

Profiles of Individuals With Mental Retardation In Ranchi : A Community Study

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ABSTRACT

The present descriptive community-based study, a part of National Pilot Project for the Mentally Retarded, illustrates various profiles of and attitudes towards individuals with mental retardation in Ranchi district. Diagnosis of mental retardation was made on clinical evidences and it was found more commonly among the subjects who were aged less than 10 years, males, firstborn and belonging to large families and lower income status. Parental consanguinity was seen in 16.7% and delayed birth cry in 35% of patients. Physical impairments were found in 25% of subjects and it was seen more among the subjects aged below 10 years and females. In general, attitudes towards subjects with mental retardation were found favourable. In brief, apart from describing the profiles of individuals with mental retardation, the present study draws attention towards the preventable causes, particularly prenatal factors, of mental retardation and emphasizes the need for the early identification and the management of physical impairments.

Key words : Community study, epidemiological study, mental retardation, emntal deficiency, physical impairments, attitudes.

INTRODUCTION

Epidemiological studies are crucial in providing data that help in understanding the distribution, possible etiology and course of conditions being examined. Further, the epidemiological data become a basis for the development of policies and strategies to handle the morbidities and mortalities in question (Wassertheil-Smoller, 1990).

Of the psychiatric disorders, mental retardation (MR) is one such condition that imposes an enormous burden on the family members (Sequeria et al., 1990). Besides, because of co-morbid physical (Narayanan et al., 1987; Madhavan & Narayan, 1990) and psychiatric disorders (Einfeld & Tonger, 1996; Salvador-Carulla, 2000), which occur at higher rates, subjects with MR experience a great subjective distress and dysfunction. According to a recent meta-analysis, the prevalence of mental retardation in India is about 5.57/1000 (Reddy & Chandrashekar, 1998).

In several earlier Indian epidemiological studies, both the prevalence and characteristics of MR has been investigated along with other psychiatric disorders (Surya, 1964; Sethi et al., 1967; Dube, 1970; Elnagar et al., 1971; Sethi et al., 1972; Nandi et al., 1975; Lal & Sethi, 1977; Sen et al., 1984; Mehta et al., 1985; Sachdeva et al., 1986; Nandi et al., 1992; Premaranjan et al., 1993; Shaji et al., 1995). Comparatively, studies that are designed particularly to examine the distribution of MR (Bharatraj, 1970; Gupta & Sethi, 1970; Avasthi et al., 1983) and characteristics of the individuals with MR (Biswas, 1975; Narayanan et al., 1973; Narayanan et al., 1986; Narayanan et al., 1987; Madhavan & Narayan, 1990) are less. The present community study, a part of a National Project on Mental Retardation, illustrates the characteristics of and attitudes towards individuals with MR in the Ranchi district.

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MATERIALS AND METHOD

General outline of the study:

The present descriptive, community-based study was a part of National Pilot Project for the Mentally Retarded (NPPMR). This project, to integrate mentally retarded with family and community, was structured with the objective of reaching a significant number of persons within a specific time frame and to bring about a qualitative change in their lives by providing developmental inputs. While the first phase of the NPPMR was conducted in the southern states of India, the second phase covered the northern and eastern states. For this project, in Bihar state, the Deepshikha Institute for Child Development and Mental Health (DICDMH) [presently in Jharkhand] was selected. The target given to DICDMH was identification of a minimum of 500 cases of MR within the time frame of six months and to give training to the family of the identified. The DICDMH carried out the present study between April and October 1999.

Study areas:

The study was restricted to three blocks, namely, Ratu, Mandar and Angarha and urban slums of Ranchi. The main criterion of the selection of the study areas was easy accessibility and this was done particularly due to the need for, after an initial identification, additional three visits to each subject with MR.

Field investigators:

For this study, seven field investigators who received Diploma in Special Education-Mental Retardation (DSE-MR) from DICDMH were selected. All these investigators were especially trained for this project. There were introductory sessions at DICDMH and then the investigators participated in a one-day training program conducted by the

coordinators of the NPPMR at New Delhi. These steps were taken to achieve uniformity in the diagnosis of MR.

