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*"Reaching towards answers"*

# **ADD and Deafness:**

A qualitative study of professionals with  
background in ADD and deafness

Principal Investigator: Cynthia DiDonna

# **Master's Project**

**ADD and deafness: A qualitative study of professionals with  
background in ADD and deafness**

**Cynthia DiDonna**

Submitted to the Faculty  
of the Masters of Science Program in Secondary Education  
of Students who are Deaf or Hard of Hearing  
In Partial Fulfillment of the Requirements  
for the Degree of Master of Science

**National Technical Institute of the Deaf  
Rochester Institute of Technology**

**Rochester, N.Y.  
May 20, 2000**

Approved: \_\_\_\_\_

(Project Advisor)

\_\_\_\_\_  
(Program Director)

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## Abstract

This qualitative research project was designed to gather information poorly understood topic: ADD and deafness. The information came from 5 detailed interviews with professionals who have experience with ADD deaf students. The interview protocol included three parts: (a) questions about the problems and issues involved in identifying deaf students who have ADD, (b) possible protocols and instruments useful for diagnosing ADD in deaf students, and (c) possible accommodations and strategies for deaf students with ADD. The results indicated 4 primary themes: possible roles of interpreters, language issues, views of medication, and accommodation strategies. Future research should be directed towards standardizing ADD test instruments for deaf students, and toward developing specific training methods for interpreters/teachers with respect to managing ADD deaf students.

## Introduction

My research topic was born in Maine during my first student teaching experience at Governor Baxter School for the Deaf. I was assigned to tutoring. Everyday I would work with the same two students. These students were not the type who answered questions in class or excelled on written exams, but nonetheless were the students who tried their hardest to keep up. Both had learning disorders.

Learning disorders and deafness create a complicated issue for educators. It is often hard to identify learning disorders in deaf students, because the cognitive, language and behavioral consequences of deafness can sometimes mask the symptoms of learning disorders. For the purpose of my research, I have chosen to narrow my focus to one type of disorder that can affect learning in the deaf population, namely Attention Deficit Disorder.

Attention Deficit Disorder (ADD) has been extensively studied within the hearing population. Little is known about ADD in the deaf population (Samar, Parasnis, and Berent, 1998). The question has been raised whether there are differences between the hearing and deaf populations in how ADD is expressed. If so what are the implications for identification and management of ADD in the deaf population?

This question is not easily answered because there are a limited number of professionals that have experience with both ADD and deafness. ADD is a disorder that can hinder students' abilities to learn if

not considered during their education. In general, deaf students are considered to be at risk for educational failure in the eyes of their teachers due to their limited access to English, and those deaf students with ADD have greater possible risk. For example, deaf students generally need to receive information in class by switching their attention among interpreters, teachers, and other students. The ability to manage this dynamic process is likely to be impaired in an ADD child.

Qualitative studies that focus on professionals with knowledge in both ADD and deafness could be useful in setting directions for future research. The intention of the current study is to gather expert opinions from professionals who have expertise in dealing with deaf students with ADD on a regular basis. It is hope that by gathering such information more deaf students will eventually be correctly diagnosed with ADD and more strategies to foster learning in deaf students with ADD will become available.

The remainder of this research report will be organized in several parts. First, a brief description of ADD and common methods of identifying ADD in the hearing population will be presented. Next, the existing literature on ADD in the deaf population will be reviewed. Then, the qualitative methods used in the proposal project will be described. This study will make use of a consistent interview protocol, which is presented in the appendix.

## Literature Review

This literature review will consist of three parts. The first part will describe Attention Deficit Disorder. The second part will look at early work on impulsivity and deafness. Impulsivity is one of the possible characteristics of ADD. Therefore the third part will examine recent work on ADD and deafness.

This review will be based on fourteen articles and one book chapter. The fourteen articles consist of 10 articles on the topic of ADD (5 focus on ADD and deafness), 2 articles on the identification of learning disorders in deaf students, and 3 articles on impulsivity in deaf students.

