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**EDUCATING AND MOTIVATING ADOLESCENTS WHO ARE DEAF OR
HARD OF HEARING WITH DRUG AND ALCOHOL ADDICTION:
COMPONENTS OF A CURRICULUM THAT LINKS ADOLESCENTS TO
APPROPRIATE TREATMENT**

by

Lindsey K. Legendre

**An Independent Study
submitted in partial fulfillment of the requirements for the
degree of:**

Master of Science in Deaf Education

**Washington University School of Medicine
Program in Audiology and Communication Sciences**

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**Approved by:
Mary Shortal, M.S.S.H., Independent Study Advisor**

Abstract: This paper highlights the components necessary for a drug and alcohol addiction curricula to educate, motivate, and link adolescents who are deaf or hard of hearing using oral communication to appropriate treatment.

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Introduction

Since Pedro Ponce de Leon's introduction of oral deaf education methods in the early 16th century, listening and spoken language instruction has positively progressed into a technologically advanced educational field. In 2009, Centers for Disease Control and Prevention (CDC) data showed that over 97% of newborns in the United States were screened for hearing loss, while the U.S. Food and Drug Administration (FDA) estimated that 42,600 adults and 28,400 children received cochlear implants as of December 2010. In addition to such impressive statistics, specific advances in cochlear implant capabilities, such as water resistance and cell phone compatibility, further demonstrate progression in the field of listening and spoken language instruction. As research surrounding oral deaf education continues to focus on topics involving young children with hearing loss and corresponding technology, questions about expected outcomes and resulting behaviors in adolescence often remain unanswered, leaving educators of such a population searching for appropriate support.

Although the promotion of universal newborn hearing screening, increasing screening follow-up, and investigating the benefits of early implantation are areas of research responsible for the recent advancements in the field of listening and spoken language instruction, current information about adolescents who are deaf or hard of hearing using oral communication is often challenging to locate. For example, students who attend private, oral schools for the deaf or hard of hearing receive specially designed instruction tailored to meet the needs of individuals with hearing loss. After such services are no longer necessary and students transition into the mainstream, public school environment, educators often search for statistics involving student success rates and overall happiness in the unfamiliar setting. More specifically, information is needed concerning methods, techniques, or strategies adolescents who are deaf or hard of hearing using oral communication implement when dealing with issues that often occur during

teen-age years. Furthermore, individuals who attend private, oral schools for the deaf or hard of hearing are often prepared for the mainstream environment by focusing energy and efforts on appropriate speech, language, and vocabulary. Even though such efforts are necessary in order to effectively communicate with others, educators in both private and public school settings are left wondering if this population of students is prepared to encounter the existence of drugs, alcohol, and peer pressure in the real-world environment.

Therefore, this paper ultimately aims to highlight the components necessary for a drug and alcohol addiction curricula to educate, motivate, and link individuals to treatment with a strong focus on appropriate language, reading level, and communication abilities of adolescents who are deaf or hard of hearing using spoken language. As a means of selecting curriculum components this paper examines the following question: How do adolescents struggling with drug and alcohol addiction who are deaf or hard of hearing using spoken language differ from adolescents with normal hearing who are dealing with similar addiction problems? With the purpose of determining the similarities and differences between the specified populations, existing drug and alcohol research involving normal hearing individuals and American Sign Language users is closely analyzed to establish the effectiveness of corresponding drug and alcohol awareness curricula. Additionally, this paper discusses suitable treatment options and resources that currently exist for adolescents who are deaf or hard of hearing using oral communication, while describing necessary program improvements for the population of interest. Finally, this paper briefly describes special education services offered for incarcerated youth in order to foreshadow possible adolescent outcomes and further emphasize the need for an appropriate drug and alcohol addiction curriculum.

Substance Use and Alcoholism

In order to determine the necessary components of a drug and alcohol addiction curricula for adolescents who are deaf or hard of hearing using spoken language, it is essential to examine data concerning the United States' population and related substance use, abuse, and alcoholism. Substance use, defined by Griswold, Arnoff, Kernan, and Kahn (2008), refers to minimal or experimental use of illicit drugs with minimal consequences. In contrast, Griswold et al. (2008) describe substance abuse as regular use or abuse of illicit drugs with several and more severe consequences. The 2010 National Survey on Drug Use and Health (NSDUH) investigates the use of illicit drugs, alcohol, and tobacco in the civilian, non-institutionalized population of the United States aged 12 years old or older. The survey estimated 22.6 million Americans were current substance users or abusers, meaning that individuals had used an illicit drug, such as marijuana, cocaine, heroin, or inhalants, during the month prior to the survey interview. This estimate represents 8.9 percent of the United States' population aged 12 or older.

Similar to substance use and abuse, alcoholism refers to a chronic disease in which individuals become dependent on alcohol and lose control over drinking habits. In addition, individuals with alcoholism may continue to consume alcohol even though related problems arise regarding relationships, health, career, or finances. Resources continue on to explain that alcohol abuse also denotes a problem with alcohol consumption without the symptoms of alcoholism. For instance, alcohol abuse simply means that an individual avoids complete dependence on alcohol, but often drinks too much causing issues similar to those reported with alcoholism. The 2010 NSDUH found that 51.8 percent of Americans aged 12 or older are current drinkers of alcohol, which translates to an estimated 131.3 million people at risk for alcohol abuse and alcoholism.

Due to the fact that the NSDUH survey interviews approximately 67,500 persons each year it is important to further pinpoint statistics surrounding drug use among individuals aged 12 to 17 in the normal hearing population. It is also necessary to keep in mind that substance use before the age of 18 is associated with an eightfold greater likelihood of developing substance dependence in adulthood. In addition, substance use results in an increased risk for motor vehicle crashes, emergency room admissions, and suicide (Griswold et al., 2008). Although numerous interventions and curricula are available for the normal hearing adolescent population, the rate of current illicit drug use among youths aged 12 to 17 remained similar from 2009 to 2010, but higher than the rate in 2008. Interestingly, the rate of current drug use varied by age among youths aged 12 to 17 in 2010. For instance, the current drug use rate increased from 4.0 percent at ages 12 or 13 to 9.3 percent at ages 14 or 15 to 16.6 percent at ages 16 or 17. About 48.6 percent of youths aged 12 to 17 additionally reported it would be “fairly easy” or “very easy” for them to obtain marijuana if interested in obtaining the drug.

