How do pre-professional undergraduate and graduate speech-language pathology majors view autism?

An Honors Thesis (HONRS 499)

by

Laurie L. Fromme-Mehringer

Thesis Director

Thomas W. Powell

Ball State University
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INTRODUCTION

Autism is considered to be a severely disabling developmental disorder (Groden & Baron, 1988). Many, including speech-language pathology students, are confused by this syndrome. According to a newsletter published by the National Society For Autistic Children, "Autism is a severely incapacitating life-long developmental disability which typically appears during the first three years of life" (Knoblock, 1982). This syndrome may include characteristics such as a significant withdrawal of contact with people, a desire for sameness, affectionate relationships with objects, and language disabilities including a complete lack of language. Onset is usually in infancy (Groden & Baron, 1988).

The term "autism" was first used by Blueler in 1919 to describe the withdrawal from the outside world seen in adult schizophrenics (Paluszny, 1979). The term, "autism," used in reference to schizophrenic individuals is unlike the syndrome of infantile autism. The syndrome of infantile autism was first described by Leo Kanner in 1943. Kanner described 11 children who showed extreme withdrawal as early as the first year of life. The early onset was one of the primary factors that differentiated childhood schizophrenia from infantile autism (Paluszny, 1979).

There are many theories about the etiology of autism. These theories fall into one of two major categories. One theory, which is no longer prominent, suggests that autistic children are "normal" at birth and their emotional development is affected by
the environment including the parents of the child (Palusznny 1979; Wing, 1976). Over the years, theories emphasizing the environment such as these have been abandoned and another type of theory has been developed. The second theory suggests that the etiology of infantile autism is organic in nature which is probably the area that contains some sort of answer to this question of developmental disability (Kugelmass, 1974).

In almost all cases, autistic individuals have serious problems with communication skills which is how a speech-language pathologist becomes involved in the formulation of the total diagnosis and assessment of an autistic individual (Paluszny, 1979; Prizant, 1982). The speech-language pathologist assesses the single area of communication in regards to contributing to the total picture of the functioning of an autistic individual.

The autistic behavior that usually exhibits the most severe and apparent deficit is verbal communication or speech. Although about 50% of all autistic children acquire functional verbal communication or speech (Baltaxe & Simmons, 1975), most of them evidence speech and language difficulties including: delayed sound system development, disorders affecting morphology, disturbances of speech quality or prosody, deficits in language use or pragmatics, and use of a monotonic voice (Baltaxe & Simmons, 1975). Children diagnosed as being autistic also lack spontaneity in the initiation of conversation and an overall lack of skills in the personal use of language (Baltaxe & Simmons, 1975).

Differential diagnosis of autism from other conditions is
often difficult (Kugelmass, 1974), and there are no tests to confirm diagnosis. The syndrome can be defined only by describing a pattern of abnormal behavior, but there is no way of knowing which elements are of the primary importance. The disciplines involved in the diagnosis of various autistic behaviors include audiology, pediatrics, psychiatry, psychology, special education, and social work. Each of these disciplines is important to the diagnosis so that a complete picture of the final condition can be presented and then recommendations can be made from the final picture presented.

A variety of different therapeuatic methods has been used with autistic children. Currently, most therapies are aimed at reducing symptoms and promoting adaptive growth, or the therapy program used is a direct result of the therapists's theoretical stance of what may be the cause of autism (Paluszny, 1979). These forms of therapy can be divided into four groups. There is therapy related to intrapsychic aspects which states that the environment does not meet the special needs of the child (Paluszny, 1979). There is therapy related to biochemical aspects which aims at improving the general condition of a child or the use of medicine to reduce specific target symptoms (Paluszny, 1979). Next, there is therapy related to behavior modification, and it focuses on a child's disturbances to external circumstances (Paluszny, 1979). Finally, there is therapy using the parents as therapists in which the focus of therapy is generally on decreasing inappropriate behaviors and promoting skill development (Paluszny,
In general the prognosis for autistic children is poor (Wing, 1976). According to a study by Rutter and colleagues (1967), the most useful predictor of outcome in autistic children was IQ measured in early childhood. This score highly correlated with later outcome. Negative factors to be considered the development of a prognosis included lack of speech by age five and a marked lack of response to sound in early childhood. Both of these factors correlated highly with a poor outcome. There was also a tendency for children who demonstrated a less severe degree of involvement to have a better prognosis.

This author believes that the media sensationalizes the autistic syndrome and that the portrayal of autism by the media is inaccurate, although no articles have been documented to support this belief. It may be true, however, that popular movies such as "Rain Man" may have an effect in the development of viewers perceptions of, and attitudes toward, autism. As one gains experience with the disorder of autism and related syndromes, however, there may be a corresponding shift in attitude. It is hypothesized that undergraduate speech-language pathology students will evidence a more favorable attitude toward autism than graduate students who are likely to have greater knowledge and experience with the disorder.
METHODS

Subjects

Twenty-five undergraduates and seventeen graduate students served as subjects in this study. These subjects attended Ball State University and had declared Speech Pathology and Audiology as their academic major.