### ADD

It is important to understand the various terms and distinctions connected to ADD. The current terms used to describe ADD according to the Diagnostic and Statistical Manual of the American Psychiatric Association (DSM IV) published in 1994 are:

- ✓ Attention-Deficit/ Hyperactivity Disorder  
Predominantly Inattentive Type
- ✓ Attention-Deficit/Hyperactivity Disorder  
Predominantly Hyperactive-Impulsive Type
- ✓ Attention-Deficit/ Hyperactivity Disorder  
Combined Type

(Brown, 1995).

The preceding categories were not always as clear. Earlier, children with difficulty sitting still, concentrating and satisfactorily completing tasks would be diagnosed as having minimal brain damage, minimal brain



dysfunction, hyperkinesis and/or hyperactivity. The third edition of the DSM-III initially labeled kids as having Attention Deficit Disorder either with or without Hyperactivity (Kelly, Forney, Parker-Fisher and Jones 1993B). The historical change reflected in latest DSM (IV) was not only seen in the terms used to label students but also in the criteria used to assess them.

The easiest criteria to identify are those that are visible or distracting to people around the child. Hyperactivity is often the first symptom noticed by observers. Inattention and impulsivity are also common problems linked to hyperactivity. The following three characteristics, "inattention, impulsivity, and hyperactivity – have been considered the 'holy trinity' of symptoms characterizing the core of what we call ADDs." (Brown, 1995).

DSM-IV has several very detailed criteria for ADD. The first criterion is that it has to be observed at least 6 months before the age of 7. The next criterion is that the impairment has to be seen in two or more settings such as school, home or work. The impairment has to have significant effects on social, academic, or occupational functions. The symptoms can not be explained by other maladies such as mood disorders, autism, psychosis or depression (Goldman, Genel, Bezman, and Slanetz, 1998). Additional criteria in DSM-IV can be seen in Tables 1 and 2. The qualification to meet the criterion of inattention is to have 6 or more of the symptoms in Table 1. To meet the criterion of

hyperactivity-impulsivity it is necessary to have 6 or more of the symptoms in Table 2.

ADD would not be studied if it did not have a significant impact on educational, occupational or social achievement. Communication and learning is impaired by the students' inability to maintain attention (Kelly et al., 1993B). Students often exhibit impulsivity by hurrying through an assignment before reading directions and skipping parts of assignments. Teacher-to-student and student-to-student relationships can be stressed by such student behaviors as calling out in class, not waiting for their turn, or getting out of their seat at inappropriate times. Distractibility prevents the student from performing well in a structured classroom (Kelly et al. 1993B). These characteristics can lead to poor academic performance.

Once a child is labeled with an ADD there are several ways to change instructional methods to accommodate the difficulty. Many children are put on medications such as methylphenidate (Ritalin), dextroamphetamine (Dexedrine), and pemoline (Cylert) (Kelly, Forney, Parker-Fisher and Jones 1993A). There are also non-medicine approaches such as parent management training, classroom environment manipulation, social skills control training, and contingency management (Goldman et al., 1998). Classroom intervention includes environmental manipulations (moving seats, visual distractions, etc.), instructional assistance (use of clear explanations, commanding

attention, etc.), study skills, organization strategies, adjustment of expectations, and incorporating strengths (Kelly et al., 1993A). Parents and dorm staff can use behavior management and homework strategies to help the student accomplish homework. Understanding the behaviors associated with the disorder can alleviate tensions for parents, teachers and student by focusing on methods and strategies that can help the child succeed.

### Impulsivity and deafness

Research into the link between impulsivity and deafness can be found from as far back as the 1970's and 1980's, although its connection to ADD was not understood. The characteristic of impulsivity is now recognized as part of ADD by the DSM-IV. Research on impulsivity in the deaf population unrelated to ADD is now rare.

