

Research Paper

Psychometric Properties of The Challenging Behavior Rating Scale: An Instrument to Assess the Challenging Behaviors in Individuals with Intellectual and Developmental Disabilities

Janaki Balakrishnan^{1*}, Waheeda Matheen²

ABSTRACT

The Challenging Behavior Rating Scale (CBRS) is a 40-item respondent based behavioral rating scale for Aggression to People/Objects (APO; 9 items), Self-Aggression/Stimulation (SAS; 11 items), Odd/Repetitive (ODR; 9 items), Socially Inappropriate (SI; 8 items) and Deviant (D; 3 items) in intellectual and developmental disabilities. It was administered by interviewing primary care givers of 620 individuals with intellectual and developmental disabilities attending special schools and residential centers between the ages of 4 to 58 years. Psychometric evidences (moderate to good range) are established that included internal consistency, concurrent and criterion group validity, and partial- confirmatory factor validity. The main outcome of the tool was to be able to classify individuals with IDD whose behavior challenges, at different levels: Typical, High-Risk & Critical. The utility of the tool in clinical as well as community settings are discussed.

Keywords: *Challenging behaviors, intellectual and developmental disabilities, validity, reliability, severity levels*

Challenging behaviors are common in Individuals with Intellectual and Developmental Disabilities (IDD). These behaviors are problematic, in that, they are physically dangerous and can impede learning and access to normal activities and are highly resistant to change. Much to the adverse impact of the challenging behaviors in learning and quality of life of the individuals with *IDD*, little is known about their phenomenology, assessment and treatment. In fact, challenging behaviors may lead to highly detrimental consequence such that, one may need to take into consideration the compounding effect throughout the lifespan on individual's health and social wellbeing, at an ultimate cost to health and social care.

¹Ph. D Research Scholar (2014-2018), Department of Applied Psychology & Behavioural Justice Basheer Ahmed Sayeed College for Women, Chennai, Tamil Nadu, India

²Associate Professor & Head of the Department of Applied Psychology & Behavioural Research Justice Basheer Ahmed Sayeed College for Women, Chennai, Tamil Nadu, India

*Corresponding Author

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Chronic and untreated conditions of challenging behaviors have serious implications such as social exclusion, institutionalization, physical harm, increased health problems, unemployment, denial or access to services and restrictive environments for individuals with *IDD*. The behaviors that challenges not only affects the individual exhibiting it, but also the families, carers and staff, who often report frustration, fatigue, burnout, daily life hassles, health and relationship problems and so experience a reduction in their own quality of life (Hastings, 2002; Lecavalier, Leone & Wiltz, 2006). Hastings & Brown (2002) posited that the perception and attitudes of staff and carers towards challenging behaviors differ according to the causality and controllability of the challenging behaviors. Further, parents or staff, who are dealing with such individuals can undergo chronic stress, can get injured and ultimately these experiences may lead to abuse, neglect or deprivation of the individuals (Emerson, McGill & Mansell, 1994).

Challenging behavior by itself is not a diagnostic label but simply used to refer to individuals whose behaviors present a challenge to services. The term *Challenging Behaviors* came to be replaced for number of related terms such as abnormal, aberrant, disordered, disturbed, dysfunctional, maladaptive and problem behaviors, used erstwhile. Instead of using the term simply as a diagnostic label for people, it was reflected since then, that to viewing a situation as a challenge rather than as a problem in person, may pave way for more constructive responses.

Challenging behaviors among *IDD* population across all levels of functioning is estimated to be 22.5% (Cooper, Smiley, Morrison, Williamson & Allan, 2007). The literature widely agrees that behaviors that challenges are about three times more common in *IDD* than in typically developing peers. Lowe, Allen, Jones, Brophy, Moore & James (2007) reported on the severe challenging behaviors (10%) of the population of *IDD* and that multiple forms of such behaviors were more commonly present. JyothiPrakash, Sudarsanan & Prabhu (2007) reported 66% of prevalence of challenging behaviors in individuals with *IDD* in India. Lakhan (2014) reported violent and destructive behaviors (59%), self-injurious (25%), temper tantrums (69%), odd behaviors (32%) and repetitive behaviors (25%) in *IDD* in India.

