PREVALENCE OF OPPOSITIONAL DEFIANT DISORDER (ODD) IN SCHOOL CHILDREN

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## ABSTRACT

### ORJfCTIVE

To examine the estimates of oppositional defiant disorder (ODD) in 4th and 5th grade school children withreference to genderandfamily correlates.

# STUDY mstGN

Cross-sectionalstudy,

**PlAClAND DURATION Of STUDY**

The study was conducted in four public sector schools of Rawalpindi city fromJanuary toDecember 2012,

**SUBJECTS ANO MCTHOUS**

The study included 223 students (119 boys and 104 girls) from 4th and 5th grades. Data were collected from their parents and teachers through Demographic Information Sheet and Assessment of Disruptive Symptoms DSM-IV (ADS-IV). SPSS 18 was usedfordataanalysis.

## RESULTS

The overall prevalence of ODD was 5.8% in the total sample and wasrelatively higher for boys(7.6%) than girls (3.8%). Symptoms more frequently presented by boyswerearguing withadults,deliberately annoying people, losing temper, and blaming others. Parental education and family monthly income were inversely relatedto ODDsymptomsin children.

## CONUUSION:

The results of this study highlight the need to take intoaccount thediagnosis,prevention andtreatment ofODD forschoolchildren, The variables like gender, parental education and socioeconomic status are Important factors to be considered in planning preventivestrategies andtreatment programs.

## KEYWORDS

Oppositional defiant disorder, School children, Assessment of disruptivesymptomsDSM-IV

## INTRODUCTION

Diagnostic and Statistical Manual of Mental Disorders (DSM-IV-TR) defines oppositional defiantdisorder (ODD) as "arecurrentpatternof negativistic, defiant, disobedient, and hostile behavior toward authority figures, Negativistlc and defiant behaviors are expressed by persistent stubbornness, resistance to directionsand unwillingnessto compromise, give in, or negotiate with adults or peers"',

A number of theorists have suggested strong links between disruptive and externalizing behavior problems In school years and more serious conduct problems during adolescent years".Untreated ODDchildren areat higher riskfor display ofdelinquentbehavior andsubstanceabuse withother mentalhealth and learningdisorders',Theoppositional defiant disorderisfrequently comorbidwith other psychiatric disorders like conduct disorder (CD), attention deficit hyperactive disorder (ADHD), anxiety disorders, depression, and learning disorders" The early-onset pathway of ODD begins in preschool years, then progresses to CD in middle childhood to most serious symptoms of disruptive behavioral problemsin adolescents''.

Malik and colleagues (2014) conducted an efficacy study of behavioral parent training program with 55 Pakistani familiesof diagnosed ADHDchildren and also studied associated problems of ODD and CD. According to parent and teacher ratings, 83 % children were laid in the clinical range for ODD. They reported a reduction1nADHDandODDsymptoms aftercompletion of theprogram1•11\_ Various studieshaverevealed thatODDestimates aremore prevalent in boysthan girls''". Meltzer, Gatward, Goodman, and Ford (2000) carried out a survey to observe the prevalence of mental disorders in 5-15 years old children (n=10438). According to theseresults7.4%boysand3.2%girlsand5.3%oftheoverallsample had the oppositional disorder. Boys had more hostile and persistent symptoms thangirls",

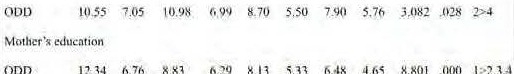
There is insufficient research evidence available on the prevalence of ODD in Pakistani school children. In this context, the present research analyzes gender differencesandtheoverallprevalence ofODD withfamily correlates andprovides better understanding of theexpressions ofODDsymptoms in boysandgirls. This will help ro expand the awareness and sensitivity of the problem in school children andplaneffectivetreatmentor prevention

## MffHOD

**Participants**

The sample of the present study was selected from four public sector schools in Rawalpindi, Pakistan. Five teachers with three teacher assistants completed the measuring scale for 4th and 5th grade students. Only those classes were taken

whichreceived70%parentalconsent to participate in the study.Care was takento choosethe samplefromintactfamilies (i.e.. with nocase of divorce or separation or death of one or both spouses]. Four hundred and sixty three parents were contacted to get consent for their children. Seventy-four (15.98%) parents refused to participate, sixty-eight (14.69%) children did not meet inclusion criteria(i.e., child and parent has no psychiatric illness, both parents alive and living together) and ninety-eight (21.16%) children were belonging to a classroom which produced 50-65% parental consent. Finally 223 (48.16%) children qualified to participant in the study. Participants



were 119 boys (S3.4%)and 104girls(46.6%)with agerange from 9to

12 years (M*=* 10.10, SD: 0.77). All children were living with both

parents andhadmorethantwosiblings(M=3.23,SD= 0.88,range= 2-6).