Diagnosis:

The diagnosis of MR was exclusively based on clinical grounds. This approach was adopted given that a large number of cases of MR had to be identified within a period of six months. An individual was considered having MR if he/she had (a) definite developmental delay, (b) onset of developmental delay before the age of 18 years and (c) poor adaptive functioning in relation to sociocultural background. Similarly, physical impairments were also diagnosed on the basis of clinical evidences only.

Procedure:

Initially, the field investigators identified a few individuals belonging to different groups such as Anganwadi workers, Saksharta Karmis, Village Health Workers and others who knew well about the area under investigations. Subsequently, these individuals were trained to identify persons with MR. Another approach used was to ask the guardians of MR persons to name similar cases in the neighbourhood. These procedures ensured easy establishment of rapport with the villagers and speedy identification of cases. After the initial identification, investigators examined the subjects to ensure the diagnosis of MR and collected study variables. The experienced authors H.S and A.N confirmed the diagnosis of MR in most cases. Later, as a part of this project, three more visits were made to assess the identified cases with a specially designed method, train the parents and guardians with the training kit and offer a book titled 'Home a school.'

Data analysis:

For this study, details of socio-demographic characteristics, risk factors for mental retardation, co-morbid physical impairments and attitudes towards mental retardation were collected. To examine group differences,

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was high among female subjects ($X^2 = 5.03$, $df = 1$, $p = 0.03$). However, there were no gender differences in terms of locomotor impairments ($X^2 = 3.5$, $df = 1$, $p = 0.06$), hearing impairments (Fisher's exact test, $p = 0.16$), visual impairments (Fisher's exact test, $p = 0.08$) and epilepsy ($X^2 = 0.78$, $df = 1$, $p = 0.38$) (table 6). Likewise, there was no difference in the rate of physical impairments in terms of abnormality in the duration of pregnancy ($X^2 = 1.22$, $df = 1$, $p = 0.3$) as well as type of delivery ($X^2 = 1.67$, $df = 1$, $p = 0.2$) (table 7).

TABLE - 4
Physical co-morbidities in mental retardation

Variable	No. of cases	%
Physical impairments	144	25.0
Locomotor	120	20.9
Hearing	4	0.7
Visual	5	0.9
Epilepsy	17	3.0

TABLE - 5
Rates of physical impairments in relation to age

Variable	N	%	P
Age (years)			0.05
<10	75	52.1	
11-20	56	38.9	
>20	13	9.0	

TABLE - 6
Sex differences in the distribution of physical impairments

Variable	Male		Female		P
	n	%	n	%	
Physical disabilities	75	21.6	69	30.3	0.03
Locomotor	63	18.2	57	25.0	0.06
Hearing	4	1.2	0	0.0	0.16
Visual	1	0.3	4	1.8	0.08
Epilepsy	8	2.3	9	3.9	0.38

TABLE - 7

Rates of physical impairments in relation to age

Variable	N	%	P
Duration of delivery			0.3
Full-term	130	24.4	
Abnormal	14	33.3	
Type of delivery			0.2
Normal	133	24.4	
Abnormal	11	36.7	

Family members of the subjects with MR were interviewed in detail to know how mentally retarded subjects were perceived in the family and in the community. Notably, a favourable supportive attitude was in the family atmosphere (90.8%) as well as in the community (82.1%).

DISCUSSION

Socio-demographic profiles:

The present finding that child and adolescent population had higher rates of MR is in accord with earlier reports (Gupta & Sethi, 1970; Sethi et al., 1972). The exact reason for such higher distribution of MR in pediatric population is unknown. Comparable to other studies (Gupta & Sethi, 1970; Sethi et al., 1972; Narayanan et al., 1986), a higher proportion of the present study subjects were males. Although an earlier proposed theory of 'X-linkage of major intellectual traits' seems to offer some explanation (Lekhre, 1972), the male dominance noted in these studies may be explained more reasonably by the cultural factors. In India, males are considered the earning members of the family and hence, the possibility of early recognition and report of subnormal intelligence is high. Conversely, the possibility of under reporting this fact is more in females due to associated stigma and consequent matrimonial problems (Gupta & Sethi, 1970).

Chi-square test with and without Yate's correction and Fisher's exact test were used. The level of significance was set at $p < .05$. Data analysis was done with SPSS-Win version 7.5.