In India, despite showing high prevalence of challenging behaviors in this population, much less work is done in terms of prevalence, provisions of services, understanding or management of such behaviors, providing specialized training and support to the staff working with *IDD* population. Further, studies accounting on prevalence of challenging behaviors were based on the occurrence of the behavior and not the severity or management difficulty. Moreover, an essential aspect of the initial assessment is to rule out any physical cause for psychiatric symptoms or behavior problems. At this point, a formal rating scale would be appropriate to understand the overall behavioral profile, its antecedents and consequences, and to further planning of services. Effective assessment of challenging behaviors is critical to aid early identification and intervention, thereby averting potential impact on wellbeing of individuals with *IDD*.

In India, with the population of *IDD* and poor staffing support, such assessments are less documented and therefore, further support and intervention is also poor. Only few tools such as Behavior Disorder Checklist (Mishra 1976), Problem Behavior Checklist (Arya, Peshawaria, Naidu & Venkatesan, 1990), Behavior Assessment Scale for Children with Mental Retardation: Part B (Peshawaria & Venkatesan, 1992), or its revised version

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(Venkatesan 2011) are available in India. These tools measure single (occurrence) or fewer dimensions (frequency and intensity) of challenging behaviors, however, it is postulated that there may be more dimensions to assess the impact of challenging behaviors. One such important dimension is the management of such behaviors as perceived by the carer/parents, which will have to be taken into account while identifying behaviors that are challenging. A need for developing a tool that screens for challenging behaviors briefly and at the same time sufficient enough to influence the outcome decisions for services is emphasized and so a standardized scale to measure challenging behaviors in *IDD* is warranted.

The Challenging Behavior Rating Scale (CBRS) has been developed to provide one such tool with broad range of challenging behaviours and its impact, i.e., by including the three dimensions (frequency, intensity and management). Moreover, as a unique attempt, the three dimensions (three sets of scores) were combined into one score by using a coding scheme evolved by practitioners in the field of *IDD*, with a mere intention to involve the direct staff or parents in decision making process because what matters most is their perceptions of challenging behavior and its impact. In this study, the psychometric properties of the CBRS is tested for reliability and validity as an instrument to assess the challenging behaviors in individuals with *IDD*.

METHODOLOGY

Participants

Participants in this study were 620 individuals with intellectual and developmental disabilities in the age group of 4 years through 58 years, with median age of 15 years. These individuals were either living with parents (69.1%) or in residential institutions (44.5%). A total of 64% were males, 36% females. Of these, 22.1% were in the age group of 4 through 10 years, 23.7% were in the age group of 11 through 14 years, 18.6% in the age group of 15 through 17 years, 18.5% were 18 through 21 years, and 17.2% were 22 through 58 years. Among the sample, 55.5% were identified as intellectual disability, 18.4% autism spectrum disorder, 6.9% attention deficit hyperactivity disorder, 5.8% cerebral palsy, and others (13.4%).

Respondents and interviewers

The primary sample was individuals with *IDD* and their parents or direct care staff provided the information about the challenging behaviors. Direct care staff, who participated in the study had worked with the individual with *IDD* for at least six months. The interviewers comprised of under graduate and post graduate students in psychology.

Sampling and procedures

As per the personal communication with Directorate of Rehabilitation of the Disabled, Office of Commissioner of Disabilities, Government of Tamilnadu, the population data as on 28-2-2017 in the city of Chennai showed to be 16426 individuals, who were all administratively defined under the category of intellectual and developmental disabilities (including mental retardation, autism, attention deficit hyperactivity disorder) by competent authority from the State, Government of Tamilnadu for availing special services. About thirteen special schools in Chennai were approached for permission to conduct the research study. After obtaining school permission, mutually convenient time to meet with the parents/direct care staff was scheduled. While some schools facilitated data collection in their parent-teacher meetings, others arranged individual meetings with the parents when they either dropped or picked their children from school. In few cases telephonic interviews

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were also conducted. The study was carried out on volunteering basis, and individuals with IDD whose parents were not willing to take part in the study were excluded.

