardian is not well-equipped with intervention techniques to combat or mitigate worse condition of ADHD. Furthermore, 59.1% of the respondents negatively responded to the statement that they are being consistently encouraged by family members who enhance their level of self-esteem and self-worth. These finding were indicating of the fact that proper awareness regarding the illness and its possible implications were not known to the patient. It could either be due to low literacy or non-awareness. Furthermore, 80.3% of the respondents believed that parental refusal can harm them vague condition of ADHD. Refusal by parents either of alienation to the outcome on pretending it to be treated at home mislead inspecting through a qualified doctor in a big dilemma in most of the families in the most developing region of the world. These findings of the study are supported by Sandberg (2002), who noticed that parental refusal could lead to severity of ADHD which further worsen the condition of child.

Table No-4: Frequency and Percentage distribution on the basis of Family Environment

S.No	Attributes	Yes	No	Uncertain	Total
1	You have given desirous environment at your family	52(40.9)	75(59.1)	00(00.0)	127(100.0)
2	Your family always focus special attention on you with special reference to ADHD	39(30.7)	88(69.3)	00(00.0)	127(100.0)
3	Your parent quarrel in normal routine which can worsen your severity of ADHD	77(60.6)	50(39.4)	00(00.0)	127(100.0)
4	You often bother of your parent when they shout at each other	88(69.3)	39(30.7)	00(00.0)	127(100.0)
5	Your parents/guardian are well-equipped with intervention techniques to combat or mitigate your condition of ADHD	39(30.7)	88(69.3)	00(00.0)	127(100.0)
6	You are being consistently encouraged by family members which enhance you level of self-esteem and self-worth	52(40.9)	75(59.1)	00(00.0)	127(100.0)
7	Parental refusal can harm your condition of ADHD	102(80.3)	25(19.7)	00(00.0)	127(100.0)

**Values in the table represent frequencies while values in the parentheses present percentage*

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Association between Family Environment & Attention Deficient Hyperactivity Disorder (ADHD)

Table. No.5 depicts the association between ADHD and family environment of the respondents. A significant (P=0.001) association was found between ADHD and you have given desirous environment at your family. Similarly, a significant (P=0.006) association was found between ADHD and your family always focus special attention on you with special reference to ADHD. These findings indicated the important role of family associated to it. Any congenial environment based on attention particular for special kids could prove to be a regressive element in raising any mental disease. However these finding are not supported by Biederman et al.(1995) and Rutter et al. (1975) acknowledge that ADHD patients often are not provided with suitable environment to feel mentally sound and needs of the mentally retarded to address, which is an catering attempt by the family.

In addition to the above, a highly significant (P=0.000) association was existed between ADHD and parent quarrel in normal routine which can worsen the severity of ADHD. Likewise, significant (P=0.006) association was found between ADHD and you often bother of your parent when they shout at each other. Non existence of congenial at home is often resulting into alterations. These little disputes emerge into shouting and some sever quarrels. These unfriendly environment is major reason of ADHD severely among patients. Sandberg (2002) who believe that terrible marital fight between parents or guardians of ADHD children leaves worse effect on the mental development of their children.

Furthermore a significant (P=0.006) association was found between ADHD and your parents/guardian are well-equipped with intervention techniques to combat or mitigate your conditions of ADHD. Similarly, significant (P=0.001) association was found between ADHD and you are being consistently encouraged by family members which enhance you level of self-esteem and self-worth. Awareness with regard to any abnormal condition, prepares in hostle to design coping strategies. ADHD is mental disorder, associated only to kids. Any parent and other member of the family, if understood the nature of the issue, associated to ADHD can mitigate the distress of the outcome to a greater extent. These findings are further supported by Biederman et al,. (1995) and Rutter et al,. (1975) that parents are to be equipped with combating techniques and they ought to keep encouraging their children to make them feel good.

