

# **DIFFERENCES BETWEEN AMERICAN INDIAN AND NON-INDIAN CHILDREN REFERRED FOR PSYCHOLOGICAL SERVICES**

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*Abstract: The physical and social characteristics of 60 American Indian children referred for psychological services were compared to those of 60 matched, non-Indian controls. Data were obtained from detailed records available in a multidisciplinary, medical school-related child study clinic. Indian children exhibited more health and social risk factors, but were superior to non-Indians on a variety of motor variables. Interpretations are offered concerning better psychological services for American Indian children based on better understanding of their possible exposure to physical health and social risks which may be related to psychological development.*

Previous authors (e.g., McShane & Plas, 1984; Dauphinais & King, 1992) report that, as a group, American Indian children who are referred to psychologists may differ from their non-Indian counterparts on a variety of physical (e.g., history of otitis media) and social (e.g., parental alcohol abuse) variables.

The present investigation was an inductive search for physical and social variables which differentiate American Indian children who are referred to clinical psychologists from non-Indian controls. It was hoped that the resulting information would add further clarity to questions such as: (a) possible etiologic factors related to psychological problems in Indian children, and (b) unique developmental or adaptive strengths of American Indian youth.

## **Method**

A list of physical and social variables on which American Indian children referred for psychological services might differ from their non-Indian counterparts was generated. The authors examined approximately 100 files of clients seen at a multidisciplinary, medical school-connected,

state-wide referral center for child development/guidance problems, which is located in the southwest region of the U.S. This produced a list of 134 specific variables involving 121 physical and 13 social characteristics, for which detailed and quantifiable information was available for all Center clients. Most of the variables entailed highly specific and usually dichotomous questions such as presence or absence of otitis media, parental alcohol abuse, etc.

Next, the files of 60 preadolescent aged (mean = 6 yrs 11 months, range 4–11 years) American Indian children and 60 non-Indian matched controls were examined, and subjects scored on the 134 study variables listed in Appendix A. Indian children were classified as "Indian" by virtue of their being referred from the Indian Health Service. None lived on a reservation, and multiple tribes were represented. Control subjects were of the same gender and within one month in age of their matched control partner. Other variables such as socioeconomic status, IQ, etc. were not employed in the matching process.

### Results

Chi square was used to determine on which of the 134 study variables the two groups differed. Twenty-two of the 134 variables yielded significant differences at less than the .05 level. Only seven would be expected to achieve significance by chance alone. These results can be seen in Table 1.

Table 1  
Statistically Significant Study Variables

Item	$p =$
Indians more likely to have had otitis media.	.000
Indians more likely to admit taking illicit drugs during pregnancy.	.003
Indians more likely to have had chicken pox.	.003
Indians more likely to have had alcoholic mothers.	.004
Indians report taking more prescription medications during pregnancy.	.007
Indians more likely to report drinking alcohol during pregnancy.	.008
Indians more likely to live in rural areas.	.009
Controls more likely to have been delivered by forceps.	.009
Controls more likely to have difficulty riding a bike.	.009
Indians more likely to have had three day measles.	.012
Indians more likely to have had a "lazy eye."	.018
Indians more likely to have had mumps.	.021
Indians more likely to have walked earlier.	.029

Table 1 (Continued)  
Statistically Significant Study Variables

Item	<i>p</i> =
Indians more likely to have alcoholic fathers.	.031
Indians more likely to respond to sounds.	.032
Indians more likely to have had varicella.	.038
Indians' mothers more likely to have taken cough medicine during pregnancy.	.038
Indians more likely to report a history of speech/articulation problems.	.041
Indians more likely to report vision problems.	.041
Indians more likely to have had a heart murmur.	.041
Indians more likely to have had jaundice.	.041
Indian mothers report having spent less time in labor.	.046

### Discussion

The results shown in Table 1 provide a conceptually coherent profile of the American Indian child clients in this study as contrasted with their non-Indian counterparts. These differences include a broad range of physical and social differences.