Ethical considerations

The study did not impose any risk or duress to the participants as it was a survey wherein the information was collected directly from the primary caregivers. Parents were informed about the purpose of the research and was assured of confidentiality of the information provided. After collecting the information, the parents and the teachers were provided with an orientation about challenging behaviors in individuals with IDD and some basic strategies were discussed. Further referral was made, wherever necessary.

Instrument

The CBRS, a 40-item scale, is classified into five subscales: Aggression to People/Objects (APO, 9 items), Self-Aggression/Stimulation (SAS, 11 items), Odd/ Repetitive (ODR, 9 items), Socially Inappropriate (SI, 8 items) and Deviant (D, 3 items). Each item is first surveyed for its occurrence (Yes/No) and if “yes”, then the items in each subscale are measured in three dimensions: frequency (rarely-1, sometimes-2, often-3), intensity (mild-1, moderate-2, and severe-3) and management (easy-1, difficult-2, cannot manage-3). The scores from the three dimensions are then combined into one single score based on a coding scheme evolved by a group of professionals working in the field. This was done to obtain one severity scale as an outcome of combining the three dimensions (frequency, intensity and management) of the same behavior. The behavior had to have occurred at least once during the past one month. Severity for non-occurrence of the behavior is imputed as 0. Three levels – *Typical* (behaviours that affect the quality of life), *High Risk* (behaviours that affect the quality of life and leads to social isolation) and *Critical* (behaviours that affect the quality of life, is threat to self or others and leads to social isolation) – are derived based on the norms, which is available with the author and can be shared based on request.

RESULTS

Data analyses were conducted using SPSS v.16 for establishing the psychometric properties (reliability, validity, diagnostic accuracy), and fit indices were calculated applying the formula.

Local prevalence of specific behaviors

The frequency of challenging behaviors as indicated by the occurrence for each of the behaviors within the sample is presented in Table 1.

Table 1. Frequency of Challenging Behaviours in IDD (N=620)

Items (i=40)	n	Cases (%)	Responses (%)
Bangs objects (Missing-1)	141	22.74	2.47
Bites/spits on- others (Missing-5)	98	15.81	1.72
Kicks/pushes/bangs on- others (Missing-2)	164	26.45	2.87
Pulls others hair (Missing-2)	90	14.52	1.58
Slaps/hits/pinches/punches others (Missing-1)	142	22.90	2.49
Throws objects at others (Missing-1)	123	19.84	2.15
Throws/Breaks (inappropriately) objects (Missing-4)	116	18.71	2.03
Screams/drops on the floor/clenches hands	133	21.45	2.33
Bangs doors/windows (Missing-1)	125	20.16	2.19
Bangs his/her head (Missing-1)	106	17.10	1.86