RESULTS

Of the 575 subjects with MR identified in this study, all the data were available only for 450 cases. For clarity, number of subjects for whom information of a particular variable was available has been given in respective tables.

Of the study subjects, a majority of them were aged below 10 years ($n = 268, 46.6\%$), males ($n = 347, 60.3\%$), with birth order four or more ($n = 181, 31.5\%$) and from large families with more than four siblings ($n = 259, 46.9\%$) and lower socioeconomic status ($n = 444, 77\%$) (table 1).

TABLE - 1
Socio-demographic profiles

Variable		No. of cases	%
Age at screening (in years) (N=575)	<10	268	46.6
	11-20	220	38.3
	>20	87	15.1
Sex (N=575)	Male	347	60.3
	Female	228	39.7
Birth Order (N=575)	1	178	31.0
	2	125	21.7
	3	91	15.8
	>4	181	31.5
Family Size (no. of siblings) (N=552)	1	74	13.4
	2-3	219	39.7
	>4	259	46.9
Economic status (N=575)	Lower	444	77.2
	Middle	95	16.5
	Upper	36	6.3

At the time of birth of the subjects with MR, a high proportion of the mothers ($n = 281, 53.0\%$)

and fathers ($n = 305, 59\%$) were aged between 20-30 years and above 30 years, respectively. A history of consanguinity was present in 96 (16.7%) cases (table 2). Of study subjects, 550 (98.2%) and 533 (95.7%) were born out of normal and full-term delivery, respectively. Delayed birth cry was noted in 201 (35%) subjects and 89 (16.2%) had a history of poor nutritional status. Six subjects had a history of neonatal jaundice (1%) and another four (0.7%) had neonatal fits (table 3).

TABLE - 2
Risk factors - parental

Variable		No. of cases	%
Age at child birth (in years) Mother (N=530)	<20	126	23.8
	21-30	281	53.0
	>30	123	23.2
Father (N=517)	<20	18	3.5
	20-30	194	37.5
	>30	305	59.0
Consanguinity (N=575)		96	16.7

TABLE - 3
Risk factors- perinatal and postnatal

Variable		No. of cases	%
Delivery type (N=560)	Normal	550	98.2
	Caesarian	8	1.4
	Forceps	2	0.4
Duration of pregnancy (N=557)	Full-term	533	95.7
	Premature	16	2.9
	Postmature	8	1.4
Delayed birth cry (N=450)		201	35.0
Nutritional status of the baby (N=548)	Normal	459	83.8
	poor birth wgt.	89	16.2
Neonatal complications (N= 560)	Jaundice	6	1.0
	Neonatal fits	4	0.7

Among 144 (25.0%) subjects who had comorbid physical impairments, most ($n = 120, 20.9\%$) had locomotor impairments such as deformity of one leg or both legs, weakness of limbs, etc. (table 4). Physical impairments were noted at higher rates among the subjects aged below 10 years ($X^2 = 5.98, df = 2, p = 0.05$) (table 5). The overall rate of physical impairments

Similar to a previous study (Biswas, 1975), in the current study, a high proportion of the persons with MR were either first born (31%) or having a birth order of four or more (31.5%). A potential reason for the later finding could be the increased incidence of labour related complications and prematurity that occurs in the multiparous women who have given four or more viable birth (Dutta, 1988). Likewise, perinatal complication associated with the first childbirth maybe the basis for observed increased rate of MR in the firstborns.

Subject who had four or more siblings had a higher representation in the present study. Except one study (Sethi & Gupta, 1972), a few earlier studies (Bharatraj, 1970; Dube, 1970; Gupta & Sethi, 1970; Avasthi et al, 1983) support our observation that the rates of MR were high in lower income group. The fact that our study included largely subjects from rural area, comprising mainly lower income groups, however, has to be kept in mind while interpreting our findings. The observations that malnutrition can affect the growth of brain (Sethi, 1979; Kaur et al., 1985; Udani, 1992) and 'Poverty syndrome' (Sethi, 1979) that includes low-income status, too many children, diminished food intake, etc. may predispose to MR (Gupta & Sethi, 1970; Sethi, 1979) indicate the probable reasons for increased occurrence of MR in lower socio-economic group.