## MEAi;URES

#### *Demographic Information*

Demographic detailssuch as age,sex. grade,parentalmarital status, and education, number of siblings, number of family members, family structure, and family income were gathered on a performa fromparents.

#### *Assessment of DisruptiveSymptoms DSM•IV(ADS-IV)*

ADS-IV isDSM-IV basedassessment scaleto measure attentiondeficit hyperactive disorder {ADHD) and oppositional defiant disorder (ODD)". Teacher-rated Urdu version of ADS-IV (ODD ,ubscale only) was administered in this study. Eight ODD symptoms are assessed through a five point likert scale that is scored fromO{muchless than otherchildren)to4 (much morethanother children).ODDsymptoms cause theproblem atschoolwas measured witha possible response range of O (no problems) to 4 (very severe problems). Continuous scores of ODD were calculated by averaging the symptom ratings and diagnostic groups of ODD and non-ODD children were depending on the presence of four ODD symptoms with severe or verysevere impairment.

### PROCEDURE

As the first step, the school adminlstratlon was contacted for data collection. The school administration was requested to send the consent form and demographic information form to the parents. They wereinformed about the purpose of the research and assured that the information will be used for research purposes only. After careful scrutiny, children who fulfilled the inclusion crlteria were selected for instrument administration. Class teachers who had supervised thechildren foratleast two months wereasked to ratethe children behaviors in the class and during school time. The scores were calculated to analyze the data. Descriptive statistics was calculated to report estimates of ODD in boys and girls. Logistic regression, t-test, Pearson product correlation, and ANOVA were applied to assess the associations and differences on gender and otherdemographic variables of the sample.

# RL.SlJllS

Cronbach's alpha was computed for continuous scores of ODD measure ( *a -=* .94) which was excellent. Descriptive statistics was calculated forthe demographic data(seeTa.ble1).

Table I

Distribution of Sample oo I.he 8.asis or Demographics (N=223)

|  |  |  |  |
| --- | --- | --- | --- |
| **Variables** | **r** | **ptreHtage** | **Mean (SD)** |
| Child's age Child's gender  Male  Female Father's age MoU1 r1s ngt:  Father • education  Mothers' education  Frunily monthly income in PK.R | 22.1 |  | 10.11) (0.77) |
| 119 | 53.4% |  |
| 10-1 | 46.6% |  |
|  |  | 38.91(245) |
|  |  | 35.53 (2.11) |
|  |  | 13.4R!1.99) |
|  |  | 12.53 (2.0(1) |
|  |  | 41,224.17 (11,164.22) |
| Mother's work status |  |  |  |
| Not working | 149 | (66.8%) |  |
| Working | 74 | (33 2%) |  |
| Fmnjlial sin,.1ch1rc |  |  |  |
| Nuclear | 119 | (53.4%) |  |
| Extendtd | 104 | (46.6%) |  |

Tublc 2

Prcvaleuce oCop1>ositionnl defiant disorder (ODD) symptoms nnd associutiou with gender

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| l'rovulencc ("/4) **OR 9S"1i'** p  **Cl**  **O0D mpr ms Tot ! Gi L!i Boys LL UL** | | | | | | | |
| Argues wilh ndultf | 75. | 6(),2 | **81.5** | 2,09 | 1,10 | 3.95 | **.024** |
| Spiteful or vindicuve | 48.4 | 42.3 | 53.8 | I.bl | U.QJ | 2.86 | ,105 |
| Blames other< | 79.8 | 73.1 | **85\_.7** | 2.47 | 1.21 | 5.06 | **.0t3** |
| Delles or re-fuses | 63.7 | 68.3 | *59.?* | 0.li3 | 0.35 | 1,14 | .128 |
| Angry aod res-e.ntful | 74.4 | 79.8 | 69.7 | 11.5 | (),29 | 1.06 | .077 |
| Touch.y or easily annoyed | 77.1 | 79,ij | 74. | 11.75 | 0.39 | 1.43 | .376 |
| Loses temper | 84.3 | 78.8 | **89.1** | 2.34 | l.09 | 5.01 | **.029** |
| Deliberately annoys people | *56.5* | 42.3 | **68.9** | 3.28 | 1.83 | 5.90 | .000 |

*Nolt': ODD* - *Oppo. ilfom,I D11f,f111t DJso,"1'11, Cl-=Co,!/hlt1m:c!lutttrw1I: LL* = *Lower Umfl: LJJ\_.::L:.lpJU!r.J.,iJull: ()Jl= Odd Uotil):. l.oglrn't:* rt!,1!l't.'J'.,;im1*m/j11.•m.•1I /0t·tJge,fo1/u.'1>t' dnd mutherJ' edw:urfon. tmd*/umi{11 *i,l(.\_·r.,111e.*

*Ju h,,ld; ,;igui(inml r,v.\·uciulir>,i*

T:ible3

One-way ANOVA for educational levels of parents (fathers and mothers) on the presence or ODD symptoms in children (N = 223)

FA

S

SDM SDl\lt SB

Fath.:r's Eduralion

*d( IJ.:/9)*



Prevalence of ODD according to teacher ratings was 5.8% (n=13l whereas 15 children (6.7%} in non-ODD group were having four or more symptoms of ODD but teachers rated them as having mild to moderate exhibition of these symptomsat school settings.