Impulsivity can be explained as acting before you think. Kinds of impulsive acts include "hitting, biting, kicking others, throwing objects, lashing about in undirected fashion, darting across a room or street, and/or hitting, pinching, biting self, or banging self with hands, against walls or furniture" (Chess & Fernandez, 1980). Possible behaviors in the classroom that are connected to impulsivity are "interrupting others, not waiting one's turn, calling out to the teacher without raising the hand, being off-task, changing task, and leaving seat without permission" (O'Brien, 1987). These behaviors are often unacceptable in the



classroom and can be perceived as behavioral problems. Teachers see behavioral problems such as these as characteristics of learning disorders. According to one teacher survey 50% or 371 out of 631 teachers listed behavioral problems as a characteristic of learning disorders (Elliott, Powers, & Funderburg, 1988).

Do deaf students tend to have more impulsivity compared to hearing peers? It seems that the research has "demonstrated that profound early deafness is closely associated with tendencies toward greater impulsivity than found among the hearing" (Altshuler, et al., 1976). Altshuler, et. al. came to this conclusion by comparing groups of hearing students to groups of deaf students using tests such as Porteus Maze, Draw-a-Line, Id-Ego-Superego, Rorschach and Developmental Level.

Other research articles also compared hearing to deaf students as well as subgroups within the deaf population. The reason for the subgroups was to determine the cause of impulsivity. O'Brien (1987) examined whether or not language skill has any link to impulsivity. The three groups that took part in the research included 25 hearing children, 20 deaf children that use total communication, and 26 oral deaf children. The results were that the deaf group's modes of communication did not have any significant impact on their levels of impulsivity.



Another possible cause of impulsivity is deafness associated with multiple handicaps. Chess & Fernandez (1980) did a longitudinal study of deaf students with congenital rubella. The study included three groups: deaf only, deaf multihandicapped and a hearing control group. The results showed that deaf multihandicapped (MH) individuals had higher incidences of impulsivity, rigidity, and hyperactivity. The deaf only group had impulsivity characteristics but not as pronounced as those of the MH deaf students (Chess & Fernandez, 1980). These results suggest that multiple handicaps contribute to impulsivity.

An interesting underlying characteristic of impulsivity is that it decreases with age. O'Brien concluded, "For all of these measures, the younger children were more impulsive than the older children in all three groups" (O'Brien, 1987). Self-abuse as noted in the longitudinal study of impulsivity decreased with age in the deaf only group (Chess & Fernandez, 1980).

#### ADD and Deafness

Studies, experiences and observations at the Illinois School for the Deaf provided descriptions of five characteristics of ADD in their children who were deaf or hard of hearing (Kelly et al., 1993B). The five characteristics were inattention, distractibility, impulsivity, hyperactivity and inconsistency (secondary or associated feature). Inattention is the inability to sustain attention or to control where attention is focused.

Distractibility is when a student's attention changes focus easily because of distracters that are:

“exogenous (visual, auditory, or tactile stimuli) or endogenous (somatic stimuli such as hunger and thirst or associative thoughts such as daydreaming). (Kelly et al. 1993B).

Impulsivity is a lack of behavioral self-control such as waiting for directions, leaving sections of homework incomplete and difficulties adjusting in social situations. Hyperactivity can be described as perpetual motion, not being able to sit still. The last characteristic, which is really secondary, is inconsistency. Students can have good or bad days, and demonstrate a lack of organizational skills.

Given the higher incident of impulsivity in the deaf population, the question arises whether there is a higher incident of ADD in the deaf population. Negative results were suggested by a study of 235 deaf students that attended residential schools for the deaf, “overall prevalence of reported attention problems is comparable to that in children without hearing loss” (Kelly et al., 1993). There are no specific tests to evaluate deaf students for ADD. It should be noted that professionals generally use tests that were originally designed for students that are hearing. Therefore, the norms do not take deafness into account.. The kind of assessment tools used to identify ADD in the Kelly et al study were the Comprehensive Teacher Rating Scale (ADD-H), Aggregate Neurobehavioral Student Health and Education Review

(ANSER), Conners' questionnaires, and Devereux Scales of Mental Disorder (Eiraldi et al. 1996).