Risk factors:

Increased maternal age carries increased risk of chromosomal non-dysfunction and older paternal age may predispose to autosomal dominant mutations (Packman, 1996). In accord with this view, about 59 % of father of the present study were found aged above 30 years when the subjects with MR were born. Similarly, although a majority of mothers were in the age range of 20-30 years, still about one fifth of them were aged above 30 years.

An association between parental consanguinity and mental retardation has been studied and parental consanguinity has been found a significant factor in relation to severe mental retardation (Narayanan et al, 1986). Parental consanguinity rate of 16.7% of the present study was lower than that of an earlier report in which 30% patients had history of parental consanguinity (Narayanan et al., 1987). This discrepancy can be explained by the methodological differences between these two studies that the later study was a hospital-based one and thus may not reflect the actual rate of consanguinity in the population.

Although a majority of the present subjects were delivered normally as a full-term baby, a history of delayed birth cry was noted in nearly one third of the subjects. This finding suggests that ensuring safe childbirth may minimise the rate of MR that occurs secondary to perinatal anoxic brain damage. In our study, about 16.2% patients had a history of poor birth weight and the reasons mentioned earlier may explain the association between nutritional status and mental retardation. Since we did not collect corroborative evidences from hospital records where delivery occurred and views about poor nutritional status might vary across persons, the possibility of underestimation of the nutritional status is undeniable.

Co-morbid physical impairments:

In this study, about one fourth of the subjects had comorbid physical impairments. Of these impairments, locomotor impairments head the list, followed by epilepsy. Visual and hearing impairments. Though rates of locomotor impairments are comparable, the rates of other impairments observed in this study were less than that of earlier studies (Narayanan et al., 1987; Madhavan & Narayan et al., 1990). Possible reasons for such discrepancy include inclusion of severe cases

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of MR and clinical samples in the previous studies (Narayanan et al., 1987; Madhavan & Narayan et al., 1990). Richardson et al. (1980) reported co-morbid epilepsy in 3-6% of subjects with IQ 50-70 and 44% if IQ is below 50. Since IQ was not measured, explanation for the lower rates of epilepsy noted in the current study cannot be given.

A higher proportion of the subjects aged less than 10 years of this study had co-morbid physical impairments. A possible explanation for such increased rates seems to be reduced life span in the presence of impairments or migration of the subjects with physical impairments from the native place, once they grown older, due to socially disadvantageous position. A noteworthy finding of this study was female subjects with MR having higher rates of co-morbid physical impairments. When types of impairments were analyzed, there was a trend indicating higher rates of locomotor and visual deficits in female subjects. Although there was no gender difference in terms of other impairments, the issue has to be studied further to know whether there is any gender-related predisposition of the differential occurrence of physical impairments. We did not notice any difference in the rate of occurrence of physical impairments in relation to obstetric factors and this may be because of statistical error that might have emerged due to small sample size of the subjects belonging to abnormal categories.

Perception towards subject with MR:

In a previous study, both the parents, particularly mother, were found to show more negative attitudes toward their severely retarded child (Rastogi, 1981). Similarly, in another study, parents with inadequate knowledge or who were ignorant about mentally handicap were found having negative attitude towards their children and high expectations (Narayan, 1993). In the present study, we did not assess the parental

knowledge and also we did not use a structure instrument to assess the attitudes towards mental retardation. Nevertheless, detailed interviews of the family members revealed a supportive attitude both in the family as well as in the community. This issue needs further exploration with well-designed instruments.

Conclusions:

Mental retardation is a common clinical condition and efforts should be made to minimize the preventable causes, particularly related to perinatal factors. Since a significant proportion of the subjects with MR have physical impairments, special training and aids to improve the functioning capacity of these subjects has to be arranged. Favourable attitudes seen in the family and in the community can be channelised to achieve such goals. Although the present study is one among of a few studies that focused solely on mental retardation and trained investigators identified subjects with MR, a few limitations of this study should be taken into account before interpreting and generalizing these findings. These limitations include purposive sampling, diagnosis of MR based exclusively on clinical grounds and likelihood of some amount of recollection bias. Hence, further studies that evaluate IQ with standardized instruments and studies focusing on issues such as quality of life of the subjects with MR, burden of care at community level and economical loss due to associated impairments are essential.