Tofindoutgender differences between boysandgirlson continuous scores of ODD, Independent sample t-test was conducted, Teacher ratings haveshown statisticallysignificant differences (t (223);2.27, p <.05)1n boys(M= 10.53, SD=6.71) andgirls (M; 7.62, SD= 542).

BoyshadhigherODDscoresthangirls.

The resultsrevealed that OddsRatios of boysforthepresenceof ODD symptoms were higher than girls (Table 2}.Symptoms more frequently presented by boys were arguing with adults, blaming others,losing ternperanddeliberately annoyingpeople,

Pearson product correlation revealed strong negative correlatlon between ODD symptoms and family income r (223) = -0.292;

p=0.001. A one-way analysis of variance (ANOVA) has shown

statistically significant relationship between different levels of fathers' and mothers' education and symptoms of ODD, F (3,219) *=* 3.08p < .05 & F(3,219)= 8.80p <.001) respectively. Tukey's HSDpost hoc analysis displayed significant differences (p= .037) on ODD

scores of the children whose fathers education was FA and master/professional. The children whose fathers had FA education hadmore symptoms of ODD ascompared withthosechildren whose fathers had higher educaLion (masters or professional) and no significant differences were found between other groups. The children whose mothers had up to matric education had more ODD symptoms (M= 12.34, SD= 6.76) as compared with those children whose mothers were FA (M= 8.83, *SD=* 6.29;p=.005), BA ((M= 8.13, SD=5.33;p=.001) andMA/professional ((M=6.48,SD=4.65; p=.000). Thus parent's higher educatron is related to fewerODDsymptomsIn children whereas other family characteristics, like maternal work status, parent's age, and familial structure had insignificant association withODDsymptoms (Table3).

# DISCUSSION

The results revealedan eyeopening percentageof ODDsymptoms In the schoolchildren.

There is no research evidence available on the prevalence of ODD in Pakistani school children although there are some studies v,,hich measured ODD as a co mo:rbid problem in children either having ADHD or CD'"""". The prevalence of ODD in current find1ngs is similar to those reported by Meltzer and colleagues" but lower than other reports in thegeneral population withsimilar age range"" that used DSM-IV definitions and parents and teachers as Informant. Prevalence was relatively higher for boys (7.6%) than girls (3.8%). Symptoms more frequently presented by boys were arguing with adults, delibe.rateiy annoying people, losing temper, and blaming others.Consistent with the international literature, thepresentstudy alsoshowed same lines of findings on child-related demographics". Child's gender was found to be slgniflcantly related to high levels of ODD like symptoms, boys scored higher on presence of ODD rates and symptoms as compared to girls. The results on gender differences in ODD manifestation are in line with previous research works"•'•

It was found thatlow familyincomeIsrelated to higherrates of ODD.

ODD is more prevalent among children with low socioeconomic

status families'. The results also showed that parent's higher educationissignificantly relatedto the low *rate*of ODD.

There aresome limitations of thestudy.ADS-IV is a reliable and valid measure; current study established its reliability but could not validatethismeasureWith Pakistani children.Small sample,onerype of the school system, and one age group also limited the generalizability of the study. Future research should focus on these issuesin relation to the comorbid nature of ODD withADHD andCD in school, home, and community context5. Since ODD in early ilge tends to persistin middleschoolyearsand results in serious antisocial behavioral display in ildolescent years, so early onset identification would helpparents,teachers andclinicians to t<1keappropriate steps in planning effective treatment and prevention programs for disruptivebehaviors.

### CONCLUSION

The results reveal that the prevalence of ODD is not very high in school children, but the presence of ODD s\_ymptoms Is an alarming sign and some effective steps in dealing with oppositional behavior patterns should be taken. Gender differences were significant with boys showing more ODD symptoms. Parental education and family monthly income were Inversely related to ODD symptoms In

children. Although being limitedIn scope, **this** study draws attention

of the researchers, teachers, parents and practitioners towards the relatively neglectedareaof thedetection of ODDin children.

