

DEVELOPMENT AND PSYCHOMETRIC PROPERTIES OF OPPOSITIONAL DEFIANT BEHAVIORS SCALE FOR ADOLESCENTS

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ABSTRACT

Objective: To construct a scale and psychometric properties for the assessment of oppositional defiant behaviors of adolescents in Urdu language.

Study Design: Cross sectional analytical study.

Place and Duration of Study: Department of Psychology, University of Gujrat, from Feb 2019 to Oct 2019.

Methodology: The initial item pool of 48 items was generated with the help of DSM 5 description of oppositional defiant behaviors, literature review and three focus groups with target population. Among the 47 expert evaluated items after pilot study 45 items were retained which included the three dimensions of oppositional defiant behaviors including irritable mood, argumentative behaviors and vindictiveness. Furthermore, in the final administration of this scales data were collected from 500 adolescents from the educational institutions and community of Gujrat using self-reported questionnaire. The exploratory factor analysis (EFA), confirmatory factor analysis (CFA) and reliability analysis were implied for data scrutiny.

Results: The final administration of 45 items was handed over to 500 participants. The model fit showed a *p*-value of .000 that established the structure validity and significance of the items to its subscales. At the final stage among the 45 items 12 were reliable for further use.

Conclusion: A scale to gauge oppositional defiant behaviors of adolescents in Urdu language is competently established with 12 questions and three sub-scales.

Keywords: Adolescents, Oppositional defiant behaviors, Reliability, Structure validity.

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INTRODUCTION

Many individuals at school and college age endure various types of behavioral problems, which adversely upset their educational accomplishment, social and domestic relationships¹. Oppositional Defiant behavior is one of them characterized by annoyed mood, stubborn, argumentative or aggressive behaviors, breaking rules, disobeying authority figures or adults². Diagnostic and Statistical Manual of Mental Disorders (DSM-5) documented three dimensions of oppositional defiant behavioral problems, first is angry/irritable mood like short temper, displeasure, over sensitive, annoyed and resentful. Second, argumentative/defiant behavior, encompasses disputatiousness with adults, violation of rules,

disobeying authority figures and adults, teasing, blaming others and third dimension is vindictiveness such as spiteful and unkind behavior toward others³.

Studies identified cross culture prevalence of oppositional defiant behaviors is 3.3%. Moreover individuals with oppositional defiant behaviors have critical outcomes for themselves and society as a whole such as criminal behaviors, joblessness, unhappiness, nervousness and other psychological complication⁴.

Adolescence is a stage of great interest for the researchers and investigators, not only because it is a critical period in development with remarkable physical, psychological, social and emotional changings, but also as many behavioral or psychological illnesses that emerge in adulthood appear to originate at earlier stages of adolescents. So there is a great need to assess this area of life⁵.

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Received: 03 Dec 2019; revised received: 13 Mar 2020; accepted: 20 Mar 2020 Email: zaqia.bano@uog.edu.pk

Most of the recent researches on oppositional defiant behavior problems emphasize on adolescents or teenagers. A recent study stated that adolescents are at high risk of oppositional defiant behavioral problem with a 1.56% prevalence in the period of 1 year⁶. Likewise, a study recognized a 5% prevalence of oppositional defiant behaviors among adolescents and youth during the period of 8-year⁷.

To measure the clinical severity of oppositional defiant behaviors different tools based on the diagnostic and statistical manual of mental disorder (DSM-4) illustration of oppositional defiant behaviors are developed in different cultures⁸. However, DSM-5 presented a latest model of oppositional defiant disorder entailing three dimensions⁹. In Pakistan foreign developed scales of disruptive behaviors¹⁰ was translated in Urdu language¹¹ is used to assess the oppositional defiant behavior. Thus there is a dire need to construct an assessment to meter latest dimensions of oppositional defiant behaviors in Urdu language.

Evidences showed that social context and cultural background effect the appearance, clarification and rate of psychiatric indications¹². Adolescents from racial subgroups and emerging or poor nations are at high risk of experiencing adverse situations, poor parenting and life stressors than youth of established countries. These risk factors are strongly linked with oppositional defiant and other behavioral complications. However, these indications represented a dire need to develop culturally valid assessment to measure oppositional defiant behaviors¹³.