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BOOK REVIEW

OUT OF SIGHT OUT OF MIND

Voices of the homeless mentally ill

The Banyan story told by Kendra, Published by East West Books (Madras) Pvt. Ltd., Chennai in 2002, Page - 252, Price Rs. 250.00.

Kendra a U.S. citizen by birth moved to India with her German husband, a diplomat in German Foreign Service. She specialized in Internal Relations during her undergraduate studies at Mount Holyoke College in Massachusetts, U.S.A. After loosing her youngest son, she was in search for peace of mind by doing some useful voluntary work. The search led her to The Banyan in Chennai. But at this Shelter for rehabilitating homeless mentally ill women, she discovered a much more therapeutic environment than she had expected.

The book contains foreword by Dr. A.P.J. Abdul Kalam, President of India and has been divided broadly in four chapters. The first chapter "Leaves of the Banyan" gives account of the women patients right from the time and circumstances which led them to The Banyan and subsequent return to their native places.

The second chapter "Life under the Banyan" gives description about the service providers, nature of vocational and social skill training programmes of The Banyan. Routine activities of the home to keep the women busy in a meaningful way has been elaborated in a manner.

The third chapter "Growth of the Banyan" mainly depicts how the idea of starting the home for mentally ill was conceived by two young girls Vandana and

Vaishnavi of Channai in early 1990s. Even today, these girl's belief that humanity has an obligation to try to allay human suffering is the driving force that permeates the Banyan's organisational culture and sustains all those associated with its mission.

The last chapter "The Banyan Reaches Out" highlights the basic philosophy and principle of The Banyan about how the mentally ill can be cured and socio-vocationally rehabilitated. Involvement of local resource persons and agencies for returning the long standing patients to their families is wonderful to learn and translate into reality in future.

The author accompanied some of the these women as they journeyed home to their communities in different parts of India. Inspired by the courage and resilience of recovering mentally ill women, Kendra, the author illustrated their histories within the context of her own journey of healing, touching on the subjects of despair and hope as they pertain to humanity in general.

The true stories of inmates, the most marginalised in Indian Society has been presented in a touching manner and reflect the visible pain of the mentally ill. This book will bring in change in the attitude of readers towards mentally ill in a positive manner. Next time, the reader sees a mentally ill person, he/she will look at him or her in very different way—the reader will see a human being.

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Psychiatric diagnosis in persons with intellectual disability in India

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Abstract

Background This study examines the rate of psychiatric diagnosis as per ICD-10 and Reiss Screen for Maladaptive Behaviours (RSMB), and distribution of psychiatric diagnosis with regard to the severity of intellectual disability (ID). It also explores the degree of agreement between Reiss screen and clinical diagnosis (ICD-10) in relation to dual diagnosis.

Methods In this study Intelligence (IQ) and Social Quotient (SQ) were estimated on Indian adaptation of Binet's scale and Vineland Social Maturity Scales, respectively, in 60 consecutive persons with ID. Both ICD-10 and RSMB were used independently to determine the presence of psychiatric diagnosis.

Results Clinically, according to ICD-10, about 60% of the sample was found to have dual diagnosis as compared to 48% on RSMB. Agreement between ICD-10 and RSMB about psychiatric comorbidity was 82%. Commonest psychiatric diagnosis was unspecified psychosis followed by bipolar affective disorders.

Conclusion Persons with ID do suffer from various psychiatric disorders. RSMB is a useful tool for dif-

ferentiating between psychiatric problems and maladaptive behaviours. Hence RSMB can be used in the Indian context.

Keywords dual diagnosis, ICD-10, intellectual disability, psychiatric disorders, RSMB

Introduction

The concept of dual diagnosis in psychiatry has been in use since long ago. However, its use in the field of intellectual disability (ID) is of recent origin. The term refers to the coexistence of psychiatric disorders with ID (Matson & Sevin 1994; Szymanski 1994; Szymanski & Wilska 1997; Sturmey 2002). Comorbid psychiatric diagnoses will affect the overall management hence it is important to understand the prevalence and nature of psychiatric diagnoses.