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Bites himself/herself	101	16.29	1.77
Pokes Eye/Ear/Nose on self	58	9.35	1.02
Pulls own hair	57	9.19	1.00
Peels/pinches/scratches skin on self (Missing-1)	67	10.81	1.17
Hits/slaps self (Missing-1)	78	12.58	1.37
Taps head/teeth	81	13.06	1.42
Picks nose (Missing-1)	62	10.00	1.09
Wrings/flaps/gazes hands (Missing-1)	134	21.61	2.35
Grinds Teeth (Missing-1)	105	16.94	1.84
Sucks thumb	49	7.90	0.86
Rocks/ Spins Around	136	21.94	2.38
Licks/mouths objects	80	12.90	1.40
Fondles genitals (Missing-9)	142	22.90	2.49
Wanders off (from assigned time or place) (Missing-2)	160	25.81	2.80
Leaves the seat (without permission or purpose) (Missing-1)	225	36.29	3.94
Touches or Hugs inappropriately (Missing-5)	118	19.03	2.07
Exposes body parts inappropriately (Missing-4)	77	12.42	1.35
Removes clothing in public (Missing-5)	65	10.48	1.14
Eats non-food items (Missing-2)	50	8.06	0.88
Makes vocal noises	198	31.94	3.47
Laughs or giggles for no reason	214	34.52	3.75
Interrupts while talking (Missing-1)	207	33.39	3.62
Cries excessively	140	22.58	2.45
Unusually fearful of ordinary things (Missing-2)	114	18.39	2.00
Uses bizarre speech (Echolalia/slurred/talking to self) (Missing-1)	159	25.65	2.78
Overactive or impulsive (Missing-1)	168	27.10	2.94
Obsessed to certain objects or activities (Missing-3)	184	29.68	3.22
Steals objects (Missing-2)	49	7.90	0.86
Tell lies/Twists truth (Missing-1)	71	11.45	1.24
Tattles /blames unreasonably (Missing-2)	85	13.71	1.49

Internal consistency reliability

Cronbach's alpha index was computed for internal consistency reliability. Values of coefficient alpha for the subscales (APO, SAS, ODR, SI and D) and CBC are reported for three age groups: 4 through 12, 13 through 18, and 19 through 58, which showed in the range of .72 to .86 for subscales (APO and SAS), .60 to .75 in the subscales (ODR and SI), .59 to .65 in the subscale D, and the CBC was between .86 to .89.

Factor validity

To test the goodness of fit of the *a priori* five factor structure, a partial confirmatory factor analysis was computed for the model derived from exploratory factor analysis using the procedures laid down by Gignac (2009). The chi-square value for the null model was 5890.42, df 780, $p < .001$ and the implied model was 1330.02, df 590, $p < .001$, indicating good fit as indicated by the significant change in the value of chi-square 4560.4, ddf 190, $p < .001$.

With the two relevant chi square values, several fit indices were calculated. As a measure of absolute fit indices, which showed a good fit ($< .05$), Root Mean Square Error of Approximation (.045) and Standardized Root Mean Residual (.037) was computed. The incremental fit indices such as Comparative Fit Index (.86), Normed Fit Index (.77) and Tucker-Lewis Fit Index (.81) were also computed showing moderate fit ($> .95$ is good fit).

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Further, Wheeler (2009) stated that when a regression model is fit to a sample data, the amount of variation (known as residuals) between the data and the fitted model should have symmetric plot (a bell shape) to uphold the model. The histogram of the residuals (between observed and reproduced correlations) revealed a symmetrical distribution (Mean = .04, *SD* = .11) thereby indicating the adequacy of the model.

As another measure of construct validity, the contribution of subscales to the model (Adjusted *R* square = .876; $F_{5, 606} = 863.12, p < 0.001$) was ascertained using multiple linear regression. With the unstandardized beta coefficients [7.865+ (.133*APO) + (.132*SAS) + (.139*ODR) + (.147*SI) + (.150*D)], the predicted values for CBC were computed using the regression equation. For multiple correlation of the subscales with the CBC, Pearson ‘*r*’ was calculated between CBC and predicted CBC, which showed a positive relationship of $r(610) = +.94, p < .01$.

Response process validity

Age and gender differences as response process was investigated to see if it contributed to any systematic error in challenging behaviours in individuals with *IDD*.