One survey demonstrated that teachers rated attention problems as affecting 76% or 500 students out of 631 (Elliott et al., 1988). However, this percentage is very high compared with other estimates. For example, the Gallaudet survey of schools and programs (Schildroth & Hotto, 1996) 3.4% of deaf children from residential schools were estimated to have ADD. Other studies have reported estimates of 15–36% (see Samar, Parasnis and Berent, 1998).

One possible reason for the high variability in these estimates is that teachers, who are the most common source of referral for learning disabilities testing, are giving a subjective point of view. Teachers showed poor reliability in a study in which they rated students one year and rated them again the next year. The first year, 7 out of 27 were labeled LD and the next year only 3 out of 27 of those students were labeled LD (Powers et al., 1988). Generally, studies of LD and ADD deaf students indicate that teachers were not trained to work with learning disabled deaf students.

Another difficulty in diagnosis is that ADD often occurs along with other disorders. Brown (1995) has noted that

“more than 50% of those diagnosed with ADDs also meet diagnostic criteria for at least one other psychiatric diagnosis, for example, mood disorder, anxiety disorders, learning disorders, disruptive behavior disorder, . . .”



A list of symptoms secondary to, associated with, or mimicked by ADD are presented in Table 3. Also, students who are deaf are often not diagnosed with ADD because their impulsivity and aggression might be mistakenly considered purely a behavioral problem (Kelly et al. 1993A). It was found at the Illinois School for the Deaf that hearing children with ADD often became less hyperactive in adolescence while deaf children often had an increase in frustration and aggression in adolescence (Kelly et al., 1993B).

Another possible cause of ADD was suggested by two research groups, "The prevalence of ADHD and hyperkinectic disorder does not appear to be higher than expected in children with inherited deafness alone but does appear to be higher in children with acquired deafness and/or additional impairments" (Hindley & Knoll, 1998). The cause of the students' deafness did help to indicate the chances of ADD since "more than twice as many students with acquired deafness were rated as having attention problems than their peers with hereditary deafness" (Kelly et al., 1993). Students with acquired deafness often had bacterial meningitis, congenital rubella or secondary handicaps. More research on the effects of deafness on learning and behavior are needed to determine the roles of ADD or impulsivity in the learning process and behavior of deaf students.



## Implications

Researchers have concluded that more deaf students have impulsive behaviors, however it is not clear whether deaf students also have a higher tendency to have ADD. One proposed way to eliminate the possible misdiagnosis is to have a variety of tests, questionnaires and information collected by many sources such as parents, teachers, and dorm staff. The methods of evaluating deaf students for ADD should use norms based on deaf students. More information on strategies and instructional methods useful for ADD deaf students would be beneficial to the students' academic and social performance in school. The purpose of this study was to elicit such information from experienced deafness professionals.

## Method

### Participants

The participants were professionals who work with deaf children and adults with ADD. Two participants were from Rochester (NY), two were from Albany (NY), and one was from Tucson (AZ). They worked in a variety of settings including schools for the deaf, mainstream programs for the deaf and a diagnostic center. Table 4 provides more detailed information about the participants. The sample was small partly due to the limited number of professionals with experience in both ADD and deafness. A list of 5 professionals with a minimum of 5 years of

experience with a deaf student population were identified by networking with appropriate faculty and staff at NTID.

### Procedures

A letter describing the research project was sent to the potential candidates. If the candidate was willing to be a participant, they were asked to contact me to set up a time for an interview. Consent forms and general background information on the participants were collected from them prior to the interview. The interview protocol was sent to the participants approximately two weeks before the interview. The three main sections of the interview protocol were (a) questions about the problems and issues involved in identifying deaf students who have ADD, (b) possible protocols and instruments useful for diagnosing ADD in deaf students, and (c) possible accommodations and strategies for deaf students with ADD. The participants were interviewed in person or by phone depending on availability of both the interviewer and participants. The interviews were audiotaped for the purpose of transcribing the information. The transcripts were analyzed for common themes.