After an extensive review of literature, Borthwick-Duffy (1994) reported, in general, the rate of psychiatric diagnoses in ID varies between 10% to more than 80%. In subsequent studies the prevalence rates were reported in this range only (Philips & Williams 1975; Das 1996; Kar *et al.* 1996; Khess *et al.* 1998; Stromme & Diseth 2000; Deb *et al.* 2001a; Molteno *et al.* 2001).

A wide range of psychiatric disorders are associated with ID. Unspecified psychosis (Philips & Williams

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1975; Eaton & Menolascino 1982; Lund 1985), unspecified behavioural and emotional disorders (Khes *et al.* 1998), hyperkinesia and pervasive developmental disorders (Jena 1999; Stromme & Diseth 2000) were reported to be highly prevalent diagnoses.

In India, there has been a growing commitment and interest to develop basic facilities for individuals with ID, more so with the introduction of Person with Disabilities Act (Ministry of Law, Justice and Company Affairs 1995). However, most of the services are restricted to special education services and early intervention programmes thus mental health of persons with ID is almost a neglected area. There are very few studies in India on psychiatric disorders in ID (Das 1996; Kar *et al.* 1996; Khes *et al.* 1998; Jena 1999); structured tool was used in only one study (Das 1996) and the majority have used semi-structured interview schedules. Das (1996) reported a prevalence rate of 50% ($n = 36$), and the commonest diagnosis was attention deficits and disruptive behaviours (22.4%), followed by unspecified psychosis (13.9%) and other disorders of infancy and childhood (11.1%). Kar *et al.* (1996) found a prevalence rate of 50% ($n = 52$). Khes *et al.* (1998) found 56.7% ($n = 60$) of psychiatric comorbidity, and the majority had unspecified behavioural and emotional disorders (25%), followed by mood disorders (16.6%), hyperkinetic disorder (13%), autism (11.1%) and psychoses (11.1%).

An important reason for differences both in the rate and in the nature of psychiatric disorders is the methodological dissimilarity, particularly in assessment procedures, concept of ID, tools and the sampling methods used (Borthwick-Duffy 1994; Matson & Sevin 1994; Sturmey 2002). None of the earlier studies, except that by Reiss (1990), has examined the issue of variations in the rates of psychopathology in relation to assessment procedures. Reiss (1990) showed that structured assessment yields less rates (39%) of psychiatric diagnosis than that of clinical interview (60%).

Although the increased recognition given to mental health of persons with ID has given rise to the development of a considerable number of psychometric assessment devices (Sturmey *et al.* 1991), only few of them have sound psychometric properties of which Reiss Screen for Maladaptive Behaviours (RSMB) is claimed to be one. RSMB is reported to have moderate to good internal and inter-rater reliabilities, cri-

terion and concurrent validity, internal consistency and reasonable fit (Reiss 1988; Reiss & Valenti-Hein 1994; Sturmey & Bertman 1994; Haverkamp & Reiss 1997). Hence RSMB was used in the current study, although no study has been carried out in India using this tool, psychometric properties have been well established in the Western countries.

Because of the paucity of studies and to overcome the methodological difficulties highlighted above, the study was designed with the aims of: (1) documenting the rate and nature of dual diagnoses, and their distribution in relation to the severity of ID; and (2) investigating the degree of agreement between a structured interview tool (RSMB) and clinical diagnosis (ICD-10; World Health Organization 1992) in an Indian context.

Method

Sample

This cross-sectional study was carried out with outpatients from two sites, Central Institute of Psychiatry (CIP) and Deepshikha Institute for Child Development and Mental Health (ICD & MH), Ranchi, India. Participants ($n = 60$) of the study were aged between 12 and 55 years. Lower limit was kept at 12 years to suit RSMB scale, and the higher limit was kept at 55 years, beyond which we seldom come across persons with ID and psychiatric comorbidity in the clinical set-up. Participants had behavioural problems for more than 2 months and were accompanied by parents. Consent was obtained from the informants. Participants were included in the study through purposive sampling method.