In addition, a highly significant (P=0.000) association was found between ADHD and parental refusal can harm your condition of ADHD. These findings are in negation to the conclusion of the preceding results. Parent's refusal to adjudge it a disease is significantly deteriorated the condition of patient at home. These findings of the study are supported by Sandberg (2002) noticed that parental refusal could lead to severity of ADHD which further worsen the condition of child.

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Table -5. Association between Family Environment and Attention Deficient Hyperactivity Disorder

Family Environment	Perception	Attention Deficient Hyperactivity Disorder (ADHD)			Total	Chi-Sqaure (P-Value)
		Yes	No	Uncertain		
You have given desirous environment at your family	**Yes**	52(100.0)	00(00.0)	00(00.0)	52(100.0)	$\chi2$=10.041 (P=0.001)
	No	62(82.7)	13(17.3)	00(00.0)	75(100.0)	
	Uncertain	00(00.0)	00(00.0)	00(00.0)	00(00.0)	
Your family always focus special attention on you with special reference to ADHD	**Yes**	75(85.2)	13(14.8)	00(00.0)	88(100.0)	$\chi2$=6.418 (P=0.006)
	No	39(100.0)	00(00.0)	00(00.0)	39(100.0)	
	Uncertain	00(00.0)	00(00.0)	00(00.0)	00(00.0)	
Your parent quarrel in normal routine which can worsen your severity of ADHD	**Yes**	77(100.0)	00(00.0)	00(00.0)	77(100.0)	$\chi2$=22.303 (P=0.000)
	No	37(74.0)	13(26.0)	00(00.0)	50(100.0)	
	Uncertain	00(00.0)	00(00.0)	00(00.0)	00(00.0)	
You often bother of your parent when they shout at each other	**Yes**	75(85.2)	13(14.8)	00(00.0)	88(100.0)	$\chi2$=6.418 (P=0.006)
	No	39(100.0)	00(00.0)	00(00.0)	39(100.0)	
	Uncertain	00(00.0)	00(00.0)	00(00.0)	00(00.0)	
Your parents/guardian are well-equipped with intervention techniques to combat or mitigate your condition of ADHD	**Yes**	39(100.0)	00(00.0)	00(00.0)	39(100.0)	$\chi2$=6.418 (P=0.006)
	No	75(85.2)	13(14.8)	00(00.0)	88(100.0)	
	Uncertain	00(00.0)	00(00.0)	00(00.0)	00(00.0)	
You are being consistently encouraged by family members which enhance you level of self-esteem and self-worth	**Yes**	52(100.0)	00(00.0)	00(00.0)	52(100.0)	$\chi2$=10.041 (P=0.001)
	No	62(82.7)	13(17.3)	00(00.0)	75(100.0)	
	Uncertain	00(00.0)	00(00.0)	00(00.0)	00(00.0)	
Parental refusal can harm your condition of ADHD	**Yes**	102(100.0)	00(00.0)	00(00.0)	102(100.0)	$\chi2$=59.088 (P=0.000)
	No	12(48.0)	13(52.0)	00(00.0)	25(100.0)	
	Uncertain	00(00.0)	00(00.0)	00(00.0)	00(00.0)	

*Number in table represent frequencies and number in parenthesis represent percentage proportion of respondents and in the last columns number in the parenthesis represent P-Value

CONCLUSION AND RECOMMENDATIONS

The present study was carried out in psychiatry ward, Khyber Teaching Hospital, Lady Reading Hospital & Hayatabad Medical Complex Peshawar; with the sole purpose for assessing the familial factors of ADHD. It is concluded from the findings that children suffering from ADHD had lacking any desirable environment to be as conducive to cater the needs, as parents of ADHD children were less equipped with coping strategies to combating the worse and unwanted

consequences of the prevailing disorder. Parent's consistent altercations at home were yet another propelling factor of ADHD. Intra-marriages are highly prone to be the vivid reason of producing children with abnormalities like ADHD. Intra family marriages if avoided may lead to curtailing of ADHD; along with children with ADHD need to be considered and treated as normal being by adopting socially allowable behavior towards them in order to remove sense of social stigma associated to them at family and community level; as well as Parents need to be trained with coping strategies about major disorders i.e. ADHD and they should refrain from quarrelling in front of their child at home were put forwarded some of the recommendations in the light of present study.