Along with examining current drug use, it is also important to consider information regarding alcohol use among 12 to 17 year old individuals in the normal hearing population. Relevant statistics classify drinking habits into the following categories: binge drinking and heavy drinking. The NSDUH defines binge drinking as having five or more drinks on the same occasion on at least 1 day in the 30 days prior to the survey. Moreover, heavy drinking refers to the act of binge drinking on at least 5 days in the past 30 days. According to the NSDUH, there were an estimated 10.0 million underage drinkers in 2010, including 6.5 million binge drinkers and 2.0 million heavy drinkers. On a positive note, the rate of current alcohol use among youths aged 12 to 17 was 13.6 percent in 2010, which was lower than the 2009 rate of 14.7 percent. Youth binge and heavy drinking rates in 2010 were also lower than rates in 2009.

The Need for an Appropriate Curriculum

After examining substance use and alcohol consumption statistics, the need for a curriculum that educates, motivates, and links adolescents who are deaf or hard of hearing using spoken language to appropriate treatment is further confirmed. Although numerous drug and alcohol curricula are available for normal hearing individuals, adolescents who are deaf or hard of hearing require specialized support and intervention. For example, this paper investigates the existence of many curricula in which conversing about and reflecting upon past experiences is a main component. Other intervention programs designed for normal hearing adolescents contain an abundance of figurative language, elevated vocabulary, and references requiring extensive background knowledge. It is also important to note that curricula, intervention programs, and research are available for American Sign Language users. This paper notes that such resources tend to focus on support from the Deaf community and the need to locate therapists fluent in American Sign Language. Therefore, adolescents who are deaf or hard of hearing using spoken language lack the support necessary to become educated about drug and alcohol addiction. In order to assist the specified population with substance use and alcoholism issues, it is important that a specially designed curriculum tailors components to the needs of deaf or hard of hearing individuals using oral communication with a specific focus on appropriate language, reading level, and communication abilities.

Characteristics of Adolescent Drug and Alcohol Users in the Normal Hearing Population

In order to determine the components needed for a drug and alcohol awareness curriculum to educate, motivate, and link adolescents who are deaf or hard of hearing to appropriate treatment, it is necessary to describe typical characteristics of adolescents with normal hearing battling with substance abuse and addiction. With such information an eventual

comparison with deaf or hard of hearing individuals can be determined to better inform educators and professionals about general behaviors indicating the possibility of substance abuse issues.

After reviewing current literature and research involving adolescents with normal hearing that are at an increased risk for substance abuse and alcoholism, it is apparent that certain characteristics are common among individuals within the population. In 2001, Webster-Stratton and Taylor determined several factors linked to adolescent substance abuse or delinquent acts. Research explains such factors as association with deviant peers, inability to bond with others at school, and experiencing academic failure. In addition, Webster-Stratton and Taylor (2001) further state that adolescents who exhibit oppositional defiant disorder (ODD) and conduct disorder at a young age are at the greatest risk of engaging in substance abuse. Similarly, Griswold et al. (2008) examined the estimated rates of comorbid mental illness among adolescents with substance use disorders. Researchers found that among adolescents with no prior substance use, the rates of first time alcohol and substance use in the previous year were higher in those adolescents diagnosed with depression, conduct disorder, ODD, attention-deficit hyperactivity disorder (ADHD), anxiety, and post-traumatic stress disorder (PTSD). Additional research notes that adolescents with comorbid mental illness and psychiatric disorders display higher rates of help-seeking behaviors for substance abuse than non-comorbid counterparts (Gayman, Cuddeback, & Morrissey, 2011).

Along with demonstrating a link between substance use and comorbid mental illnesses, such as ODD and conduct disorder, available research further explains parenting style and environmental factors in connection with adolescent substance and alcohol use. For example, researchers conclude that parents who demonstrate harsh and inconsistent discipline methods increase the likelihood of further conduct problems. Parents' inability to set limits and effectively

monitor a child's behavior also results in consistent patterns of conduct issues which are explained above as factors that increase an adolescent's probability to engage in substance use and abuse (Webster-Stratton & Taylor, 2001). Moreover, current studies show that factors contributing to adolescent substance abuse develop from an intricate relationship between personal and community variables. Griswold et al. (2008) suggest that environmental factors may influence genetic variability, meaning that adolescents may have a biological predisposition to develop a disorder or condition, like substance abuse or alcoholism, when certain environmental factors are present. Webster-Stratton and Taylor (2001), along with DeGarmo, Eddy, Reid, and Fetrow (2009), define such environmental factors as problematic family interactions, increased police contact during elementary school due to juvenile delinquency, poverty, and parents' marital status.

As well as parenting styles and environmental factors impacting the development of adolescent substance abuse or alcoholism, non-compliance, aggression, and rejection are added characteristics of individuals with normal hearing who are likely to partake in substance use and abuse (DeGarmo et al., 2009). Research explicates that youth who are consistently non-compliant and aggressive are often socially rejected during daily interactions by the majority of familiar adults and peers. Consequently, this constant dismissal decreases an adolescent's access to normative social situations and experiences. Therefore, such an individual may become dependent on a deviant peer group that serves a resource for observing and learning typical antisocial behaviors, such as stealing, intimidation, or violence, along with substance use and abuse.

In connection with the display of aggression or the experience of rejection from familiar individuals, additional research explains that behavior is often determined by attitude, social

influences, self-efficacy, and intention. Thus, attitudes towards substance use result from outcome expectations of those specific behaviors (Malmberg, Overbeek, Kleinjan, Vermulst, Monshouwer, Lammers, Vollebergh, & Engels, 2010). For instance, it is fair to state that other people's behaviors directly and indirectly influence the thoughts, feelings, and actions of others. Researchers additionally determine that the development of behaviors, such as substance use and abuse, depends greatly on an individual's ability to resist temptation and the presence of motivations surrounding readiness to partake in such activities (Malmberg et al., 2010).