### Results

After reviewing the transcripts, four main themes presented themselves: a) possible roles of interpreters, b) language issues, c) views of medication and 4) accommodation strategies.

### Possible roles of Interpreters

Interpreters are often utilized in the mainstream setting. The most important preparation is for the interpreter to be trained along with the mainstream teacher about ADD and strategies to accommodate the ADD deaf student in the classroom. An ADD deaf student needs to be taught how to use the interpreter as a communication tool because if the student is not aware of how to use the interpreter effectively, "then the child again is not getting the benefits by what is happening . . . so I wouldn't expect that child to continue to pay attention or follow through on instructions." The interpreter can moderate the student's attention by looking for eye gaze and eliciting feedback from the child to determine if the child can understand the information. In this respect, participant 1 noted that one important skill needed by an interpreter is to differentiate between when a student not paying attention and when the student is "taking a break" from focusing. It is a difficult task to focus on one person for 45 minutes.

Also, the information an interpreter provides to school personnel and parents is invaluable because they can observe the student in various settings including in the hall, classroom, sports environments, and so on. With the current trend of deaf students being placed in mainstream settings, it is important to include the interpreters in

training, as part of the education team and as a important source of information.

### Language Issues

The second theme is partially related to the previous one. Is it hard to distinguish between ADD characteristics and language issues that lead to inattentiveness. The three language issues mentioned were: a) a mismatch of teachers/interpreters and the student's communication style may complicate attention and learning problems, b) tests that depend on language may misdiagnose ADD and c) a language delay due to deafness may cause psychological problems that "mimic" ADD.

Deaf students often come to school with language difficulties so it is necessary to first eliminate language complications. It is not always clear if the deaf student is more comfortable with ASL, PSE, or English. Teachers in a School for the Deaf or interpreters in the mainstream classroom need to use language that matches the language needs of their students.

Partipant 3 noted that one way to check and see if this match is made is by the evaluation of students for a couple of months before evaluating them for ADD so that any communication issues can be weeded out. Language is critical because "if a student isn't understanding either the content that's being taught or doesn't understand the language, they are much more liable to drift off".



Another issue mentioned by two participants was the need to ensure ADD test validity by using tests that do not depend on language. Some of the language-free tests the participants used to evaluate students are the Conners Continuous Performance Test (CPT) and the Gordon Scales.

Participant 3 noted that another function of language is to provide a way to vent feelings or emotions. Deaf students with language delays many tend to be more physical since they have greater difficulty expressing their emotions and feelings through language. ADD students may form the habit of acting out due to frustration, not due to ADD per se. A test that does not include language may still give false results due to the language delay side effect of frustration that exhibits itself in behavior.

#### Views of Medication

An issue often mentioned in the newspapers and on television is in regard to medication. Does it work? All five participants felt medication has been useful but medication should not be the first option, "ADHD is ruling out [other explanations]. . . because you can rule out other stuff . . . we don't have any blood tests . . . we don't have any hard factual tests that we use for ADHD". Once a student is labeled ADD, external changes should be attempted first before using medication, for example implementing a different class structure.

There are a few negatives or "side effects" in the student's life due to the use of medication. Participant 3 noted that sometimes a student uses the excuse of missing a dose of the medication to justify wrongful behavior. They lose responsibility for themselves and become dependent on the idea that they are not in control. Another negative, mentioned by participant 5, is that students can get used to feeling dependent on a drug in general, and may therefore transfer to another substance such as alcohol, illegal drugs or caffeine. There can also be a stigma for students who have to go to the nurse to get their dose of ADD medication everyday. Participant 1 made an interesting comment about medication:

"it's kind of ironic when you have a student who is having a difficult time trying to focus . . . having to go in and disrupt him in classroom and take him out of the class, go down to the nurse, and then bring him back to the classroom, trying to catch up to where the class left off, because now he has missed maybe 5-10 minutes of class."

