

COMPARATIVE STUDY OF BEHAVIOURAL DIMENSIONS OF MENTALLY RETARDED AND NORMAL CHILDREN AS A FUNCTION OF CHRONOLOGICAL AND MENTAL AGE — MISSOURI CHILDREN'S PICTURE SERIES

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The study of the structure of the personality of the mentally retarded (MR) has been the subject of study for quite some time. A review of literature indicates that MR exhibit an abnormally higher level of incidence, than their normal peers, of inappropriate behaviours such as emotional lability, mixed psychiatric disorders, maladjustment, lower self-concept, hypoactivity, hyperactivity, frequent changes of mood, aggressivity, abnormal behaviour problems and distractibility (Feldhusen and Klausmeier 1962, Carrier, Orton and Malpass 1962, Garfield 1963, Chazan 1964, Reger 1964, Snyder, Jefferson and Strauss 1965, Snyder 1966, Meyerowitz 1967, Jacobs and Pierce 1968, Brown and Jones 1970, Kirkendall and Ismail 1970, Chess and Korn 1970). Ringness (1962) on the other hand reported that MR children did not become more emotionally reactive as measured and indicated by galvanic skin response in learning situations than the bright average children, Heber (1965) in his review of the research on personality indicated that "there is an almost complete lack of evidence to indicate that increased anxiety is more prevalent in retarded persons or that it is a major factor interfering with performance." Researchers like Lucito (1964), Klausmeier and Wiersma (1967), Pandey (1971), Severy and Davis (1971) and Madsen and Connor (1973) found MR to be more co-operative and conforming than their normal peers. However, Robinson and Robinson (1976) have noted the prevalence of mixed trends and fads in assessing the personality of the MR which they ascribe to the lack of appropriate measuring instruments that could be efficiently and effectively used with the MR population, keeping in mind their low levels of communication skills, maturity, self-awareness and manifest ability for abstraction. Saroj, Draughn and Madore (1979), keeping the above limitations in mind used the Missouri Children's Picture Series (MCPS) test, — the only objective test of personality on the market today which requires no verbal response from the child, — to study the comparative performance of normal and mentally retarded children. The results of their study indicated that, when compared with their normal peers, MR children measured to be a less conforming type, under-manifested behaviours pertaining to sex related roles, were less mature, more aggressive, and exhibited more inappropriate behaviours symptomatic of cluster syndromes of such behavioural states as inhibition, hyperactivity and somatization. However, Saroj *et al.* in their study, did not examine the interaction of chronological age (CA) and mental age (MA) on the performance of the mentally retarded children. In this study the authors have attempted a further analysis of the data using CA and MA as covariants to determine as to what extent the possible interaction of CA and MA is operative in the development and manifestation of behaviours that form the cluster syndromes specific to various dimensions of personality (Conformity, Masculinity-Femininity, Maturity, Aggression, Inhibitions, Hyperactivity, Sleep Disturbance and Somatization) as measured by the MCPS.

METHOD

Subjects: The children who participated in this study were drawn from a rural midwestern town with middle or low-middle anglo-saxon background, and attended two schools in the same school district. Fifty-two MR children (30 boys and 22 girls) attending

grades three through five, and fifty-four normal children (25 boys and 29 girls) from the same schools and corresponding grades, were randomly, selected for this study. The chronological ages of the MR children ranged from seven to fifteen years (mean = 10.46) and of the normal children from nine to twelve years (mean = 11.04). The range of the intelligence quotients (IQ) for MR children was 48 to 80 (mean = 68.27) and for the normal group from 100 to 129 (mean = 112.89). Both groups of children could read and follow verbal instructions given to them. In the process of screening three MR children were excluded from the study for being unable to follow verbal instructions adequately enough for the purpose of this study. One child with an IQ of 80 was included in the study since he was classified as mentally retarded and was attending a class for mentally retarded children.