Curricula, Interventions, and Treatment for the Normal Hearing Adolescent Population

In addition describing typical characteristics of adolescents struggling with substance abuse and addiction, it is essential to examine and analyze existing awareness curricula designed for individuals with normal hearing between the ages of 12-18. Moreover, such an investigation must specifically focus on components, such as language and vocabulary level, communication abilities, and connection with adolescent treatment facilities. Valuable information is also gained from investigating treatment and interventions suggested for the normal hearing population as adolescents who are deaf or hard of hearing may benefit from similar treatment if options include a specialized focus on the needs of the specified deaf and hard of hearing population.

In 2001, Webster-Stratton et al. aimed to identify and describe empirically supported universal, selected, and indicated prevention interventions for substance use and delinquency in adolescence by addressing major risk behaviors in early childhood. Through an examination of various prevention programs, Webster-Stratton et al. (2001) first acknowledges the importance of parent involvement and education throughout the intervention process. Researchers stress the need for parent-focused interventions, such as home visiting programs, family therapy, and parent training that helps to improve prenatal health, pregnancy outcomes, and the

appropriateness of responses to behavior problems which, in turn, improves the child's overall health and development. Webster-Stratton et al. (2001) specifically mention Cognitive Behavioral Parent Training Programs for Children with Conduct Problems as an effective intervention that teaches parents about positive, nonviolent discipline methods and supportive parenting approaches in order to promote children's self-confidence, pro-social behaviors, problem solving skills, and academic success. Researchers additionally explain that such training helps parents understand how to provide home support for school goals (Webster-Stratton et al., 2001).

Along with identifying and describing numerous, effective parent-based programs and intervention strategies, Webster-Stratton et al. (2001) discuss classroom-focused interventions, such as *The Perry Preschool Project Programs*, the *Good Behavior Game (GBG)*, and the *Program for Academic Survival Skills (PASS)*. With the idea that school failure contributes to the development of conduct disorders, substance abuse, and delinquency, listed intervention programs center on strengthening academic and cognitive performance, social adaptation, and appropriate classroom behavior. Examiners additionally review *Promoting Alternative Thinking Strategies (PATHS)*, which was originally developed for deaf children and then later adapted for use with regular education and special education students (Greenberg & Kusche, 1998). The PATHS program is based on teacher implementation which covers the following conceptual domains: self-control, emotional understanding, positive self-esteem, relationships and interpersonal problem-solving skills. Although classroom teachers involved in PATHS related studies were unable to report changes in behavior after aiming to improve such conceptual domains, researchers' close examination supports the idea that PATHS, in combination with

regular classroom consultation, slightly reduces behavior problems within the normal hearing population.

Similar to Webster-Stratton et al. (2001), Griswold et al. (2008) discuss the need for adolescents with substance use issues to consult with professionals who specialize in substance use disorders. In order to identify adolescents with substance use disorders, researchers suggest screening all individuals for alcohol and substance use using the CRAFFT Questionnaire. The questionnaire, developed at Children's Hospital Boston, is a brief, reliable tool utilized by numerous physicians to determine patients' degree of risk involving drug and alcohol related problems. The CRAFFT Questionnaire includes the following questions to which participants offer a yes or no answer:

- Have you ever ridden in a car driven by someone (including yourself) who was "high" or had been using alcohol or drugs?
- Do you ever use alcohol or drugs to relax, feel better about yourself, or fit in?
- Do you ever use alcohol/drugs while you are by yourself, alone?
- Do your family or friends ever tell you that you should cut down on your drinking or drug use?
- Do you ever forget things you did while using alcohol or drugs?
- Have you gotten into trouble while you were using alcohol or drugs?

When scoring the CRAFFT Questionnaire, 1 point is rewarded for every "yes" answer, while 0 points are given for "no" responses and, consequently, individuals scoring a 2 or more are considered at a high risk for problems caused by drinking alcohol or using drugs. CRAFFT Questionnaire creators also encourage physicians to discuss scores with adolescents with the intention of providing high risk individuals with information about support services and treatment centers involved in the rehabilitation process (Children's Hospital Boston, 2001).

Subsequent to administering the CRAFFT Questionnaire, Griswold et al. (2008) additionally recommend that physicians converse with adolescents about support services and corresponding resources using motivational interviewing as a means for initiating discussion and developing

conditions for positive change. More specifically, motivational interviewing focuses on the following areas: assessment and feedback, negotiation and goal setting, behavioral modification techniques, self-help directions, and follow-up and reinforcement (Griswold et al., 2008).

Through the process of motivational interviewing, examiners suggest that physicians pose a variety of questions in order to gain an increased understanding about an adolescent's alcohol and drug use patterns, relationships with peers, and knowledge about substance abuse. With such information, physicians are then encouraged to provide adolescents with ideas for building positive relationships with peers, for instance. Griswold et al. (2008), continue on to explain that it is important to offer brief interventions when working with adolescents because, even the shortest of discussions, may defer experimentation with drugs and alcohol.

In connection with previously discussed research, Griswold et al. (2008) also recognize the role of family and community in the management of adolescent substance abuse disorders. Researchers propose that screening parents and family members for substance use and abuse is an important part of the rehabilitation process in hopes that all parties close to the adolescent receive appropriate treatment and intervention. Along with the screening of family members, Griswold et al. (2008) express the significance of family therapy when working to manage adolescent substance abuse disorders. Studies explicate that appropriate therapy must offer support, foster strength building, and promote the removal of alcohol and narcotics from the home environment. Finally, Griswold et al. (2008) highlight peer groups as an approach to promote abstinence from drugs and alcohol. Researchers note that adolescents are likely to seek out peers with similar backgrounds and, therefore, involvement in peer group helps adolescents avoid forming relationships with individuals consistently using drugs and alcohol. Instead,

members of a peer group may support one another in remaining abstinent and participating in extracurricular activities, such as clubs, athletic teams, and volunteer programs.

In addition to the information presented by Griswold et al. (2008), a 2009 study, conducted by DeGarmo et al. (2009) aimed to examine the long-term impact on youth substance use using the Linking the Interests of Families and Teachers (LIFT) program. The LIFT program is a preventative intervention tool based on a developmental model that focuses on momentary social interaction processes thought to be significant in initiating and continuing youth problem behaviors (Patterson, 1982; Patterson, Reid, & Dishion, 1992; Reid and Eddy, 2002). Ultimately, the LIFT program aims to prevent the development of antisocial behaviors by promoting positive interactions between youth and parent(s) in the home, youth and peers in the classroom and on the playground, and between parents and teachers about youth (Eddy, Reid, & Fetrow, 2000). The intervention program also includes parent management training, child social and problem solving skills training, the Good Behavior Game components in order to educate students about emotion and recognition management, group cooperation, and problem solving.