The positives of medication were explained with several individual success stories. Students who were once unable to sit still for more than five minutes could sit still for a 2-hour evaluation after medication. Another student who was failing now maintains a "B" average. The right medication and dosage can be a "dramatic improvement and the child has a dramatic sense of control [that] eases the family dynamic so much." Choosing the right medication and correct dosage is not easy. The wrong medication can drive a student into more distraction. The zeal to find an effective dose can lead to overdosing. Another factor that can affect dosage levels is the onset of adolescence. The need to change

the medication can arise as a result of the body and hormonal changes that accompany adolescence.

Besides dosage and type of medication, the timing of the dosage is equally as important. For example participant 2 commented, "some kids, if getting the dose is off by as little as half an hour, that kid has really gone bonkers." Participant 5 noted that some ADD students find that later they do not need the medication because they are not in the school setting. Participant 5 stated, "In the position that he has chosen in his job, he is actually very successful [without medications] and part of the success is related to the ability that he can change focus so quickly." ADD kids can grow up to be very successful adults who do not need education providing they choose the right job. Participant 4 felt a double blind study could help choose the correct dose and to determine when medication is really needed.

### Accommodations Strategies

The last theme is the compilation of the accommodations mentioned by the participants. The number one mentioned accommodation is a structured and organized classroom. The essential structure of any organized classroom includes a daily schedule, consistent expectations for behavior, homework charts, and immediate consequences for actions. The homework chart can be one that is filled



out by students themselves or is brought home to the parent to check when their work is finished.

The second most frequently mentioned accommodation is to reduce distractions in a traditional classroom that has rows of seats by seating an ADD deaf student as close to the front of the classroom near the interpreter or the teacher as possible. That way the distractions are behind the student. Also, the student is close enough to the front of the room so that the instructor can touch the student's desk to redirect attention if necessary. If possible, the desks can be placed in a circle or u-shape so that the ADD deaf student can see everyone. The u-shape or circle setup for desks will be less distracting for the ADD deaf student because the teacher can better monitor the student's behavior (e. g. side conversations, note passing, etc.)

The last accommodation is to break work into small segments. A large page of written assignments or problems should be covered up to show only a few items so that focusing is easier. Also, changing activities frequently and using a variety of activities to avoid wandering attention is useful. Participant 5 who is also the parent of an ADD child recommended having a second set of books so that if students forget their books they can still do their homework. There are many books and websites that outline further accommodations and strategies for ADD children.



## Miscellaneous Comments

The desire for standardized tests to evaluate deaf students for ADD was expressed. However, the three participants were not too concerned that the checklists, scales, CPT tests, and other methods for evaluation of ADD are not yet standardized for deaf students. They feel their knowledge of deafness and the use of tests without language can compensate for the lack of standardization. The interview protocol included many questions about issues that did not seem to be emphasized during the interviews. Deaf culture was only mentioned by one participant as a possible reason for misinterpretation of behavior. Participant 5 noted that deaf students tend to have more chronic middle ear infections than hearing students, which can cause deaf students as a group to look as if they have a higher incidence of ADD than hearing students.

## Summary

Generally, participants noted the importance of accurately diagnosing ADD deaf students. The participants felt that there is a need for educating interpreters, mainstream teachers, and other people who work with ADD deaf students. The kind of training was not described and is a topic for further research. Other needs are to create new tests or standardize current tests so that deaf norms are available. However, the interviews suggested that experience with deafness permits deafness

professionals who work with ADD deaf students to compensate to a large degree for the failings of existing testing protocols for ADD evaluation. Generally, this finding suggests that knowledge of deafness should be one of the standard criteria for defining what a "qualified" ADD evaluator is for deaf students. Currently ADD research on the hearing population is advancing rapidly. Researchers in deafness will gain further insights into potentially new approaches to ADD evaluation and management of deaf students by integrating their knowledge of deafness with current advances in the general field of ADD research.