Instrument of Measure: The Missouri Children's Picture Series test was used in this study. The test consists of 238 (3" x 5") cards with pictorial drawings depicting some activity or scene expected to be familiar to children between the ages of five and sixteen years, a pink card of the same size as the picture cards, test manual, answer sheet and eight scoring keys. The test is non-verbal in the sense that the subject is not required to make verbal responses. It is not time paced and measures eight behavioural dimensions of the personality: **Conformity** (refers to the tendency of submissiveness and/or willingness which includes a cluster of eighteen major types of behaviours indicating a child's level of conformity), **Masculinity-Femininity** (refers to the current adaptive level and adaptability of a child according to sex and sex related roles, and includes a group of twenty-nine behaviours and their associates), **Maturity** (refers to the mental and social maturity level of the child and includes a cluster of fourteen principal behaviours and their associates), **Aggression** (refers to a cluster of twenty major types of overt or covert behaviours indicative of aggressive tendencies and/or acts which are directed towards people, places, things and events), **Inhibition** (means a non-reactive and/or self-suppressive attitude of a child under normal circumstances and includes eighteen such principal behaviours which signify attributes reflective of inhibitory tendencies), **Hyperactivity** (refers to a cluster of twenty-nine major types of behaviours symptomatic of an unusually high level of activity in a child), **Sleep Disturbance** (refers to those manifest behaviours which are indicative of the fact that a child may be having disturbances in his sleep or related to sleep. A group of nine principal types of behaviours and their associates are included in this cluster), and **Somatization** (refers to an anxiety oriented psycho-somatic group of eight symptomatic behavioural cluster). The MCPS can be administered both individually as well as in small groups, using multiple sets of cards, by persons with minimum training. The interpretation of results, however, must be done by a specially trained diagnostician.

Procedure: The MCPS test was administered to the children in groups of ten. A deck of MCPS cards was placed in front of each child and the 'pink' card, a part of the test, was placed to the right. All children were given the following instructions individually: *"All these cards have pictures on them (pointing to the deck of cards). I want you to look at each picture and see if it looks like fun to you. If a picture looks like fun to you, put it on the coloured (pink) card here on the right (the pink card was pointed to). If it does not look like fun to you put it to your left side (the left side was pointed to). Now look at this first picture (the card was pointed to). Does it look like fun to you?"* All children followed the instructions correctly and after each child had sorted the deck of cards, the non-fun pile was recorded and scored, with the help of the keys. Raw scores were converted into T-scores and a personal profile was drawn up for each child. A T-score of 50 is the mean score, with the standard deviation set 5 points.

RESULTS AND DISCUSSION

The analysis of co-variance with CA as a covariant revealed that the performance of mentally retarded children as a group differed significantly from that of the normal children on the dimensions of conformity, $F(1,103) = 11.996$ $p < .001$; Masculinity-

Femininity, $F(1,103) = 4.813$ p .005; Maturity, $F(1,103) = 37.016$ p .001; Aggression, $F(1,103) = 30.582$ p .001; Inhibition, $F(1,103) = 5.656$ p .05; Hyperactivity, $F(1,103) = 38.934$ p .001; and Somatization, $F(1,103) = 10.972$ p .01. This seems to mean that mentally retarded children as a group, when compared to their normal peers, are a less conforming type, do not exhibit adequate and appropriate sex related role behaviours, are less mature, more aggressive, inhibited or rigid in their attitude, have higher incidence of hyperactivity, are abnormally high day dreamers and frequently exhibit an abnormal level of psychosomatic behaviours.

With MA as a covariant a significant difference in performance of normal and MR children was noted on the dimensions of Inhibition, $F(1,103) = 4.879$ p .05, and Hyperactivity, $F(1,103) = 4.765$ p .05, this may mean that mentally retarded exhibited behaviours that were likely to form the syndromic cluster leading to higher levels of Inhibition and Hyperactivity compared to their normal peers. With CA and MA as covariants a significant difference was noted on the dimension of Hyperactivity, $F(1,103) = 6.366$ p .05 level. From this analysis it seems that as to how mentally retarded children measure on the dimensions of Conformity, Masculinity-Femininity, Aggression and Somatization, depends to a large extent on their mental age rather than on any other factor. These dimensions, to some degree, require forming of relationships at the mentation level rather than a visual-motor relationship. Since retarded children experience more failures in their life they either withdraw from the situations or develop deviant behaviours, as a learned reactive tendency, of which hyperactivity is one. Therefore, it seems reasonable to assume that the older the mentally retarded person the more inhibited and hyperactive he or she would tend to be, probably because of an element of rigidity or inhibitory tendency which may have developed as a consequence of repeated failure experiences.