Measures

All participants were assessed with Stanford-Binet Intelligence Scale: L-M form, an Indian adaptation of the Binet scale (Kulshreshta 1971) and Vineland Social Maturity Scale (Indian adaptation by Malin; revised by Bharat Raj 1992) to determine the Intelligence (IQ) and Social Quotient (SQ) scores, respectively. These tests have been used extensively in India, and they were found to have good psychometric properties (Jayashankarappa 1986; Bharat Raj 1992). Depending on the scores yielded on these two tests the diagnosis of ID was confirmed as per ICD-10

Table 1 Distribution of psychiatric disorders across different levels of intellectual disability (ID) ($n = 60$)

Level of ID	Psychiatric diagnosis				Total n (%)
	Nil n (%)	Psychosis n (%)	Affective n (%)	Others n (%)	
Mild ($n = 22$)	4 (18.2%)	6 (27.3%)	10 (45.5%)	2 (9.2%)	18 (50%)
Moderate ($n = 26$)	9 (34.6%)	12 (46.2%)	3 (11.5%)	2 (7.7%)	17 (47%)
Severe ($n = 12$)	11 (91.7%)	1 (8.3%)	0 (0)	0 (0)	1 (3%)

criteria. A detailed mental status examination and interviewing of informants were carried out to make clinical psychiatric diagnosis as per ICD-10 criteria. In addition, RSMB (Reiss 1987) was also used and interpreted according to Reiss Screen Test Manual (Reiss 1988) to screen psychopathology.

Statistical analysis

Percentages were calculated for socio-demographic and clinical variables and to find out the agreement between diagnoses made by ICD-10 and RSMB. Mean and standard deviation was calculated for age. Severity of ID and psychiatric disorders were the variables studied.

Results

Of the 60 persons, 46 (76.7%) were males, 52 (87%) were single. The mean age was 21 (SD = 6.98) years. Thirty-seven per cent ($n = 22$) had some kind of formal education, 25% ($n = 15$) had special education and 38% ($n = 23$) had no education at all. The majority of the sample were from middle socio-economic status (67%), urban background (48.3%) and CIP (75%). Among the participants, 22 (36.7%) had mild ID, 26 (43.3%) had moderate ID and 12 (20%) had severe ID. The severe ID group includes persons with IQ below 35, which included two persons with profound ID for statistical purposes.

In the present study 40% had no psychiatric diagnosis. Unspecified psychosis was the commonest psychiatric diagnosis (16.7%) followed by bipolar affective disorder (13.3%) and schizophrenia (10%), which included both paranoid and undifferentiated subtypes. Three (5%) had single episode mania and two (3.3%) each had depression and autism. One

Table 2 The degree of agreement between ICD-10 and Reiss Screen for Maladaptive Behaviours (RSMB) for psychiatric diagnosis

		RSMB		
		Yes n (%)	No n (%)	Total n (%)
ICD-10	Yes	27 (45)	9 (15)	36 (60)
	No	2 (3)	22 (37)	24 (40)
	Total	29 (48)	31 (52)	60 (100)

Overall agreement between ICD-10 and RSMB was 82% ($n = 49$).

person each had delusional disorder, personality disorder, conduct disorder, substance abuse and obsessive-compulsive disorder.

Analysis of clinical diagnoses revealed that in the mild ID group, the majority (45.5%) had affective disorders, followed by psychosis (27.3%), behaviour disorder (18.2%) and other psychiatric disorders (9.1%). In the moderate ID group, the majority had psychosis (46.2%) followed by behavioural disorder (34.6%) and affective disorders (7.7%). In severe ID group the majority (91.7%) had behaviour problems, followed by psychosis (8.3%) (Table 1).

According to clinical examination, about 36 (60%) patients were found to have an ICD-10 psychiatric diagnosis. While only 29 (48%) were found to have dual diagnosis on RSMB. In this study general agreement between clinical diagnosis and RSMB is 82% (Table 2).

Discussion

Most often psychiatric disorders are either under- or over-diagnosed in ID. Apart from the methodological differences, often clinical experience can affect beliefs

and the environment in which the evaluation was performed or the training of the professionals influences the diagnostic decision. When someone considers ID synonymous with mental illness, there may be a tendency to over-diagnose. If the belief were that persons with ID are immune to mental health problems, this would lead to under-diagnosis. If a child goes to a psychiatric setting, the chances of becoming false positive for psychiatric disorder would increase and vice versa with special school setting. Nonavailability of reliable tools can also lead to over- or under-diagnosis. It is thus imperative to have a valid screening instrument to give accurate inference about the mental health of persons with ID. Although a lot of research has already been carried out to overcome these fallacies, more is yet to come (Sturmei 2002).