Instrumentation

For this study, a 38-item Likert-type scale was compiled. The items on this scale were adapted from previously existing attitude scales which measured attitudes towards various handicaps (Antonak & Livneh, 1988). The scale consisted of 12 positively worded statements and 26 negatively worded statements randomly arranged. Five response categories were provided including: SA = Strongly Agree, A = Agree, U = Undecided, D = Disagree, and SD = Strongly Disagree. A scoring system was then devised assigning a number 1-5 to each of the possible responses. Positively worded statements were scored SA = 5 and SD = 1. The system was reversed for negatively worded statements so that SA = 1 and SD = 5. According to this assigned scoring system it was presumed that lower scores would designate respondents in agreement with positively worded statements and thus possessing a highly favorable (and perhaps unrealistic) attitude towards autism. The opposite was true for the higher scores which designated respondents in agreement with negatively worded statements and thus possessing a more negative attitude toward autism.
Design

The scales were distributed to selected graduate and undergraduate classes in the Department of Speech Pathology and Audiology, Ball State University. The subjects were advised to read each question carefully and then to circle the response that best described their reaction. All subjects were instructed to refrain from writing their names or other identifying information on the scale. The scales were coded with either brown dots to indicate undergraduates or green dots to indicate graduate students corresponding to their academic class standing. After the respondents had completed the scales, the principal investigator calculated scores for each subject by summing the responses across the 38 items. Descriptive and inferential statistics were calculated using the SPSS-X t-Test subroutine.
RESULTS

The present study was designed to examine graduate and undergraduate's attitudes towards autism. Thus the research question was posed, "How do pre-professional undergraduate and graduate speech-language pathology majors view autism?" Data were then gathered to test the null hypothesis that the mean scores of the two groups would not differ significantly ($p < .05$). Rejection of the null hypothesis would support the view that education and practical experience affect one's attitudes.

A two-tailed test for independent samples was used to analyze the collected data. The difference between groups means revealed that a significant difference was approached [$t(40) = 2.01, p = .051$], but did not reach a level of statistical significance. As a result, the null hypothesis was retained.

The group of graduate students had a total mean score of 131.8824, and the undergraduates earned a total mean score of 125.4800. High scores on the scale were consistent with a positive attitude toward autism and low scores corresponded to a negative attitude toward autism. The mean and standard deviation of the two groups are presented in Figure One. The overlap seen in the graph of the total score mean reflects the general similarity in the scores obtained by the two groups toward the syndrome of autism. Thus, there was a statistically nonsignificant trend for undergraduate students to possess a slightly more negative view of autism than graduate students; however, the scores obtained by both groups were rather positive.
Total mean scores & ranges

undergraduate students

graduate students

115.923

125.4800

134.967

142.9104
DISCUSSION

Overview
The purpose of the present study was to determine how speech-language pathology students viewed autism. The media may play a role in the shaping of attitudes toward autism. Movies, such as "Rain Man" may have an effect in the development of viewer's perceptions and attitudes toward autism; however, as one gains more experience with the disorder of autism and related syndromes through increased education and clinical experience, there may be a corresponding negative shift in attitude. It was hypothesized that undergraduate speech-language pathology students would have evidenced a more favorable attitude toward autism than graduate students who were likely to have greater knowledge and experience with the disorder. Thus the research question was posed, "How do pre-professional undergraduate and graduate speech-language pathology majors view autism?"

A 38-item Likert-type scale was compiled and administered to undergraduate and graduate speech-language pathology majors. Scores were tabulated and the results analyzed to determine if a statistically significant difference between the total mean scores was present. The null hypothesis stating that the mean total scores would not differ significantly was retained; therefore, the original alternative hypothesis was not supported.

Limitations of the Present Study and Directions for Future Research
The attitudes of the graduate speech-language pathology majors were slightly, but not significantly, more positive than
those of the undergraduate students surveyed, as assessed by the scale formulated for this study; however, both groups mean scores were considered to be indicative of positive attitudes.

It seemed reasonable to assume that graduate speech-language pathology students would possess a less positive attitude toward autism. The higher than anticipated mean score obtained for this group suggests that this may not be the case. Several factors may have led to this unexpected finding. First, the examiner received a great deal of feedback from graduate students that they were not familiar with the autistic syndrome. This lack of expected knowledge may have produced a higher mean score for this group. This lack of knowledge of graduate students suggests that more attention should be provided in both course and clinical work toward familiarizing the student with the aspects of autism and other related syndromes. Another factor which may have led to the higher mean score of the graduate group was the smaller number of undecided responses marked by these students. The graduate students were more decisive in their responses; however, several survey forms completed by undergraduate students indicated that almost all responses marked were of an undecided nature. This may have lowered the undergraduates' scores. This apparent lack of familiarity with the autistic syndrome by the undergraduate students may have led to a lower mean score earned by this group. A third factor which may have affected the outcome of this study was the small number of subjects used. The total mean scores of the two groups were quite similar. A
few more extreme responses by either group may have easily led to a different outcome; therefore, a larger sample should be used to cross-validate these findings. A final factor which may have affected the outcome of this study was the unequal group size. If the groups had been of equal size, perhaps the eight respondents added to the graduate group or eight subtracted from the undergraduate group may have had higher or lower total scores than the rest of the group due to more or less knowledge about the syndrome. These scores may have affected the mean scores obtained and thus led to different findings; however, this is all just speculation which almost definitely would have been eliminated if a larger and equal group of subjects had been used.