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Background information:

1. Participant's code \_\_\_\_\_
2. Deaf \_\_\_\_\_ Hearing \_\_\_\_\_
3. Male \_\_\_\_\_ Female \_\_\_\_\_
4. Age \_\_\_\_\_
5. Place of work \_\_\_\_\_
6. Title of position \_\_\_\_\_
7. Educational background \_\_\_\_\_  
\_\_\_\_\_
8. Describe your responsibilities \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
9. How long have you been working with deaf students?  
\_\_\_\_\_
10. Have you worked with hearing ADD students? If yes, how long?  
\_\_\_\_\_
11. How many years of experience do you have with deaf ADD students?  
\_\_\_\_\_

Interview Protocol

Identification

A. Can you tell me what are the most important things that come to mind about identifying ADD in deaf students?

1. What are the indications that you particularly notice when identifying deaf students?
2. Are there specific behaviors that might mislead one to suspect or believe that a student has ADD when in fact they do not?
  - a. Are there specific behaviors that are often or widely construed as “deaf” behaviors which may mask signs of ADD?
  - b. In your opinion, do indications of ADD for deaf and hearing students overlap? If yes, what are some examples?

B. What are the methods used to identify ADD at your institution?

1. Do you use any formal instruments, assessment tools, protocols, checklists or referral procedures?

*If yes:* a. What are they? Your preference?

b. What are the reasons for you choosing those methods?

c. In your opinion, are these methods be equally valid for all ages?

d. In your opinion, are these methods equally valid for deaf and hearing students?

*If no:* a. Would you prefer to use a particular method or methods? Which ones?

b. In your opinion, do you feel that if you did use formal instruments, etc. they would be equally as valid for all age groups?

d. In your opinion, do you feel that if you did use formal instruments, etc. they would be equally as valid for both hearing and deaf students?

2. a. What are the steps, from start to finish that deaf student would go through to be identified as ADD?

b. What are the positive and negative consequences for a deaf student of being identified as ADD?

To:

Date:

From: Cynthia DiDonna, Principal Investigator

Thank you for your willingness to assist me in my final project on ADD and deafness. As mutually agreed, we will be meeting on \_\_\_\_\_ at \_\_\_\_\_.

As I have mentioned, the interview will either audiotaped or videotaped for data collection purposes only. If videotaped, I will reverse interpret our interview onto an autotape from which a transcription will be made. No one else will be viewing the videotape and your identity will not be revealed on the audiotape.

I have attached a copy of the questions for your review, an information sheet to fill out and a consent form to sign. If you have any questions about anything, feel free to call me at (716) 442 -7926 or email me at the following addresses [cmd8907@rit.edu](mailto:cmd8907@rit.edu) and [clmd@hotmail.com](mailto:clmd@hotmail.com). Again, your time in assisting me in this endeavor will be greatly appreciated and I know that your experiences and perceptions will be valuable to this study.

I am looking forward to our meeting.

Sincerely,

Cynthia DiDonna



National Technical Institute for the Deaf  
Master of Science in Secondary Education  
of Students Who Are Deaf or Hard of Hearing  
Lyndon Baines Johnson Building  
52 Lomb Memorial Drive  
Rochester, New York 14623-5604  
716-475-6776 (Voice/TDD)  
716-475-6500 (Fax)

ADD and deafness: A qualitative study of professionals with background  
in ADD and deafness

Cynthia DiDonna: Principal Investigator

I agree to participate in this study which I understand to be part of  
a research project to be submitted in partial fulfillment of the Masters of  
Science in Secondary Education of Students Who Are Deaf or Hard of  
Hearing at the National Technical Institute of the Deaf.

I understand that interview will be about one hour long. The  
interview will be either audiotaped or videotaped for collection purposes  
only and my identity will not be on the transcript. I will be able to review  
the transcript of the interview.

I am aware that my opinions may be utilized for research purpose  
only and my identity will not be in the final report.

I understand that my participation is voluntary and I may  
discontinue at any time.