Now India has various Acts for the special people, important being the Persons with Disabilities Act (Ministry of Law, Justice and Company Affairs 1995) whose objectives are providing equal opportunities, protection of rights and full participation of the disabled. Developing assessment methods to make appropriate interventions for the mental health of persons with ID, we believe, is a step in this direction.

Prevalence rates in the West fall in very broad range as compared to a steady range of 50–64% in India (Borthwick-Duffy 1994; Das 1996; Kar *et al.* 1996; Khess *et al.* 1998; Jena 1999). Consistent with the earlier studies from India, in the present study 60% had a clinical psychiatric diagnosis, and 48.3% as measured by the RSMB. The prevalence rate obtained on clinical evaluation is exactly the same as that found by Reiss (1990). The difference between the clinical judgements and RSMB highlights the tendency to fit behavioural problems in persons with ID into some diagnostic category.

Consistent with previous studies (Philips & Williams 1975; Eaton & Menolascino 1982; Lund 1985), unspecified psychosis was the major subtype (16.7%). It may result from the inability of the individuals to express problems because of low cognitive abilities (Weisblat 1994) or lack of certain key symptoms for making a definite diagnosis, which increases the possibility of such diagnoses.

In the present study, affective disorders were the second commonest diagnoses. Bipolar affective disorder was found in 13.3% of cases, which is higher compared to any other study, and mania was found four times higher than the rates reported in the West

(Heaton-Ward 1977; Bouras & Drummond 1992). Depression was found in two persons with mild ID (3.33%) characterized by aggression, withdrawal behaviours, sleep problems, anhedonia and subjective perception of low social support (Kazadin *et al.* 1983; Fraser & Nolan 1994). These findings support the views of Sovener & Hurley (1983) that affective disorders are easy to recognize and diagnose than other psychiatric disorder.

In schizophrenia, undifferentiated subtype was the commonest in contrast to paranoid schizophrenia reported by Western studies (Day 1985; Bouras & Drummond 1992; Salvador-Carulla *et al.* 2000). Observational findings revealed that history of schizophrenia was same as that of nonretarded schizophrenics although formal thought disorder was difficult to make out (Reid 1972; Heaton-Ward 1977; Meadow *et al.* 1991). Only one case had shown delusional disorder, predominantly delusions of infidelity and persecution, which is consistent with the findings of Salvador-Carulla *et al.* (2000). This shows the difficulty in subtyping schizophrenia and/or any specific psychotic disorder.

Interestingly, personality and conduct disorders were found in people above the age of 18 years and the prevalence was lower than previous studies (Philips & Williams 1975; Gillberg *et al.* 1986; Bouras & Drummond 1992; Jena 1999).

In this study, affective disorders were found more in the mild ID group and psychosis in the moderate ID group (Deb *et al.* 2001a; Richard *et al.* 2001). None of the persons in severe ID group could be identified to have any specific psychiatric disorder, which points to the diagnostic difficulty as severity of ID increases (Rutter *et al.* 1976; Borthwick-Duffy & Eyman 1990; Deb *et al.* 2001b; Molteno *et al.* 2001). Therefore, it is still a matter of debate whether rates of psychiatric disorders in severe ID group are really less or clinicians fail to understand the psychopathology in them because of their poor language and cognitive skills.

The agreement between ICD-10 and RSMB about the dual diagnosis was 82%. This is comparable to 81.1% for the Illinois sample and 72% of the Chicago sample (Reiss 1988). This strengthens the proposition that the overall cut-off point on RSMB can be used reliably in Indian settings to screen out psychiatric disorders in persons with ID. However, one limitation of RSMB is lack of a subscale for mania, because of

which the persons with a clinical diagnosis of mania tend to score high on psychosis and aggression subscales. At least in the Indian setting this has to be kept in view while using RSMB.

In conclusion, decisions regarding psychiatric diagnosis are crucial because in the absence of an appropriate psychiatric diagnosis a child will not be able to get the mental health services so crucial for his overall well-being. At times, this factor is also aggravated by the attitudes and expertise of the professionals. This obstacle can be overcome by using a standardized tool like RSMB.

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