Table 2. Descriptive Statistics of CBRs (Scale Scores) by Age (N=612)

CBRS Scale Scores	Age Groups	N	Mean	SD
APO	4-12 Years	207	12.04	2.30
	13-18 Years	210	12.56	2.08
	19-58 years	195	12.57	2.26
SAS	4-12 Years	207	11.48	1.72
	13-18 Years	210	11.72	1.84
	19-58 years	195	12.10	1.59
ODR	4-12 Years	207	11.43	2.18
	13-18 Years	210	12.02	2.22
	19-58 years	195	12.29	1.51
SI	4-12 Years	207	10.58	2.78
	13-18 Years	210	11.29	2.68
	19-58 years	195	12.54	1.84
D	4-12 Years	207	14.63	1.55
	13-18 Years	210	14.71	1.55
	19-58 years	195	15.41	1.11
CBC	4-12 Years	207	16.01	.96
	13-18 Years	210	16.84	.93
	19-58 years	195	17.11	.92

Age had significant effect on the CBRs scale scores (both subscales and composite) in APO at $F(2, 609) = 3.78, p < .05$; SAS at $F(2, 609) = 6.56, p < .01$; in ODR at $F(2, 609) = 9.81, p < .001$ with Brown-Forsythe robust statistic at $F(2, 570) = 9.95, p < .001$; in SI at $F(2, 609) = 31.97, p < .001$ with Brown-Forsythe robust statistic at $F(2, 565) = 32.43, p < .001$; in D at $F(2, 609) = 17.78, p < .001$ with Brown-Forsythe robust statistic at $F(2, 577) = 18.01, p < .001$; and in CBC at $F(2, 609) = 74.61, p < .001$. The age differences in both subscales and the composite in the present sample (See Table 2) was significant indicating

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higher challenging behaviors in the age group of 19-58 years old compared to other two groups.

The comparison of means based on gender showed slight difference in ODR whereas other subscales and composite had very similar scores (See Table 3). Male sample scored higher in ODR ($M = 12.06$, $SD = 2.05$) when compared with their female counterparts ($M = 11.62$, $SD = 1.98$) at $t(610) = 2.56$, $p < .05$.

Table 3. Descriptive Statistics of CBRS (Scale Scores) by Gender

CBRS Scale Scores	Gender	N	M	SD
APO	Male	395	12.30	2.118
	Female	217	12.54	2.400
SAS	Male	395	11.66	1.528
	Female	217	11.94	2.066
ODR	Male	395	12.06	2.054
	Female	217	11.62	1.978
SI	Male	395	11.48	2.561
	Female	217	11.38	2.683
D	Male	395	14.82	1.352
	Female	217	15.06	1.642
CBC	Male	395	16.64	.960
	Female	217	16.65	1.192

Concurrent validity

The Vineland-II was completed for 86 individuals along with CBRS (scale scores). Pearson correlation of the CBRS (CBC) and the Vineland (Maladaptive Behavior Index, MBI and Adaptive Behavior Composite, ABC) was computed (See Table 4). The CBC had large positive correlation (.63, $p < .001$) with MBI and medium negative correlation (-.34, $p < .01$) with ABC.

Table 4. Pearson Correlation Coefficients of CBRS and Vineland-II : Subscales and Composite, (N=86)

	CBRS (M ± SD)						
	APO (12.86 ± 3.09)	SAS (11.73 ± 2.36)	ODR (12.15 ± 2.29)	SI (11.52 ± 2.93)	D (15.19 ± 1.91)	CBC (16.73 ± 1.35)	
Vineland-II (M ± SD)							
Maladaptive Behavior Index (17.40 ± 2.81)	.63***	.34**	.60***	.47***	.48***	.63***	
Adaptive Behavior Composite (50.14 ± 13.70)	-.18	-.46***	-.31**	-.22*	.04	-.34**	

Note. Cell Values contains Pearson Correlation Coefficients

* $p < .05$, ** $p < .01$, *** $p < .001$.

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Criterion group validity

The Vineland-II assessment included a measure of adaptive levels for standard scores of 20 to 70 based on a classification system provided by Grossman (1983 revision). Based on this classification, the sample data was divided into five adaptive levels namely profound deficit (≤ 20), severe deficit (21 to 35), moderate deficit (36 to 50), mild deficit (51 to 70) and accepted (> 70).