When comparisons were made on the basis of sex with CA as a covariant a significant difference was noted in the performance between normal and MR girls on the dimensions of Conformity $F(1,45) = 5.928$ p .05, Maturity $F(1,45) = 26.134$ p .001, Aggression $F(1,45) = 11.110$ p .01, and Hyperactivity $F(1,45) = 12.745$ p .01. These results lead one to conclude that mentally retarded girls are of a less conforming type, relatively less mature, possess more aggressive tendencies and exhibit a significant number of behaviours that are more symptomatic of hyperactivity than those of their normal peers. These differences, of necessity, seem to be due to a difference in their mental age. The difference on the dimension of Masculinity-Femininity was also noted to be significant, $F(1,45) = 4.341$ p .05, when MA was used as a covariant which is indicative of the fact that in order to exhibit appropriate sex related role behaviours CA seems to be an important factor, the lower the CA the lesser are the manifest appropriate sex related role behaviours. A significant difference on the dimension of Inhibition, $F(1,44) = 4.394$ p .05, was also revealed when MA and CA, both, were controlled, suggesting that MR girls were more inhibited. This may lead to the assumption that the manifest inhibitory behaviours are a function of an interaction of both CA and MA, suggesting that with their limited mental capacity over a long span of life the MR girls are not able to face the real life situations as well as their normal peers which leads to failure condition and an abnormal level of anxiety. The resultant reaction to such conditions is either an abnormal amount of overactivity (hyperactivity) or behaviours leading to withdrawal symptoms and inhibitory tendencies.

In comparing the performance of boys from both groups with CA as a covariant significant differences were noted on the dimensions of Conformity, $F(1,55) = 5.425$ p .05, Masculinity-Femininity, $F(1,55) = 17.813$ p .001, Inhibition $F(1,55) = 4.451$ p .05 and Somatization $F(1,55) = 19.423$ p .001, results falling on the adverse side for the MR boys. With MA as a covariant there was no significant difference in performance on any of the eight dimensions. However, with CA and MA as covariants a significant difference in performance was evident on the dimensions of Hyperactivity, $F(1,54) = 6.811$ p .05 and

Somatization $F(1,54) = 4.970$ $p .05$ going in favour of normal children, indicating that MR boys are more often prone to be engaged in activities that resemble day-dreaming and psychosomatic behaviours.

Mentally retarded boys performed significantly below the MR girls on the dimension of Masculinity-Femininity with CA, MA and CA+MA as covariants, $F(1,49) = 15.275$ $p .001$, $F(1,49) = 14.490$ $p .001$ and $F(1,49) = 14.501$ $p .001$ respectively, which probably means that the development of appropriate sex related role behaviours is dependent more on the differences of sex than on differences due to CA or MA.

SUMMARY

Mentally retarded children as a group, when compared with their normal peers, measured to be of a less conforming type, do not exhibit adequate and appropriate sex related role behaviours, are less mature, exhibit either more aggressive or inhibitive tendencies, and have a higher incidence of hyperactivity and behaviours related to the abnormal level of psychosomatic tendencies. This difference seems to be related to the obvious difference in intelligence, i.e. the more severely retarded the child the higher the abnormal level of either hyperactivity or inhibitive tendency. Even if the influences of mental age and chronological age are adjusted an abnormal level of hyperactivity seems to be a general characteristic of mentally retarded children. Mentally retarded girls, when compared with normal girls, seemed to be a less conforming type, relatively immature, and they exhibited higher levels of aggressiveness and hyperactivity. This difference seemed to be related to the difference in intellectual levels of the two groups, whereas chronological age seems to be related to the dimension of Masculinity-Femininity, suggesting that the older the retarded girl the better the understanding of sex appropriate role behaviours. Mentally retarded girls also seem to be more inhibited than their normal counterparts which may be related, possibly, to their cumulative adverse experiences in life. Mentally retarded boys, on the other hand, measure substantially lower on the levels of Conformity and sex appropriate manifest role behaviours and had higher levels of inhibitive, psychosomatic and hyperactive tendencies when compared to their normal peers. Mentally retarded boys also seemed to be underdeveloped in the sex appropriate role behaviours in comparison to mentally retarded girls.

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