Concerning physical differences, Indian children displayed a higher incidence of: otitis media, ordinary chicken pox, varicella, mumps, three-day measles, jaundice, and heart murmurs; as well as more speech problems, episodes of "lazy eye" and more visual acuity problems. Their mothers reported (more than control mothers) that, during pregnancy, they were more involved with; (a) alcohol consumption, (b) use of illicit drugs, (c) abuse of prescription drugs, and (d) use of over-the-counter drugs (e.g., cough medicine). The mothers of Indian children reported a higher frequency of precipitous delivery, and their children were less likely than controls to have been delivered by forceps.

Motorically, the American Indian referrals were reported to have learned to walk earlier, to have had less difficulty with riding a bicycle, and were less likely to have been referred for problems involving fine or gross motor skills. Socially, the American Indian children in this study were more likely to have had an alcoholic father and more likely to have had an alcoholic mother. They were also more likely to have resided in a rural area.

### Conclusions

American Indian children referred to the psychological services center cooperating in this study appear to differ significantly from their non-Indian client counterparts on a number of dimensions. Indian children seem more likely to suffer from a variety of physical and social handicaps which in all likelihood could affect their intellectual, emotional, behavioral,

and learning status. The greater incidence of potential risk factors such as otitis media, communicable diseases, jaundice, heart problems, and vision disorders, as well as the higher prevalence of prenatal alcohol and other substance abuse by mothers, may play an important etiologic role for many of their psychological difficulties. While these findings are consistent with those of other reports, they add additional empirical support for the existing belief that American Indian children are, as a group, at greater physical and social risk for a variety of developmental disorders. Our data also implicate/identify additional risk factors not cited prominently in the existing Indian mental health literature, e.g., higher incidence of several communicable diseases, heart-related problems, and the existence of superiority in certain motor-related areas.

Generalization of the above findings, however, should be guarded. None of our American Indian subjects resided on a reservation. Also, no controls for either socioeconomic status or IQ were employed. Thus, these latter variables could constitute common third variables which could explain a portion of the relationship between Indian vs. non-Indian children and certain developmental risk factors.

Future research could add clarity to these findings by determining if our results are reliable across tribal and/or reservation vs. nonreservation resident lines. Also, future research may determine if these findings are consistent for subjects of varying age and/or gender.

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#### References

- Dauphinais, P., & King, J. (1992). Psychology assessment with American Indian children. *Applied and Preventive Psychology, 1*, 97–110.
- McShane, D., & Plas, J. M. (1984). The cognitive functioning of American Indian children: Moving from the WISC to the WISC-R. *School Psychology Review, 13*, 61–73.

## Appendix Study Variables

### Physical Data

1. Age
2. Gender
3. Birth order
4. Weight gained by mother during pregnancy
5. Mother's use of cigarettes during subject's pregnancy
6. Mother's use of alcohol during subject's pregnancy
7. Mother's use of drugs during subject's pregnancy
8. Birth weight of this child
9. Method of feeding this baby
10. Age subject sat independently
11. Age subject crawled
12. Age subject walked independently
13. Difficulties riding a bike
14. Difficulties throwing a ball
15. Coordination difficulties
16. Subject's enjoyment of playground equipment
17. Child's ability to use tools
18. Child's ability to dress self
19. Child's ability to fasten clothing
20. Child's ability to tie shoes
21. Child's handedness
22. Child's attention span
23. Child's response to sounds
24. Number of days child has spend in the hospital
25. Nutritional status of the subject
26. Mother's swelling during pregnancy with the subject
27. Maternal blood pressure problems during pregnancy with this subject
28. Maternal kidney problems during pregnancy with this child
29. Presence of infections during pregnancy with this subject
30. Mother's exposure to diseases during pregnancy with this subject
31. Presence of bleeding or spotting during pregnancy with this child
32. Maternal injury during pregnancy with this subject
33. Length of pregnancy with this subject
34. Number of days of gestation
35. Were antibiotics taken by mother during this pregnancy
36. Were vitamins taken by mother during this pregnancy
37. Was Valium taken by mother during this pregnancy
38. Was cold medication taken by mother during this pregnancy
39. Was hemorrhoid medicine taken by mother during this pregnancy
40. Was Tylenol taken by mother during this pregnancy
41. Was cough medicine taken by mother during this pregnancy
42. Was Vistral taken by mother during this pregnancy
43. Were morning sickness pills taken by mother during this pregnancy
44. Was iron taken by mother during this pregnancy
45. Was Rocephin taken by mother during this pregnancy
46. Was Tridate taken by mother during this pregnancy
47. Was Telepaque taken by mother during this pregnancy
48. Was Telepuquise taken by mother during this pregnancy