Based on the preliminary analyses, the five groups were found to be of unequal sizes. As a remedial approach, the group “accepted” was removed from the data set, severe and profound was combined to one group with mild and moderate as two other groups. With 3 groups (N=83), one way ANOVA was run to see if there were any significant mean differences in the CBRS scores based on adaptive levels.

Based on the Vineland-II adaptive behavior functioning, individuals were classified into three categories of adaptive levels: mild, moderate, severe-profound. The means of the three groups showed severe and profound group as largest (APO, SAS, ODR, SI and CBC) while moderate showed largest in D (See Table 5). The mild group had lowest means (APO, SAS, ODR and CBC) and moderate had lowest in SI and severe & profound had lowest in D.

Table 5. Descriptive Statistics of CBRS (Scale scores) by Adaptive levels.(N=83)

CBRS Scale Scores	Adaptive Levels	N	M	SD
APO	Severe & Profound	16	13.81	3.60
	Moderate	15	12.87	2.45
	Mild	52	12.67	3.15
SAS	Severe & Profound	16	13.62	3.30
	Moderate	15	11.73	1.67
	Mild	52	11.23	1.95
ODR	Severe & Profound	16	13.44	2.58
	Moderate	15	12.73	2.37
	Mild	52	11.63	2.25
SI	Severe & Profound	16	12.56	3.14
	Moderate	15	11.33	3.31
	Mild	52	11.35	2.79
D	Severe & Profound	16	14.88	0.81
	Moderate	15	15.33	1.95
	Mild	52	15.29	2.17
CBC	Severe & Profound	16	17.50	1.51
	Moderate	15	16.80	1.37
	Mild	52	16.52	1.26

The effect of adaptive levels was significant in SAS at $F(2, 82) = 7.09, p < .001$ with Brown-Forsythe robust statistic at $F(2, 28) = 5.61, p < .01$; in ODR at $F(2, 82) = 4.15, p < .05$ and in CBC at $F(2, 82) = 3.34, p < .05$. The results supported the validity of the CBRS as a measure of challenging behaviors to differ based on the adaptive levels of the individuals with IDD in two subscales (SAS & ODR) and CBC.

Proportion of Challenging Levels based on norms

The main purpose of CBRS was to identify and classify based on the levels of challenging behaviours in individuals with intellectual and developmental disabilities. Table 6 showed

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the levels of CBRS (subscales and composite) individuals with intellectual and developmental disabilities.

Table 6. Challenging levels of CBRS (N=612)

CBRS	Challenging Levels		
	Typical	High Risk	Critical
APO	584 (95.4%)	22 (3.6%)	6 (1%)
SAS	606 (99%)	3 (0.5%)	3 (0.5%)
ODR	600 (98%)	9 (1.5%)	3 (0.5%)
SI	595 (97.2%)	17 (2.8%)	--
D	575 (94%)	28 (4.6%)	9 (1.5%)
CBC	513 (83.8%)	98 (16%)	1 (0.2%)

DISCUSSION

The CBRS was developed, to provide a measure with broader range of challenging behaviours and its impact, i.e., by including the three dimensions (frequency, intensity and management), underlying the statement given by Oliver, McClintock, Hall, Smith, Dagnan & Stenfert-Kroese (2003), “assessments that identify only a limited number of dimensions of impact of challenging behavior may be insufficient to properly identify the significance of such behavior to services and people with intellectual disabilities themselves”. Also, as a unique attempt, the three dimensions (three sets of scores) were combined into single score by using a coding scheme evolved by practitioners (including parent professionals) in the field of *IDD*.

Notably, the sample demonstrated a variety of different problem behaviors, which has contributed to positively skewed non-normal data. Therefore, normalizing and score transformation of the raw scores into scaled scores were performed so as to enhance the application of the scale. Rojahn, Matson, Lott, Esbensen, and Smalls (2001) has noted that problem behaviors are typically of low prevalence at a single point of observation even in at-risk population such as *IDD* because challenging behaviours are observed under different conditions that are inherently disparate each time when they are observed.