A question raised for future research might encompass the comparison of two different majors rather than limiting oneself to only one major of which included undergraduate and graduate students. A suggestion might be to study the reactions of a pre-professional "people" major (e.g., speech pathology) versus a "business" major (e.g., accounting). Another suggestion might include comparing two pre-professional "people" majors such as speech pathology versus special education majors. These majors all have different course requirements which may affect their attitudes toward autism. Another interesting question would be: will "people" versus "business" majors have highly different attitudes toward autism due to their differences in personality which led them to choose such different majors? Another possibility for further research would be to provide an
overview of autism in a few paragraphs for one group and for the other no information would be provided before completing the survey forms. Would the presentation of information lead to a more realistic outlook concerning autism? Or would no difference in the attitudes of the groups be evidenced? A final possibility for a future study would be the development of one's own attitude scale. Formulation of an attitude scale might lend itself to less ambiguous or confusing statements regarding autism. This scale could initially be distributed to determine the validity of the statements compiled. After determining the validity of the statements formulated, only those statements determined as being valid could be used in a final survey form. This might lead to a higher degree of reliability in tabulating the results of the study.

To summarize, the present investigation was an attempt to determine whether greater clinical experience and knowledge affect one's attitudes and perceptions toward autism. While acknowledging the limitations of the investigation, it was found that graduate students did not differ significantly from undergraduate students in their view of autism; however, both undergraduate and graduate students were positive in their outlooks toward autism.
EXPERIMENTAL ATTITUDE SCALE

Instructions: After reading each item, please circle the response that best describes your attitude toward that item. Please mark every item using the following response categories:

 SA = Strongly Agree
  A = Agree
  U = Undecided
  D = Disagree
  SD = Strongly Disagree

Please read each item carefully and respond as honestly as possible.

SA  S  U  D  SD  1. Autistic people are dangerous.
SA  S  U  D  SD  2. Autistic people are crazy.
SA  S  U  D  SD  3. Autistic people are not stubborn.
SA  S  U  D  SD  4. Autistic people are not very easy to take care of.
SA  S  U  D  SD  5. Autistic people can be trusted.
SA  S  U  D  SD  6. Autistic people have something to live for.
SA  S  U  D  SD  7. Most people do not like to talk about autism.
SA  S  U  D  SD  8. There are different kinds of autism.
SA  S  U  D  SD  9. Autistic individuals are always happy and carefree.
SA  S  U  D  SD  10. One cannot tell if a person is autistic by his or her looks.
SA  S  U  D  SD  11. An autistic person will always be that way.
SA  S  U  D  SD  12. Autistic people can control their feelings.
SA  S  U  D  SD  13. Autistic people do not have a difficult time saying what they mean.
SA  S  U  D  SD  14. Most autistic people should not be hospitalized.
SA  S  U  D  SD  15. Normal people feel sorry for autistic people.
SA  S  U  D  SD  16. Autistic individuals do not know right from wrong.

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17. Few, if any, autistic people are capable of real friendliness.

18. Once autistic, always autistic.

19. Autistic individuals need the same kind of control and discipline as an untrained child.

20. Autism is not a hopeless condition.

21. Autism is usually brought on by physical causes.

22. There is not much that can be done for a person with autism.

23. Autism is one of the most damaging conditions that a person can have.

24. If parents loved their children more, there would be fewer cases of autism.

25. Autistic individuals come from homes where parents displayed little interest in them.

26. Developmental centers seem more like prisons than like places where autistic people can be cared for and taught.

27. The best way to handle autistic individuals in mental hospitals is to keep them behind locked doors.

28. Autistic individuals in mental hospitals should be allowed more privacy.

29. There is little that can be done for autistic in mental hospitals except to see that they are comfortable and well fed.

30. Autism has little or no relationship with intelligence.

31. One should not expect too much from an autistic individual.

32. Most autistic people think and act alike.

33. It is impossible to get "close" to an
autistic person.

34. People with autism are a danger to the public.

35. The way autistic people act is irritating.

36. Most people feel uncomfortable when they associate with autistic individuals.

37. Autistic individuals are in many ways like children.

38. Simple repetitive work is appropriate for autistic individuals.
BIBLIOGRAPHY