To overcome these flaws the present study on the development and psychometric properties of oppositional defiant behavior scale for adolescents will be a building block. In this situation the present study would be a great breakthrough in the ground of psychological measures as it would construct an oppositional defiant behavior scale for adolescents in native language. The existing study conducted with an objective to develop an assessment of oppositional defiant behavior for adolescents in Urdu language.

METHODOLOGY

This is a cross sectional analytical study that was conducted in the department of Psychology, University of Gujrat from February 2019 to October 2019. The data was collected from various educational institutions and community of Gujrat. The 500 adolescents both male and females with age range 12-19 were included in the study using convenient sampling. At initial stage an item pool of 48 questions was generated by the investigator with the help of Diagnostic and Statistical Manual of Mental Disorders (DSM-5) explanation of oppositional defiant behaviors, review of literature and 3 focus group (fig-1).

During expert evaluation, 1 item was deleted. Hence, a pilot study was conducted with 47 items. After analysis 45 items were considered as reliable for final administration with three subscales of oppositional defiant behaviors (i) angry

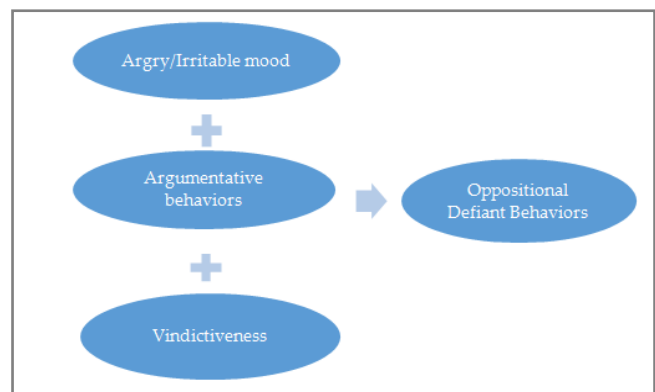


Figure-1: Diagnostic and Statistical Manual of Mental Disorders (DSM-5) Model of Oppositional defiant behaviors.

/ irritable mood (ii) argumentative behavior (iii) vindictiveness. Current study was approved and permitted by the ethics committee of the department of Psychology, University of Gujrat. In pilot study 100 participants were included while final study was conducted on 500 participants. After the permission of institutional authorities researcher used convenient sample to recruit study participants. Further, the purpose of study was explained to participants and data were collected after taking a written informed consent. The respondents were thoroughly instructed about how to

respond to the statements. The respondent's identity confidentiality of data was insured. At

Table-I: Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) and Bartlett's Test of Sphericity for oppositional defiant behaviors scale for adolescents (N=500).

Measure	KMO	Bartlett's Test of Sphericity
Oppositional Defiant Behavior Scale for Adolescents	0.83	0.000

Table-II: Factor loading of oppositional defiant behaviors scale for adolescents (n=500).

Questions	Angry / Irritable mood	Questions	Argumentative behaviors	Questions	Vindictiveness
18	0.673	15	0.626	4	0.563
20	0.517	17	0.854	37	0.536
21	0.618	33	0.955	38	0.577
22	0.790	43	0.520		
		45	0.811		

Table-III: Model Fit Summary of 12 Items (n=500).

Model Fit Summary					
p-value	Chi Square	Goodness of Fit Index	Comparative Fit Index	Root Mean Square Error of Approximation	Root Mean Square Residual
0.000	201.731	0.934	0.910	0.084	0.049

the end they were thanked for their participation.

Data Analysis

To analyze data exploratory factor analysis, confirmatory factor analysis, and reliability analysis were implied by using Statistical Package for Social Sciences (SPSS-22) and Analysis of a Moment Structures (AMOS-22) for windows.

RESULTS

After conducting pilot study 45 items were further administrated on 500 adolescents. From 45 questions 12 were retained after exploratory factor analysis while deleting the irrelevant question.

Table-I indicated the KMO is 0.83 which is highly acceptable and Bartlett's Test of Sphericity values is also significant at 0.000.

Table-II depicted number of items in each subscale as item number 18, 20 and 22 were reflected as reliable for the sub-scale of angry/ irritable mood (A/IM). Further, the item number

15, 17, 33, 43 & 45 were considered reliable for argumentative behavior (AM). Last of all, the item number 4, 37 & 38 were reliable for vindictiveness (VN).