CBRS reported questionable to good measure of internal consistency reliabilities (.59 to .89). Novick and Lewis (1967) have substantiated that Cronbach’s alpha provides a conservative estimate of a measure’s reliability and it can never be lower than alpha of hypothetical alternative form of the same length. That is, with any other related measure, it cannot produce coefficients lower than the alpha (.59 to .89) provided by this tool. Thus, CBRS report good internal consistency in CBC; acceptable to good consistency in APO & SAS; questionable to acceptable in ODR & SI; and poor to questionable in D. However, none of the ICRs were below .50, to be deemed as unacceptable.

The model developed in the EFA is confirmed through PCFA [χ^2 (590, $N = 620$) = 1330.02, CFI = 0.86, SRMR = 0 .037] and considered to be having a reasonable prospect for investigating through CFA in future research. The five-factor solution with the absolute fit indices (<.05) is encouraging and may point to better fit with replication even though the incremental fit indices (< 0.95) were fairly low. The construct was also validated through its significant relationship found between CBC and predicted CBC.

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The age differences in both subscales and the composite in the normative sample was significant indicating (19-58 years) had higher challenging behaviours than the other two groups of lower age. Studies reported that parents or teachers perceive better degree of controllability with younger age groups than with older age groups. Gender differences in odd/repetitive behaviours of CBRS scale scores (Males = 12.06 and Females=11.62) in the sample was significant, which indicated that males have higher odd/repetitive behaviours when compared to female individuals with *IDD*.

CBRS also showed concurrent validity with another well-established construct, Vineland-II by having a significant positive relationship with the maladaptive measure, and a significant negative relationship with adaptive functioning of the individuals with *IDD*. Individuals in the severe-profound classification had higher scores on the APO, SAS, SI, ODR & CBC, but notably those in mild and moderate category showed higher scores in D.

The practical utility of the CBRS is the use of the norms, which primarily is to aid the classification, to make appropriate provision of services for individuals with *IDD*, within a system that was built upon the principle of response to intervention. Generally, the norms of the psychological tests are derived based on age or grade. In CBRS, norms were developed based on age. The standardization sample was in the age group of 4 years through 58 years, with median age of 15 years.

National Institute for Health and Care Excellence (2015) has evaluated a moderate to low-quality evidence on the psychometric properties of various measures of challenging behaviours. As a result of inherent variability of the construct, lack of representation in the sample, difficulties to data collection, inter-observer (parents and teachers) bias or desirability, demand characteristics (parent, teacher, stranger etc.) and contextual influences (home, school or community), there are both theoretical and practical implications for population instrument validity in *IDD*.

Although, it is relatively common and persistent for individuals with *IDD* to develop challenging behaviours from time to time, it is not necessary to either exhibit same behaviours at all times or all individuals with *IDD* exhibit similar behaviours. It is because of this inherent variability, the CBC is shown at the low end. Regardless, the author recommends that the subscales may be used for behavior intervention studies. The CBC levels may be used for disability policy or educational placement decisions, also bearing in mind that the critical levels in any two subscales may indicate high support needs. More importantly, behaviors that are threat to self or others, albeit challenging levels, need to be dealt with at the baseline.

CBRS would bring outcomes particularly to reduce maladaptive behaviours and to facilitate adaptation in socially relevant settings and increase the repertoire of daily living skills of individuals with severe challenging behaviours who are imposed by severe limitations because of their disabilities.

CONCLUSION

CBRS is a reliable and valid tool to assess challenging behaviours in individuals with *IDD* with established psychometric properties - factor structure, internal consistency reliabilities, construct validity, concurrent validity, and criterion group validity- for the subscales (Aggression to People/Objects, Self-Aggression/ Stimulation, Odd/Repetitive, Socially

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Inappropriate and Deviant) and the composite. It has scope for validation through confirmatory factor analysis as future prospect. Comparatively CBRS is easy and economical to administer and is very useful for research and evaluation purposes.

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Conflict of Interest

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