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The behavioural profile of psychiatric disorders in persons with intellectual disability

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Abstract

Background Problems associated with psychiatric diagnoses could be minimized by identifying behavioural clusters of specific psychiatric disorders.

Methods Sixty persons with intellectual disability (ID) and behavioural problems, aged 12–55 years, were assessed with standardized Indian tools for intelligence and adaptive behaviour. Clinical diagnoses were conferred as per International Classification of Diseases – 10th Revision (ICD-10) criteria. Subsequently Reiss Screen for Maladaptive Behaviors (RSMB) and AAMD Adaptive Behavior Scale-Part II were administered independently.

Results Aggression and rebellious behaviours were more common in affective disorders and personality disorders. Psychotic and paranoid features were significantly more in psychosis group. Those with behavioural problems had significantly low scores on the sub-scales of RSMB.

Conclusion RSMB and AAMD Adaptive Behavior Scale-Part II will be useful to identify behavioural clusters, which will complement clinical psychiatric diagnoses in individuals with ID.

Keywords behavioural profile, intellectual disability, psychiatric problems

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Introduction

Persons with intellectual disability (ID) can experience a wide range of psychiatric disorders from unspecified behavioural and emotional disorders to schizophrenia and personality disorders (Reiss 1988; Matson & Sevin 1994; Das 1996; Kar *et al.* 1996; Szymanski & Wilska 1997; Khess *et al.* 1998; Jena 1999; Kishore *et al.* 2004). However, identification of psychiatric disorders in this group is reported to be difficult because of inherent communication and cognitive deficits (Bouras & Drummond 1992; Moss & Patel 1993; Szymanski 1994; Salvador-Carulla *et al.* 2000).

Earlier studies reveal that, from the clinical point of view, all forms of schizophrenia can be found in individuals with ID but often with mixed clinical features (Reid 1993). Although formal thought disorder and persecutory delusions are difficult to assess (Wright 1982; Meadows *et al.* 1991), withdrawal behaviour, sleep disturbances, hallucinations without complex delusional systems, paranoid and catatonic features, aggressiveness, impulsiveness and self-

injurious behaviours may be the hallmarks of schizophrenia (Eaton & Menolascino 1982; Reid 1993).

It is easy to identify affective disorders, as the manifestation of symptoms would be much similar to that of general population (Sovener & Hurley 1983). Mania is said to be characterized by aggressive outbursts, increased motor productivity and vocalization (Fraser & Nolan 1994). And, depression is usually characterized by aggressive outbursts, withdrawal behaviour and somatic complaints instead of classical depressive symptoms (Sovener & Hurley 1983; Dosen & Gielen 1993). More severe forms of depression may include psychotic features thus making it difficult to differentiate it from schizophrenia (Fraser & Nolan 1994).

Personality disorders is another challenging issue. Despite sporadic incidence reports of borderline, anti-social, avoidant, dependent and schizoid personality disorders, there is low consensus about their characteristic features (Eaton & Menolascino 1982; Reid & Ballinger 1987; Dana 1993). Lastly, scores of behaviours such as aggression, inappropriate social behaviours, anti-social behaviours, sexual acting out, defiant behaviours, and physical harm are of major concern which may or may not be part of any psychiatric disorder (Peshwaria *et al.* 1990; Sturmey *et al.* 1991; Bouras & Drummond 1992; Khess *et al.* 1998).

From the review it appears that the difficulty encountered in the psychiatric diagnostic process is mainly because of developmentally impaired social functioning, intelligence and communication abilities (McIntyre *et al.* 2002; Sturmey 2002). Perhaps identification of behavioural clusters may rectify the diagnostic problems (McIntyre *et al.* 2002), which will help in early identification and appropriate intervention. The objective of the study was to identify behavioural profile of specific psychiatric disorders through Reiss Screen for Maladaptive Behaviors (RSMB) and AAMD Adaptive Behaviour Scale Part II.