In the 2009 study, DeGarmo et al. determined that the LIFT program, while controlling for deviant peer association, had an overall impact on average levels of use for tobacco, alcohol, and illicit drugs for all youth in the LIFT program. Moreover, researchers found that the LIFT program reduced adolescents' risk in beginning to drink alcohol, decreased the rate at which substance use increased across adolescence, lessened occurrences of playground aggression, and reduced levels of drug and alcohol use through effective family problem solving (DeGarmo et al., 2009). DeGarmo et al. (2009) further explain that the LIFT program acknowledges that children with extreme behavior problems often receive reinforcement for antisocial behaviors, but little reinforcement or praise for positive behaviors. Ultimately, examiners express that a

school and classroom-wide preventative intervention, such as the LIFT program, potentially increases the intensity of reinforcement children receive as educators implement curriculum components, like the Good Behavior Game and social skills training, which are designed to increase positive reinforcement.

Similar to the efforts of DeGarmo et al. (2009), Malmberg et al. (2010) examined the effectiveness of The Healthy School and Drugs curriculum program which aims to reduce early and excessive substance use among adolescents. The Healthy School and Drugs (HSD) program includes elements of the following school-based interventions: knowledge-based, cognitive-affective based, and social influence-based programs. First, HSD focuses on knowledge and enhancing students' understanding of biological and psychological aspects of substance abuse in order to promote a negative attitude towards drug use and abuse. HSD additionally involves cognitive-affective components that aim to improve students' self-confidence and self-awareness as a means of preventing vulnerability. Finally, The Healthy School and Drugs curriculum contains social influence elements which promote the development of social and/or life skills in order to prevent peer pressure leading to related drug and alcohol use (Malmberg et al., 2010).

After outlining the basis for The Healthy School and Drugs curriculum design, researchers continue on to explain that the program for secondary schools consists of four main areas. Malmberg et al. (2010) describe the first curriculum area as information lessons. More specifically, information sessions are defined as e-learning modules created with adolescent experiences in mind. HSD requires students to work through the modules at an independent pace during designated class periods, while strengthening refusal skills and discussing relevant topics with peers in chat rooms and forums. Researchers go on to define parental participation as another Healthy School and Drugs curriculum component. Malmberg et al. (2010) explicate that

parental participation involves attendance at various HSD meetings. For example, the Healthy School and Drugs curriculum introduces program prevention goals during parent meetings. Corresponding conferences also provide parents and guardians with factual information concerning adolescent substance use and drug education strategies designed for the home environment. Furthermore, Malmberg et al. (2010) describe regulation as the third curriculum area included within the Healthy School and Drugs prevention program. Interestingly, researchers refer to regulation as the belief that that rules set boundaries and create clarity. Additionally, this third component of HSD promotes the creation of special parent-teacher teams responsible for creating and revising school rules surrounding substance abuse behaviors. Finally, the corresponding article notes that monitoring and counseling are aspects of the fourth curriculum area. Malmberg et al. (2010) explain monitoring and counseling as methods for handling problematic substance use behaviors among students. Moreover, the Healthy School and Drugs curriculum directs monitoring and counseling components towards teachers, mentors, and student spectators so that such responsible parties are able to recognize and efficiently support students with problematic drug and alcohol use issues.

Along with outlining the Healthy School and Drug program components, Malmberg et al. (2010) discuss the expected effectiveness and strengths of the prevention program. Although detailed results are currently unavailable for the interested public, researchers explain that the clear and elaborate theoretical basis underlying the curriculum is a noteworthy strength. For example, creators of the HSD program determined e-learning module elements with the Attitude, Self-Influence, and Self-Efficacy (ASE) model in mind as the theory involves the prediction and explanation of healthy behavior. It is also important to note that the Healthy School and Drugs prevention program consists of multiple components and Tobler, Roona, Ochshorn, Marshall,

Streke, and Stackpole (2000) show that multi-component programs produce more positive effects than single component programs. Lastly, Malmberg et al. (2010) focus on the fact that the Healthy School and Drug program is a school-based curriculum indicating that prevention methods are available and accessible in a large population of adolescents.

Keeping previously mentioned substance abuse curricula and research in consideration, it is important to explore and analyze statistical information involving the percentage of the adolescent population willing to accept assistance when dealing with alcohol or drug addiction issues. Interestingly, Gayman et al. (2011) acknowledge the significance of such information and recognize that the transition into young adulthood is a particularly high risk period in the life course of substance use disorders. Even though substance use disorders are common among young adults, researchers note that knowledge and information regarding help-seeking behaviors and delays in help-seeking is lacking. Consequently, Gayman et al. (2011) address the following questions: (1) What is the prevalence and social distribution of help seeking among young adults with substance use disorders; (2) What are the demographic and clinical factors associated with help seeking among young adults with substance use disorders; and (3) What are the demographic and clinical factors associated with delays in help seeking after substance use disorder onset? Researchers also explain that studies involving help-seeking behaviors demonstrate varying results. Therefore, Gayman et al. (2011) further question whether relatively low rates of help seeking reported by young adults is related to experiencing brief struggles with drug and alcohol addiction, whereas older individuals often seek help due to lifetime battles with substance abuse.

After examining 672 subjects identified as meeting lifetime criteria for alcohol or illicit drug use or dependence, researchers found that only one third of young adults with a history of

substance use disorder report ever seeking help (Gayman et al., 2011). In particular, help seeking varied by substance use diagnosis. For instance, individuals who met the criteria for abuse and dependence demonstrated the highest rate of help seeking, but those who met the criteria for abuse only displayed the lowest occurrence of help seeking behaviors. Moreover, subjects with childhood or adolescent onset of substance use disorders were more likely to report seeking help than individuals experiencing onset during young adulthood (Gayman et al., 2011). In addition, participants with co-morbid mental illnesses, such as depression or PTSD, report an increased rate of help seeking when compared to individuals without a history of mental illness.