References

i. Alizadeh H, Applequist KF, Coolidge FL. 2007. Parental self-confidence, parenting styles, and corporal punishment in families of ADHD children in Iran.*Child Abuse Negl*;31(5):567-72.

ii. Blau, A. 1938. Mental changes following head trauma in children. Arch Neurol Psychiatry 35:723- 769

iii. Barbaresi, W. J, Katusic, S. K., Colligan, R. C., Pankratz, V. S., Weaver, A. L & Weber, K. J. 2002. How common is attention-deficit/hyperactivitydisorder? Incidence in a population-based birth cohort in Rochester, Minn. Arch PediatrAdolesc Med.156:217—24.2

iv. Barkley, R. A., Murphy, K. R., Fischer, M. 2008. *ADHD in adults: What the science says*. New York: Guilford

v. Biederman J, Faraone S, Keenan K. 1992. Further evidence for family-genetic risk factors in Attention Deficit Hyperactivity Disorder. Arch Gen Psychiatry;(49):728-38.

vi. Baria, F. Z. 2013. Does your child suffer from Attention Deficit Hyperactivity Disorder? The Times of India Life.

vii. Centers for Disease Control and Prevention. 2009. Attention-Deficit/Hyperactivity Disorder (ADHD). Data & Statistics

viii. Gaub M, Carlson CL. 1997. Gender differences in ADHD: A Meta analysis and critical review. Journal of Child Adolesc Psychiatry. 36: 1036-45.

ix. Jaffe PG, Baker LL, Cunningham AJ. 2004. Protecting children from domestic violence: strategies for community intervention. New York: The Guilford Press

x. Johnston C, Mash EJ.2001. Families of children with attention-deficit/hyperactivity disorder: review and recommendations for future research. *ClinChildFamPsycholRev*;4(3):183-207.

xi. Karim R., Shakoor A, Azhar L, Ali A. 1998. Prevalence and Presentation of ADHD among the attendees of Child Psychiatric Clinic. Mother & Child;36(1):71-5.

xii. Polanczyk, G. V., Willcutt, E. G., Salum, G. A., Kieling, C & Rohde L, A. 2014. ADHD prevalence estimates across three decades: an updated systematic review and meta-regression analysis. Int J Epidemiol; 43:434—42.6

xiii. Rader, R., McCauley, L and Callen, EC. 2009. Current strategies in the diagnosis and treatment of childhood attention-deficit/hyperactivity disorder. Am Fam Physician; 79: 657-665.

xiv. Rutter M, Cox A, Tupling C, Berger M, Yule W. 1975. Attainment and adjustment in two geographical areas.I-The prevalence of psychiatric disorder.*Brit JPsychiatry*;126:493-509

xv. Scahill L, Schwab-Stone M, Merikangas KR, Leckman JF, Zhang H, Kasl S. 1999. Psychosocial and clinical correlates of ADH D in a community sample of school-age children. *JAm Acad Child AdolescPsychiatry* ;38(8):976-84. DOI:10.1097/00004583-199908000-00013

xvi. Sandberg S. 2002. Hyperactivity and attention disorders of childhood. 2. ed. Cambridge: Cambridge University Press.

xvii. Still, G. 1902. The Goulstonian Lectures on some abnormal psychical condition in children: lecture I. Lancet 1:1008-1012.

xviii. Schroeder VM, Kelley ML. 2009. Associations between family environment, parenting practices, and executive functioning of children with and without ADHD.*J Child Fam Stud.* 2009;18(2):227-35.

xix. Strecker E &Ebaugh F (1924) Neuropsychiatric sequelae of cerebral trauma in children. Arch Neurol Psychiatry 12:443-453.