Method

Participants

Sample details are the same as reported in an earlier study (Kishore *et al.* 2004). Sixty persons with ID and behavioural problem continuing for more than 2 months were selected from the Central Institute of Psychiatry, Ranchi and Deepshika Institute for Child Development and Mental Health, Ranchi through purposive sampling method. Participants' age ranged from 12 to 55 years, and accompanied by either parents or siblings. The minimum age level and the duration of behavioural problems were decided as per the requirement of RSMB. The majority of the participants were males (76.7%) and below 20 years (63.3%). There were 36.7% with mild ID, 43.3% with moderate ID, and 20% with severe/profound level. The mean age of the group was 21 (± 7.03) years.

Procedures

The participants screened for ID and behaviour problems through semi-structured interview were taken up for IQ assessment on Stanford-Binet Intelligence Scale (Kulshreshta 1971) and Vineland Social Maturity Scale (Bharat Raj 1992) to confirm the level of ID. Psychiatric diagnoses were conferred through a semi-structured interview as per International Classification of Diseases – 10th Revision (ICD-10; World Health Organization 1992). The psychiatric diagnoses were formulated by resident doctors in psychiatry and the first author under the supervision of a consultant with MD in psychiatry. Then, the RSMB (Reiss 1987), Reiss Screen Test Manual (Reiss 1988) and AAMD Adaptive Behavior Scale Part II (Nihira *et al.* 1975) were used independently to rate behaviour problems. The RSMB consists of 38-item spread across eight domains, and each item is rated on a 3-point scale; it is reported to have good psychometric properties and diagnostic utility (Reiss & Valenti-Hein 1994; Havercamp & Reiss 1997; Reiss 1997). The AAMD Behavioural Scale: Part II contains 14 domains. The scale is valid to measure adaptive behaviour (Nihira *et al.* 1975). Domains of both the scales are given in Tables 1 and 2 respectively.

Sample was divided into four groups for statistical analysis, which is as follows: (1) Behavioural ($n = 24$; those with unspecified problem behaviours); (2) Psychosis ($n = 19$; unspecified psychosis, schizophrenia, delusional disorder and autism); (3) Affective disorders ($n = 13$; bipolar affective disorder, mania and depression); and (4) Others ($n = 4$; personality disorder, conduct disorder, substance dependence and obsessive-compulsive disorder). This grouping is akin to previous studies (Reiss 1988).

Statistical analysis

Descriptive statistics (percentage, mean, SD), ANOVA and *post hoc* test (LSD) were applied using SPSS 7.5 version for Windows.

Results

The objective of the study was to study behavioural profile of psychiatric disorders in persons with ID by using RSMB and AAMD Scale Part II. The results are as follows: RSMB revealed that aggression (50%), sleep problems (42%), confused thinking (38%), hostility (31%), hallucinations (30%), eating problems (28%), inattentiveness (26%), attention seeking (23%) and regressive behaviours (20%) were very common. And, other symptoms were below 10%.

Significant differences were found among the groups in the mean scores of the RSMB scales (Fig. 1). In the aggression scale, the 'affective'group had higher scores than the 'psychosis' and 'behavioural' groups. On Psychosis scale, the 'psychosis' group and 'affective' group had greater scores than the other two. Both 'psychosis' and 'affective' groups scored higher than the other two groups in behavioural and physical symptoms on Depression scale. On the Dependant personality disorder scale, 'affective group' had significantly higher scores than the 'behavioural group' (Table 1).