Besides offering insightful statistics concerning the rate of help seeking among young adults with substance use disorder, Gayman et al. (2011) additionally examine clinical predictors of substance use issues and characteristics of help seeking in order to appropriately direct early intervention and prevention program efforts. As a result, researchers report differences in help seeking by race-ethnicity. Specifically, non-Hispanic Caucasians displayed the highest rates of help seeking behaviors, while African American individuals had the lowest rate of help seeking. Gayman et al. (2011) also explain that individuals with a history of arrest are more likely to seek help when compared to non-justice-involved counterparts. All in all, researchers conclude many individuals with substance use disorder seek help due to struggles with extensive dependency, influences from society in regards to social behavior, and as a consequence of therapeutic motivations and treatment.

Subsequent to reviewing an array of studies and literature involving curricula, interventions, and treatment designed for normal hearing adolescents with substance abuse issues, it is necessary to highlight vocabulary and language abilities needed to participate in suggested programs. For instance, Webster-Stratton et al. (2001), DeGarmo et al. (2009), and

Malmberg et al. (2010) focus on parent and teacher inclusion in the intervention process. Although this emphasis on adult participation provides adolescents with a support system, involved guardians may assume communication responsibilities throughout the treatment process. Unfortunately, this leaves adolescents without any opportunities to learn and use language necessary for dealing with and overcoming such addictions. Additional drug and alcohol awareness curriculum, such as the PATHS program, provide classroom teachers with materials geared towards young, visual learners. In the later grades, curriculum components place a large emphasis on reaching goals in reading and language arts. Therefore, participants must possess the ability to read and review grade level novels and corresponding resources.

Similar to the vocabulary and language skills necessary to participate in the PATHS program, the CRAFT Questionnaire, reviewed by Griswold et al. (2008) requires participants to answer questions containing multiple parts, while presenting figurative language and slang terms. The CRAFT Questionnaire also involves a “yes” or “no” answering process, meaning that adolescents are unable to explain corresponding situations or responses which may lead to misunderstanding the question or misinterpretation of an adolescent’s response. Similarly, researchers suggest methods, such as motivational interviewing, discussions about special social and problem solving skills, and cooperation-based activities during which adolescents must demonstrate age-appropriate conversation, language, and vocabulary skills in a variety of academic and home environments.

Background Information about Substance Abuse and Alcoholism in the Deaf Community

Along with describing typical characteristics of normal hearing adolescents dealing with substance abuse issues and connecting such behaviors to an examination of existing drug and alcohol awareness curricula, it is necessary to discuss the progression of ideas surrounding drug

abuse and alcoholism in the Deaf community. Particularly, a thoughtful outline and inspection of American Sign Language (ASL) users' viewpoints regarding substance abuse in the Deaf community is essential in order to understand the specific needs and difficulties for Deaf substance abusers seeking appropriate treatment. Such an awareness and understanding is valuable as adolescents who are deaf or hard of hearing using listening and spoken language may maintain related beliefs and encounter similar difficulties when seeking and accepting substance abuse treatment.

While conducting an effective investigation of ASL users' viewpoints surrounding substance abuse in the Deaf community, interested parties must consider past research in order to understand the progression of beliefs and resources over time. In 1979, Isaacs, Buckley, and Martin conducted a study, titled *Patterns of Drinking Among the Deaf*, which aims to examine Deaf and hard of hearing individuals' drug and alcohol use in comparison with the normal hearing population. Interestingly, researchers introduce background information with a statement that acknowledges the increasing integration of individuals with special needs into the mainstream community rather than segregating such a population to specialized agencies or centers. Isaacs et al. (1979) also discuss that, before *Patterns of Drinking Among the Deaf*, research studies regarding substance use among the Deaf were nonexistent, while corresponding programs to aid individuals with addiction problems were slowly beginning to develop and evolve. In addition, agencies involved in study procedures report being unfamiliar with procedures to follow or services to offer if a Deaf person came to ask for help (Isaacs et al., 1979).

Along with highlighting background information pertinent to substance abuse and alcoholism in the deaf community, it is important to discuss a specific section of *Patterns of*

Drinking Among the Deaf which discusses the Deaf community's opposition to substance abuse therapy and treatment. Isaacs et al. (1979) refer to the Deaf community as a close knit body which recently emerged from the long-time stereotype of "deaf and dumb." According to researchers, discussions mentioning the possibility of Deaf alcoholics and substance abusers provoked active hostility and massive denial among members of the deaf community. For example, as outsiders brought drug and alcohol issues to the attention of the deaf community, individuals demonstrated powerful opposition and remarked that, "we have been fighting to rid the hearing community of the stereotype 'deaf and dumb'; we don't want to spend the next hundred years trying to erase another devastating slur, 'deaf and drunk' (Boros & Sanders, 1975).

As time continues on, additional information and further research involving substance abuse and alcoholism in the Deaf community becomes readily available. For instance, Taylor and Francis's 1982 study, titled *Alcoholism Treatment for the Deaf*, discusses deaf alcoholics as an underserved population in need of appropriate and effective treatment. In 1989, Katherine Lane's *Substance abuse among the deaf population: An overview of current strategies, programs, and barriers to recovery* examines the prevalence of substance abuse among deaf people, while addressing barriers to recovery, appropriate treatment centers, programs and services currently offered. Finally, Whitehouse, Sherman, and Kozlowski present information regarding the special characteristics and needs of hearing-impaired alcoholics and drug addicts within the 1991 study *The Needs of Deaf Substance Abusers in Illinois*. As researchers introduce the topic of Deaf substance users and alcoholics, Whitehouse et al. (1991) mention the increase of research materials concerning such sensitive subject matter. Researchers further describe advancements in treatment and resources as Alcoholics Anonymous or Narcotics Anonymous begin to offer meetings for sign language users (Whitehouse et al., 1991).