49. Was Halcion taken by mother during this pregnancy
50. Was Companzioe taken by mother during this pregnancy
51. Was Materna taken by mother during this pregnancy
52. Was Appressvine taken by mother during this pregnancy
53. Was Penicillin taken by mother during this pregnancy
54. Was Percogesic taken by mother during this pregnancy
55. Was Piopan taken by mother during this pregnancy
56. Were steroids taken by mother during this pregnancy
57. Were antacids taken by mother during this pregnancy
58. Was Lasix taken by mother during this pregnancy
59. Was Ginen Contex taken by mother during this pregnancy
60. Was Apesoline taken by mother during this pregnancy
61. Was Phenobarbital taken by mother during this pregnancy
62. Was Demoral taken by mother during this pregnancy
63. Was Morphine taken by mother during this pregnancy
64. Were aspirins taken by mother during this pregnancy
65. Was Benedryl taken by mother during this pregnancy
66. Was there abuse of illicit drugs by the mother during this pregnancy
67. Was there a problem of blood incompatibility with this child
68. Was there a problem of excessive drooling with this subject
69. Was there a problem of clumsiness with this subject
70. Was there a problem of delay in gross motor skills with this subject
71. Was there a problem of delay in fine motor skills with this subject
72. Was there a problem of "lazy eye" involving this subject
73. Has this child had speech/articulation problems
74. Was Ritalin taken by child
75. Was Rymgen taken by child
76. Was calcium taken by child
77. Were desensitization injections for allergies given to child
78. Was Methylphenidate taken by child
79. Was Deanol taken by child
80. Was Chromium taken by child
81. Was Ylert taken by child
82. Was Phenobarbital taken by child
83. Was Tezopen taken by child
84. Was Tofronil taken by child
85. Was Protoprin taken by child
86. Was Cylert taken by child
87. Were Gamma globulin injections given to child
88. Was Tegretol taken by child
89. Was Synthroid taken by child
90. Was Mellaril taken by child
91. Was Depakene taken by child
92. Was Kitalin 15 taken by child
93. Was Dimetapp taken by child
94. Was Actifed taken by child
95. Was Valium taken by child
96. Was Theophillin taken by child
97. Was labor induced
98. Length of labor in hours
99. Were shots or hypos given during labor
100. Was subject delivered head first
101. Were forceps used to deliver the subject
102. Was oxygen given to subject after delivery

103. Coloring of this child when born
104. Has subject had colic
105. Problems with sucking, swallowing, or oral feedings
106. Problems with speech or hearing
107. Has subject had 3-day measles
108. Has subject had mumps
109. Has subject had ordinary chicken pox
110. Has subject had varicella
111. Has subject had allergies
112. Has subject had serious injuries
113. Has subject had convulsions
114. Has subject had surgery
115. Has subject had ear infections
116. Has subject had DPT immunization
117. Has subject had measles immunization
118. Has subject had smallpox immunization
119. Has subject had German measles immunization
120. Has subject had mumps immunization
121. Has subject had other immunizations not listed above

### **Social Data**

122. Marriage status of child's biological parents
123. Number of people living in child's current household
124. Number of extended family members who live with child
125. Population of town where child lives
126. Economic status of the child's family
127. Was subject's mother alcoholic
128. Was subject's father alcoholic
129. Was any other family member (besides mentioned above) alcoholic
130. Member(s) in subject's family who have been abused as a child
131. Member(s) in subject's family who have committed suicide
132. Number of years of school completed by subject
133. Number of years of school completed by subject's mother
134. Number of years of school completed by subject's father