Confirmatory Factor Analysis (CFA) on 12 items appeared significant for three subscales. The value of Comparative Fit Index (CFI) was 0.910 that was in the acceptable range with the p-value of 0.000 <0.05. The results confirmed the model fit of the oppositional defiant behavior

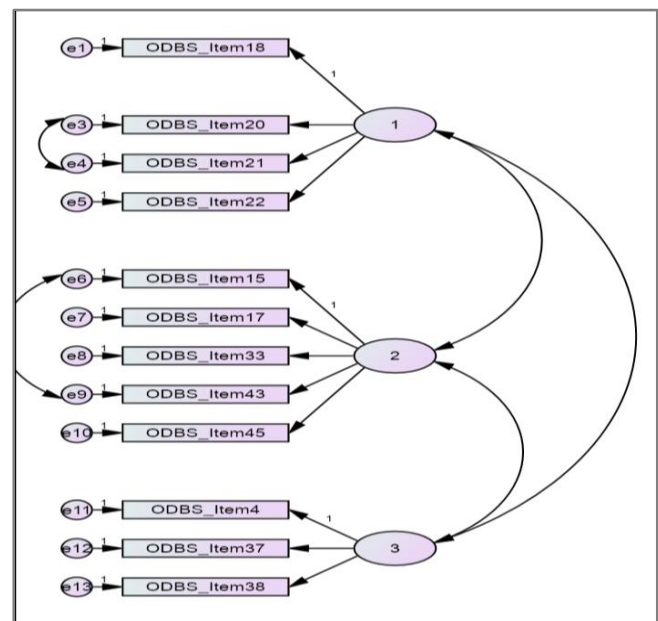


Figure-2: Confirmatory Factor Analysis 12 items (n=500).

scale and its subscales (fig-2 & table-III).

Reliability of scale was find out by computed Cronbach alpha. Cronbach alpha value was .857. As acceptable reliability value is .70 and above. So that in the present study the reliability values is above than acceptable value (table-IV).

Table-IV: Reliabilities of the Subscales (n=500).

Sub Scales	Total Items	Cronbach Alpha r
Total	12	0.857

DISCUSSION

The primary objective of current study was to established a sound oppositional defiant behaviours scale for adolescent in Urdu language and its psychometric properties. At initial stage an item pool of 48 questions was generated after expert's evaluation 1 item was deleted. Hereafter, a pilot study was conducted with 47 items in which 45 items were considered as reliable for final administration with three sub-scales. Furthermore, the exploratory factor analysis abridged the items to 12 that confirmed by confirmatory factor analysis considered reliable for further use.

Current study reported 0.83 KMO value and .000 Bartlett's test of sphericity which indicated the sample size is adequate and data is suitable for further exploratory factor analysis. A study described that appropriateness of data depends on two key factors first is KMO value which determine whether your sample is adequate or not. Second, Bartlett's test of sphericity should be significant which tell us nature of correlation among variables^{14,15}. Moreover, another study explored the KMO value between 0.7 to 0.8 considered good, while value between 0.8 to 0.9 and greater are excellent. In current study reliability value of final 12 items was .857 that was greater than acceptable value. Previous study is in lined to support the reliability of findings of current study that argued the reliability value of .70 or greater is considered as statistically suitable¹⁶.

Further more confirmatory factor analysis was implied in current study to confirm the factors of study results reported goodness of model fit as Values GFI = .934, CFI = .910, RMSEA = .084 and RMSR = .049, respectively. These results are supported by previous findings stating that

acceptable or good RMSEA values should be >0. Further GFI and CFI values near to 0.9 demonstrate a comparatively good fit^{17,18}. Besides, the established measures were reflected as best fitted and reliable if the value of CFI was greater than .90. As mentioned earlier, reliability value of .70 or greater is considered as statistically significant. The CFI values of oppositional defiant behavior scale for adolescents were .91 with the reliability of 0.857. According to the statistically adequate range the values of newly developed scale of oppositional defiant behaviors were in highly acceptable ranges.

CONCLUSION

A scale to gauge oppositional defiant behaviors of adolescents in Urdu language is competently established with 12 questions and three sub-scales.

CONFLICT OF INTEREST

This study has no conflict of interest to be declared by any author.

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