Although Whitehouse et al. (1991) focus on advancements in research, treatment options, and resources for members of the Deaf community with drug and alcohol abuse issues, *The Needs of Deaf Substance Abusers in Illinois* reports the existence of less than 10 residential chemical dependency treatment programs in the country with augmented services for deaf persons. Moreover, results show that 60% of agencies included in the study report serving only a small number of Deaf individuals. Therefore, agencies report difficulty justifying the need for telecommunications device for the Deaf (TDD). In connection with this fact, Whitehouse et al. (1991) point out that the majority of ASL users are unfamiliar with therapy and, oftentimes, share concerns about breaches in confidentiality, especially when interpreters are present during corresponding sessions with a normal hearing counselor. Furthermore, researchers mention conflicts between the Deaf community and the hearing population as many Deaf individuals express mistrust for hearing persons. Whitehouse et al. (1991) continue on to explain that some members of the Deaf community involved in study procedures believe that individuals within the normal hearing population provide inaccurate labels, such as “less intelligent”, when referring to members of the Deaf community, while other people report experiencing parent or professional neglect due to communication conflicts and difficulties.

Even though numerous teams of interested professionals perform an increased amount of research concerning alcohol and substance abuse problems among persons who are Deaf, more current research articles highlight several issues related to the topic of interest. For instance, Rendon (1992) examines the prevalence of substance abuse and alcoholism in the Deaf community and determines that such struggles are regarded as moral issues, while the denial of pathological drinking is a common occurrence within the culture. Rendon (1992) reinforces the idea that the Deaf alcoholic is at a distinct disadvantage when faced with moral pressure and lack

of support from the Deaf community (Lane, 1989). It is also important to note that the Deaf community, differing from the general population, remains dependent on the idea that substance abuse is related to “moral weakness” with members of the community fearful of receiving negative labels from acquaintances and outsiders (Rendon, 1992). Likewise, additional, recent research maintains that idea that the prevalence of substance use disorders among the Deaf is difficult to estimate since the validation of alcohol and drug screening instruments has yet to occur (Alexander, DiNitto, & Tidblom, 2005). Alexander et al. (2005) further refer to substance abuse in the Deaf community as a sensitive topic and suggest the use of ASL to approach subjects rather than relying on interpreters to communicate information as this strategy may promote increased participation in connected research studies.

Similar to information found within the works of Rendon (1992) and Alexander et al. (2005), supplementary articles describe research on the prevalence of alcohol and other drug use among Deaf or hard of hearing youth as “exceedingly scant” and “methodologically weak” (Titus & White, 2009). Researchers continue to report that failure to understand Deaf culture, mistrust of health providers, issues of privacy and confidentiality, and sensitivity to stigmatizing the Deaf result in inadequate prevention and substance abuse treatment for members of the Deaf community (Berman, Streja, & Guthmann, 2010). Berman et al. (2010) further explicate that the lack of current information regarding alcohol and illicit drug use in the Deaf and hard of hearing population creates difficulty when attempting to implement appropriate prevention and treatment methods as researchers only have limited ideas about the specific needs of the population of interest.

A thoughtful outline and investigation of ASL users’ viewpoints regarding substance abuse in the Deaf community is necessary in order to understand the specific needs of and

difficulties encountered by Deaf substance abusers seeking appropriate treatment. Such an awareness and understanding is also valuable when contemplating suitable prevention and recovery methods for the population of interest. For example, Rendon (1992) additionally discusses recovery efforts and the fact that the Deaf alcoholic or drug addict can achieve recovery only when the Deaf community acknowledges that accessibility to appropriate treatment must be the reality and not the rarity. Research continues on to explain that substance abuse recovery depends greatly upon the Deaf community's willingness to admit that, regardless of culture, race, or faith, alcoholism and drug abuse affects all cultures and that recovery is right for everyone (Rendon, 1992).

Barriers to Accessible and Appropriate Treatment

While considering the progression of ideas surrounding drug abuse and alcoholism in the Deaf community, it is essential to examine the specific needs and difficulties faced by sign language users seeking appropriate substance abuse treatment. In connection with such needs and difficulties, it is necessary to review Section 504 of the Federal Rehabilitation Act of 1973 which states that agencies and provided service centers receiving federal funding must be accessible to individuals with disabilities. Section 504 further states that offered services for individuals with disabilities must be as "equitable" and "accessible" as resources available to the general population. Consequently, current research questions the scope of adherence to the federal mandate and whether treatment agencies' lack of compliance is a product of ignorance or hesitation due to financial responsibilities involved in making services accessible (Whitehouse et al., 1991).

Although some related studies simply state that existing substance abuse treatment facilities are inaccessible to Deaf sign language users, numerous researchers provide a detailed

list which pinpoints common challenges experienced by the population of interest when pursuing substance abuse treatment. Specifically, Whitehouse et al. (1991) mention that the majority of facilities lack TDD accessibility and staff persons who are Deaf or fluent in ASL. Researchers also explicate that provided service centers are often reluctant to contract for qualified sign language interpreters due to the additional financial burden. Interestingly, Whitehouse et al. (1991) discuss the Deaf community's frequent mistrust of the normal hearing population and, therefore, observe that an extensive amount of time in treatment is spent attempting to establish trust between the Deaf patient and normal hearing professional. Similarly, Rendon (1992) focuses on the language barrier often encountered by Deaf individuals and explains that ASL users may be uninformed about family, community, or agency events. Moreover, research notes that this uninformed state may leave individuals unaware about the dangers or consequences related to drug and alcohol abuse or misuse.

Along with illustrating difficulties faced by a member of the Deaf community entering a treatment facility, Whitehouse et al. (1991) and Rendon (1992) additionally describe challenges involved within the general recovery process. For instance, researchers discuss geographic location and the unlikelihood that Deaf community members with substance abuse issues reside within reasonable distance of one another. As a result, drug and alcohol treatment agencies have difficulty justifying specialized programs for such a low incidence population (Rendon, 1992). As Alcoholics Anonymous or Narcotics Anonymous begin to offer meetings for sign language users it is important to highlight that sessions are only available in a limited number of locations and at certain times of day. Therefore, a member of the Deaf community with drug or alcohol addiction may be unable to attend meetings due to transportation or career complications (Rendon, 1992). Finally, Whitehouse et al. (1991) state that many treatment programs begin

early in the day and continue late into the evening. Researchers acknowledge that this required amount of time may be overwhelming and exhausting for those individuals who work with an interpreter and receive visual information (Whitehouse et al., 1991).