#### *Acknowledgement*

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### REF-ER£NCES

1. American Psychiatric Association (APA}. DSM-IV-TR: The Diagnostic and Statistical Manual of Mental Disorders (Fourth Edition) Text Revision. Washington, DC: American Psychiatrlc Associiltion;2000.
2. Connor DF. Aggression and antisocial behavior in children and adolescents: Research and treatment. New York: The Guilford Press;2002.
3. Loeber R, Burke J, Lahey B, Winters A, Zera M, Oppositional defiant andconductdisorder:A review of thepast 10years,part
   1. Journal of the American Association of Child and Adolescent Psychiatry 2000;39(12):1468-1484.

4\_ Gregg 5. Preventing antisocial behavior in disable and at-risk

.students. Appalachia Educational Laboratory Policy Brief 1996; 1-12.

S. Pliszka SR. Comorbidity of attention-deficit/ hyperactivity disorder with psychiatric disorder: An overview. Journal of Clinical Psychiatry 1998;59(7): 50-55.

1. Steiner H, Remsing L, Work Group on Quality Issues. Practice parameter for the assessment and treatment of children and adolescents with oppositional defiant disorder. Journal of the American Academy of ChildandAdolescentPsychiatry 2007;46: 126-141.
2. Herbert M. Developmental Problems of Childhood and Adolescence· Prevention, Treatment and Training, Malden MA: Blackwell Publishing. 2005.
3. Moffitt TE,Caspi A, Harrington H, & MilneBJ. Males on the life­ course-persistentandadolescence-limitedantisocialpathways: Follow-up at age 26 years. Developmental Psychopathology 2002;14(1): 179-207,



1. van Lee PA, Muthen BO,van der Sar RM,Crijnen AA.Preventing disruptive behavior in elementary schoolchildren: Impact of a 1.1niversal classroom-based intervention. Journal of Consulting andClinicalPsychology 2004;72:467-478.
2. Malik TA, Rooney M, Chronis-Tuscano A, Tariq N. Prelimfnary efficacy of a behavioral parent training program for children with ADHD in Pakistan. Journal of Attention Disorders 2014;1- 15.
3. Malik TA. &Tariq N. Psychological and demographic correlates

forparent training program efficacy forchildhood externalizing beh;ivior problems. FWUJournalo{SocialSciences 2012;6(1):9- 16.

1. Lahey BB, McBurnett K, Loeber R. Are attention­ deficit/hyperactivity disorder and oppositional defiant disorcier developmental precursors to conduct disorder? In A Sameroff, M Lewis, SM Miller (Eds.), Handbook of developmental psychopathology (2nd *ed.* pp. 431-446). New York: Plenum. 2000.
2. Maughan B, Rowe R, Messer J, Goodman R,Meltzer H.Conduct disorder andoppositional defiant disorder in anational sample: developmental epidemiology. Journal of Child Psychology and Psychiatry,2004;45:609-621,
3. Waschbusch DA, King S, Northern Partners in Action for Childrenand Youth.Shouldsex-specificnormsbeused toassess Attention-Deficit Hyperactivity Disorder (ADHD) or Oppositional Defianl Disorder (ODD)? Journal of Consulting

andClinical Psychology 2006;74(1): 179-185.

1. Trepar E, Ezpeleta L. Sex differences in oppositional defiant disorder.Psicothema 2011;23(4):666-671.
2. Meltzer H, Gatward R,Goodman R, Ford T.The mental health of children and adolescents in Great Britain. London: Office for NationalStatistics;2000.
3. Waschbusch DA,Sparkes SJ,NorthernRegion Panners in Action

for Children and Youth. Rating scale assessment of attention deficit/ hyperactivity disorder (ADHD) andoppositional defiant disorder (ODD) symptoms: Is there a normal distribution and does it matter? Journal of Psychoeducational Assessment 2003; 21:261-281.

1. Sarwat A, AliSM.,&Ejaz.MS.Mental health morbidity in children: Ahospitalbased studyin childpsychiatry clinicPakistan Journal of Medical Sciences, 2009;25(6):982-985.
2. Qureshl A& Thaver D. Cross sectional review of children with ADHD presenting to an outpatient psychiatric institute in Pakistan. Journal of Paklst.in Medical Association 2003; 53(9): 441.
3. Bufferd SJ,Dougherty LR, Carlson GA,KleinDN.Parent-reported mental health in preschoolers: Findings using a diagnostic interview.ComprehensivePsychiatry 2011;52:359-369.
4. Keenan K, Wakschlag LS, Danis B, Hill C, Humphries M, Duax J,

DonaldR.F1.1rther evidence of thereliability andvalidityof DSM­ IV ODD and CD in preschool children,Journal of the American Academy of ChildandAdolescent Psychiatry 2007;46:457-468.

1. Lavigne JV, Lebailly SA, Hopkins J, Gouze KR, Binns HJ. The

prevalence of ADHD, ODD, depression, and anxiety in a community sample of 4-year-olds. Journal of Clinical Child and Adolescent Psychology 2009;38:315-328.