Participant's Name \_\_\_\_\_

Participant's Signature \_\_\_\_\_

Date Signed \_\_\_\_\_

Investigator \_\_\_\_\_

## Footnotes

1. Attention Deficit Disorder is a general term that includes the three categories found in the Diagnostic and Statistical Manual of the American Psychiatric Association (DSM IV, 1994): 1) Attention-Deficit/ Hyperactivity Disorder (Predominantly Inattentive Type), 2) Attention-Deficit/Hyperactivity Disorder (combined type), and 3) Attention-Deficit/ Hyperactivity Disorder (predominantly Hyperactive-Impulsive Type).
2. The lower cased d in deaf is used in this research to include all the students that are cultural Deaf as well as those who identify themselves as deaf, hard of hearing or hearing impaired. The differences between these identifications will not be examined separately.

Table 1  
DSM-IV criteria for symptoms of inattention

1. *Inattention*: six (or more) of the following symptoms of inattention have persisted for at least six months to a degree that is maladaptive and inconsistent with developmental level:
  - (a) often fails to give close attention to details or makes careless mistakes in schoolwork, work, or other activities
  - (b) often has difficulty sustaining attention in tasks or play activities
  - (c) often does not seem to listen when spoken to directly
  - (d) often does not follow through on instructions and fails to finish schoolwork, chores, or duties in the workplace (not due to oppositional behavior or failure to understand instructions)
  - (e) often has difficulty organizing tasks and activities
  - (f) often avoids, dislikes, or is reluctant to engage in tasks that require sustained mental effort (such as schoolwork or homework)
  - (g) often loses things necessary for tasks or activities, e.g., toys, school assignments, pencils, books or tools
  - (h) is often easily distracted by extraneous stimuli
  - (i) is often forgetful in daily activities

(Brown, 1995)

Table 2

DSM-IV criteria for symptoms of Hyperactivity-Impulsivity.

2. *Hyperactivity-Impulsivity*: six or more of the following symptoms of hyperactivity-impulsivity have persisted for at least 6 months to a degree that is maladaptive and inconsistent with developmental level:

*Hyperactivity*

- (a) often fidgets with hands or feet or squirms in seat
- (b) often leaves seat in classroom or in other situations in which remaining seated is expected
- (c) often runs about or climbs excessively in situations where it is inappropriate (in adolescents or adults, may be limited to subjective feelings of restlessness)
- (d) often has difficulty playing or engaging in leisure activities quietly
- (e) is often "on the go" or often acts as if "driven by a motor"
- (f) often talks excessively

*Impulsivity*

- (g) often blurts out answers before questions have been completed
- (h) often has difficulty awaiting turn
- (i) often interrupts or intrudes on others (e.g., butts into conversations or games)

(Brown, 1995)



Table 3  
The Spectrum of Attention Disorder

### Primary

Inherited or secondary to factors affecting early brain development  
Dysfunction of varying combinations of neural systems with varying clinical presentations (subtypes)

### Secondary

Symptoms secondary to, associated with, or mimicked by:

- Cognitive/Processing Disorder
  - Language disorder
  - Learning disorder
  - Cognitive impairment
- Medical Disorder
  - Seizures
  - Infections
  - Toxins
- Emotional/Psychiatric Disorders
  - Anxiety
  - Depression
  - Autism
  - Personality disorders
  - Behavioral disorders
- Environmental Factors
  - Disrupted/Chaotic home situations
  - Inappropriate school placement
  - Mismatch of neurobehavioral styles and environmental expectations

(Kelly et al., 1993B)

Table 4  
Description of Participants

Code	Family member Has ADD	Setting	Title of position	Years of experiences with:		
				Deaf students	Deaf/ADD students	
1	No	Female/ Hearing	Mainstream Classroom	Teacher of the Deaf	18	3
2	No	Female/ Hearing	Mainstream Classroom	Speech Therapist	12	12
3	Yes	Female/ Hearing	School for the Deaf	Learning Disabilities Specialist	8	8
4	No	Male/ Hearing	School for the Deaf	School Psychologist	12	9
5	Yes	Female/ Hearing	Diagnostic Center	School Psychologist	20	20