In agreement with research described above, more current articles continue to examine similar difficulties and commonly occurring challenges along the road to substance abuse recovery. For example, Alexander et al. (2005) investigate alcohol and drug use screening measures as an appropriate method for obtaining information about an individual who is Deaf and uses sign language as a primary mode of communication. Since the diagnostic tools of focus were created for the hearing population, researchers determine that aspects of the exam, such as syntax, reading level, and changes in time sequence, make it difficult for members of the Deaf community to understand test items in written form (Alexander et al., 2005). Likewise, Titus et al. (2009) focus on youth members of the Deaf community who are unable to use hearing abilities for communication purposes. Researchers highlight risk factors related to substance use issues that are unique to this population in order to emphasize the need for appropriate and accessible treatment. For instance, Titus et al. (2009) explicate that a decreased exposure to formal prevention programs, increased emotional distress related to social isolation and struggles to connect with a hearing world, and a deep need to fit in with hearing and non-hearing peers requires specialized attention as such youths struggle with substance use issues and seek related treatment.

As Titus et al. (2009) focus on youth members of the Deaf community, Berman et al. (2010) further emphasize the significance of examining the specific needs and difficulties faced by this population seeking appropriate substance abuse treatment. Researchers discuss communication difficulties, such as failure to understand Deaf culture, issues of privacy and

confidentiality, and sensitivity to programs perceived as stigmatizing the Deaf so that professionals are aware of such gaps in knowledge between the differing communities (Berman et al., 2010). As mentioned above and in connection with such needs and difficulties, it is necessary that treatment agencies acknowledge communication barriers in accordance with Section 504 of the Federal Rehabilitation Act of 1973. Therefore, as current research highlights the need for specialized programs, provided treatment centers must establish curricula for youth and adult members of the Deaf community that are as accessible and effective as those designed for the normal hearing population.

Recommendations for Substance Abuse Curricula and Available Resources

While the majority of research included within this literature review involves adult members of the Deaf community, information surrounding suggested curricula elements and available resources focuses on adolescent American Sign Language users. Keeping communication barriers and described accessibility issues in mind, it is necessary to consider researchers' curricula and program suggestions as adolescents who are deaf or hard of hearing using oral communication may benefit from similar substance abuse treatment guidelines. Additionally, an examination of available resources for adolescent ASL users is important so that qualified listening and spoken language professionals are able to carefully adapt such information to meet the needs of adolescents who are deaf or hard of hearing with such communication preferences.

Although *The Needs of Deaf Substance Abusers in Illinois* (1991) presents information developed over twenty years ago, researchers' suggestions align with findings and ideas described in more current research. For instance, Whitehouse et al. (1991) acknowledge that effective substance abuse treatment for American Sign Language users requires specialized

programs as Deaf individuals uniquely experience isolation from the general population. In addition, *The Needs of Deaf Substance Abusers in Illinois* (1991) mentions that improved networking across the entire social service delivery system is necessary in order to link members of the Deaf community with appropriate substance abuse service providers. Researchers further describe the need for a treatment facility house with certain characteristics and components, including the following trained personnel: medical, nursing, and counseling staff familiar with ASL and Deaf culture; a communication specialist, a speech and hearing consultant, full-time sign language interpreter, teacher of the Deaf, and a linkage counselor (Whitehouse et al., 1991).

Similar to implications presented within *The Needs of Deaf Substance Abusers in Illinois* (1991) involving substance abuse treatment centers for members of the Deaf community, Titus et al. (2009) describe professional treatment and recovery support resources for struggling adolescents within *Substance Use Among Deaf and Hard of Hearing Youths: A Primer for Student Assistance Professionals*. Researchers initially state that counselors' knowledge surrounding Deaf culture and the impact of a hearing loss for an individual trying to function in a hearing world is extremely important when working with adolescent ASL users. Titus et al. (2009) continue on to note that integrating and sustaining recovery behaviors into daily life is challenging for Deaf or hard of hearing individuals as few options exist for culturally and linguistically accessible recovery supports and resources, especially for adolescents. Therefore, after a thorough review of substance-related problems among Deaf and hard of hearing students, Titus et al. (2009) provide the following list of suggestions in order to respond to the needs of the specified population:

1. Remain aware of how hearing-loss-related issues may present themselves. For example, isolation, wanting to fit in with peers, attempts at succeeding in school, and entitlement to excessive behavior.
2. Learn about Deaf culture, specifically the variations in how people with hearing loss relate to the Deaf community.
3. Seek consultation with substance abuse agencies with the ability to serve individuals with hearing loss.
4. Identify local and regional resources for students who are Deaf or hard of hearing and struggling with drug and alcohol addiction.
5. Learn how to collaborate with qualified interpreters in order to better the professional relationship with the adolescent of concern. For instance, Titus et al. (2009) suggest speaking to the student rather than the interpreter, establishing confidentiality guidelines, and debriefing at the conclusion of each meeting.
6. Create an acoustical environment conducive to communication with students who are hard of hearing. For example, researchers support enhanced lighting, minimizing the background noise, facing the student when speaking, and maintaining eye contact throughout an interaction.
7. Capitalize on prevention and early intervention opportunities, particularly focusing on information and issues regarding social isolation, adjustment to hearing loss, and family distress.
8. Link students with serious substance use problems to specialized resources for assessment, treatment, and peer-based recovery support. Titus et al. (2009) recommend

physically linking the student to such resources rather than providing contact information or general encouragement.

9. Conduct and on-going recovery check-ups in order to prevent relapse (Titus et al., 2009).

Besides presenting professionals with a detailed list of effective strategies for working with youth members of the Deaf community dealing with drug and alcohol addiction issues, Titus et al. (2009) provide interested parties with related reading, resources, and websites. Specifically, researchers offer information about curriculum packages developed for substance abuse in the Deaf or hard of hearing community available through the Mid-Atlantic Addiction Technology Transfer Center (ATTC) Network. The network, which is comprised of 14 regional centers and a national office which serves the entire United States, aims to unify science, education, and services to transform the lives of all persons impacted by substance use disorders (“What Is the Mid-Atlantic Attc?”, n.d, para. 1). The corresponding website additionally provides adolescent ASL users with numerous applicable resources, such as *Stars Nashville: Services for People who are Deaf or Hard of Hearing*, which sponsors education and prevention programs, after-school tutoring services, and workshops and training designed to prevent drug and alcohol addiction among youth who are Deaf or hard of hearing. Moreover, the Mid-Atlantic ATTC Network website highlights research concerning the population of interest, while providing individuals with an exhausting catalog of curriculum materials for substance use and abuse education.