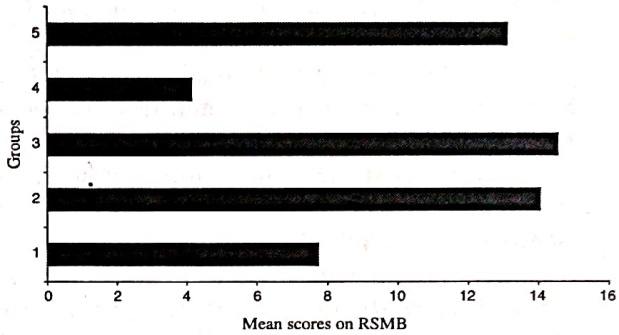

Figure 1 Mean Reiss Screen for Maladaptive Behaviors (RSMB) scores of various groups. Groups: 1. Others; 2. Psychosis, 3. Affective, 4. Behavioural, 5. All those with psychiatric diagnosis (i.e. cumulative mean score of group 1, 2 & 3).

Table 1 Group differences on Reiss Screen for Maladaptive Behaviors (RSMB) scales

	Groups					
RSMB scales	**Behaviour ($n = 24$) M ± SD**	**Psychosis ($n = 19$) M ± SD**	**Affective ($n = 13$) M ± SD**	**Others ($n = 4$) M ± SD**	***F*-test**	***Post hoc****
Aggression	1.71 ± 1.86	2.16 ± 2.41	4.15 ± 2.61	3.0 ± 2.58	3.52	A > P* A > B*
Autism	0.79 ± 2.11	1.89 ± 2.69	0.46 ± 0.88	0.5 ± 1.0	1.60	–
Psychosis	0.5 ± 1.22	4.68 ± 2.77	3.69 ± 3.04	0	15.19	P >O* P >B* A > O* A > B*
Paranoia	0.12 ± 0.45	1.37 ± 1.64	1.38 ± 1.89	1.5 ± 1.91	4.02	P >B* A > B*
Depression (behavioural symptoms)	0.33 ± 0.70	2.0 ± 1.80	1.46 ± 1.66	0.5 ± 1.0	5.77	P >B* A > B*
Depression (physical symptoms)	0.75 ± 1.33	3 ± 1.73	2.54 ± 1.94	0.5 ± 1.0	8.84	P >O* P > B* A > O* A > B*
Dependent personality disorder	0.58 ± 0.93	1.05 ± 2.07	1.77 ± 1.92	1.0 ± 1.15	1.53	A > B*
Avoidant personality disorder	0.46 ± 0.83	0.73 ± 1.56	1.23 ± 1.30	0.5 ± 1.0	1.18	–

A, Affective; B, Behavioural; O, Others; P, Psychosis.
*$P < 0.05$.

Table 2 shows the AAMD Part II profile. In the domain of rebellious behaviours, the 'affective' and 'other' groups scored significantly higher than the 'psychosis' group; and the 'affective' group scored significantly higher than the 'behavioural' group in the same domain. The 'behavioural' group scored significantly higher than the 'affective' in the domain of stereotyped behaviours and odd mannerisms. The 'affective' group scored significantly higher than the 'psychosis' and 'behavioural' groups in the domain of psychological disturbances. The psychosis group was significantly higher than the behavioural group in the use of medications.

Discussion

Earlier studies have amply discussed the problems associated with psychiatric diagnoses in person with ID and it was suggested that identification of behavioural profile or establishing a relationship between the behavioural clusters and psychiatric disorders could rectify these problems to a large extent (McIntyre *et al.* 2002; Sturmey 2002). Therefore, the present study was conducted with RSMB and AAMD Part II to examine the behavioural profile of specific psychiatric disorders.

The findings of RSMB are consistent with earlier studies that affective group had higher scores on aggression scale compared with other groups (Fraser & Nolan 1994). However, as aggressive behaviours were reported both in mania and depression (Sovener & Hurley 1983; Fraser & Nolan 1994), it is desirable to examine further whether increased motor activity, vocalization, withdrawal behaviours and somatic complaints can differentiate between the two conditions. Psychosis and affective groups having higher scores on Psychosis scale compared with other two groups indicates that RSMB is useful in identifying a psychotic disorder. Therefore, hallucinatory behaviours and paranoid ideation should be probed to confirm the diagnosis of psychosis. However, higher scores by the psychosis group on depression scales highlight the difficulty of differentiating psychosis from depression (Sovener & Hurley 1983; Fraser & Nolan 1994). In such a situation it is better to accept the limitations and observe the individual for other

Table 2 Group differences on AAMD Adaptive Behaviour Scale Part II

	Groups					
AAMD Part II domains	**Behavioural ($n = 24$) M ± SD**	**Psychosis ($n = 19$) M ± SD**	**Affective ($n = 13$) M ± SD**	**Others ($n = 4$) M ± SD**	***F*-test**	***Post hoc* analysis $P < 0.05$**
I. Violent and destructive	54.38 ± 18.56	55.26 ± 20.27	61.31 ± 22.33	71.75 ± 20.39	1.09	–
II. Anti-social	58.25 ± 61.37	39.79 ± 8.20	59.69 ± 24.27	57.75 ± 19.00	0.90	–
III. Rebellious behaviour	52.33 ± 16.82	50.58 ± 12.54	69.69 ± 20.29	69.25 ± 24.13	4.65	O > P; A > P; A > B
IV. Untrustworthy behaviour	58.73 ± 13.31	56.28 ± 9.84	57.64 ± 10.12	61.52 ± 12.5	0.26	–
V. Withdrawal	60.96 ± 17.89	68.16 ± 20.87	61.46 ± 19.29	66.75 ± 19.38	0.59	–
VI. Stereotyped behaviours and odd mannerisms	72.45 ± 13.65	70.94 ± 14.77	63.00 ± 7.16	71.25 ± 61.52	1.56	B > A
VII. Inappropriate interpersonal manners	71.96 ± 9.80	74.89 ± 9.70	75.27 ± 11.08	70.51 ± 0.0	0.55	–
VIII. Unacceptable vocal habits	69.09 ± 10.47	74.11 ± 12.18	69.45 ± 10.61	71.52 ± 9.64	0.77	–
IX. Unacceptable or eccentric habits	64.25 ± 12.62	62.58 ± 9.26	59.54 ± 6.08	60.0 ± 0	0.70	–
X. Self-abusive behaviour	75.50 ± 7.30	74.21 ± 4.79	75.77 ± 7.03	72.5 ± 5.0	0.41	–
XI. Hyperactive tendencies	72.29 ± 10.96	68.58 ± 3.17	73.15 ± 13.18	70.0 ± 0	0.80	–
XII. Sexually aberrant behaviours	63.27 ± 13.18	100.50 ± 12.68	70.73 ± 10.60	76.5 ± 5.0	0.96	–
XIII. Psychological disturbances	28.64 ± 6.01	30.94 ± 14.03	57.25 ± 28.06	38.75 ± 24.28	8.54	A > P; A > B
IV. Use of medications	56.17 ± 10.97	65 ± 17	65.00 ± 12.08	61.25 ± 10.31	1.93	P > B

A, Affective; B, Behavioural; O, Others; P, Psychosis.

behavioural clusters such as withdrawal behaviours and somatic complaints (Reiss 1992). The study also indicates that those with just behavioural problems are less likely to be false positive for psychiatric diagnosis on RSMB.

The findings based on AAMD indicate that rebellious behaviours could commonly be found in both the affective and personality disorders. Particularly, the affective group seems to exhibit more psychological disturbances hence it is easy to differentiate them from other psychiatric disorders. Qualitative analysis indicated that aggression and rebellious behaviours are common to mania, personality and conduct disorders though preponderance is high in mania (Fraser & Nolan 1994).

In conclusion, behavioural profiles can be identified in psychiatric diagnoses. When traditional methods are ineffective, behavioural scales like RSMB and AAMD Part II can be used to identify behavioural profiles as part of psychiatric evaluations. Proper screening with such scales will ensure appropriate and early intervention procedures. Nevertheless future studies are required with more participants in each psychiatric group.

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