As well as offering readers with a link to the Mid-Atlantic ATTC Network Website, Titus et al. (2009) include the Minnesota Chemical Dependency Program for Deaf or Hard of Hearing Individuals (MCDPDHHI) as a reference within the suggested reading, resources, and website directory. MCDPDHHI is a specialized program designed to meet the communication and cultural needs of Deaf and Hard of Hearing persons in chemical dependency treatment. Although

the majority of materials and articles center around the needs of adult members of the Deaf community, several resources are available for adolescents, such as the *Hands Off Tobacco! An Anti-Tobacco Program for Deaf Youth* curricula and the *Helping Deaf and Hard of Hearing Young People* research article. Furthermore, within the list of helpful related resources, Titus et al. (2009) refer to the National Directory of Alcohol and Other Drugs Prevention and Treatment Programs Accessible to the Deaf and the Northwest Deaf Addiction Center as both resources link adolescent members of the Deaf community to beneficial services that aid in conquering substance abuse issues.

Even though available research and information surrounding substance abuse among youth members of the Deaf community are difficult to locate, an examination of suggested curricula elements and available resources is significant when aspiring to create a related curriculum for a similar adolescent population. Specifically, current research highlights suggested curricula and program components for adolescent ASL users which may additionally benefit adolescents who are deaf or hard of hearing using oral communication. Finally, an examination of available resources for adolescent ASL users is important so that qualified listening and spoken language professionals are able to seek out comparable materials and adapt such information to meet the needs of adolescents who are deaf or hard of hearing with spoken language abilities.

Resources for Adolescents Who are Deaf or Hard of Hearing and Use Oral Communication

Although articles described above note that available literature and information regarding substance abuse among adolescent American Sign Language users is lacking, research and resources concerning drug and alcohol use amid adolescents who are deaf or hard of hearing and use oral communication is especially in need of attention. As mentioned previously, educators in the field of listening and spoken language demonstrate uncertainties surrounding methods,

techniques, or strategies the population of interest implements when struggling with issues that often occur during teen-age years. For instance, after students who are deaf or hard of hearing graduate from a language and speech centered environment, educators additionally question whether this population of students is prepared to encounter the existence of drugs, alcohol, and peer pressure in the real-world environment. Subsequent to conducting a thorough investigation and speaking with several researchers and informed individuals, it is extremely difficult to locate an explicit curriculum for the targeted population and it is likely that such available resources are non-existent.

While research is essentially unavailable on the subject of substance abuse amongst adolescents who are deaf or hard of hearing using listening and spoken language, awareness of the few related studies serves a current resource for effective teachers in the field of listening and spoken language. Moreover, professionals are able to use presented information, regarding a similar adolescent group, and adapt curriculum ideas and suggested strategies to meet the needs of students in a listening and spoken language environment. For example, Berman et al. (2010) focus on faculty perspectives in connection to tobacco education practices within a private school environment that employs sign language as the main mode of communication. It is important to note that tobacco use parallels drug and alcohol addiction as habits often begin in childhood or adolescence and significant health consequences result from such practices. Interestingly, researchers also explain that a prevention curriculum requires the identification of motivated and prepared faculty so that uptake, delivery, and commitment of the program are consistent on a school-wide basis (Berman et al., 2010). Consequently, it is fair to state that comparable educator behaviors would be necessary in order to successfully execute future drug

and alcohol curricula components designed for adolescents in a listening and spoken language environment.

As Berman et al. (2010) continue on to discuss teacher perspectives, educators express desires for a tailored prevention curriculum aimed towards the special population of interest. Researchers describe specific components of a specially tailored curriculum as containing and considering the following: emphasized visual elements, hands-on activities, limited written text, simple and direct language, images of deaf and hard of hearing individuals, provision of health statistics from hospitals and clinics, and the creation of panels to include cancer survivors and “tobacco victims” with relevant life experiences (Berman et al., 2010). Although listed components are suggested with adolescent ASL users in mind, similar ideas apply to the creation of substance use and abuse materials as adolescents who are deaf and hard of hearing in a listening and spoken language environment require curricula customized to language and vocabulary abilities. In addition, the study at hand discusses the importance of school-wide programming, links to media, and other community activities as valuable elements of effective prevention curricula (Berman et al., 2010). Once more, thoughts and ideas that further pursue consistency and an overall positive view of materials that touch upon sensitive subjects, such as tobacco, drugs, and alcohol, are necessary in order to successfully educate special adolescent populations about the dangers and consequences of such substances.

In addition to reviewing and adapting materials to meet the needs of adolescents with substance abuse issues who are deaf or hard of hearing and use listening and spoken language, educators and struggling individuals may find support from related organizations, such as Chestnut Health System in Illinois. The treatment center offers multiple locations throughout central and southern Illinois that provide adolescents with chemical dependency treatment and

prevention services. Although Chestnut Health Systems on no occasion mentions specific services for youth who are deaf or hard of hearing, the organization believes that recovery is possible for every individual through a process strengthened by hope, empowerment, health and wellness, spirituality and connectedness, and respect. Importantly, Chestnut Health System's therapists work with probation officers, truancy officers, judges, school administrators, parents, and other human service professionals in order to provide young people with an accurate assessment and referral. Therefore, it is likely that adolescents who are deaf or hard of hearing using oral communication may benefit from the organization's cooperative communication methods since there is potential for professionals in the field of listening and spoken language to become involved in the treatment process.

Along with promoting cooperative practices amongst concerned adult figures, Chestnut Health Systems additionally encourages family involvement as adolescents work to overcome chemical dependency issues. For example, the organization presents The Family Night Program to address a variety of relevant subjects, such as how addiction affects the whole family, how to recognize and prepare for possible relapse, and how to develop better family communication (Chestnut Health Systems, 2002). This specific focus on communication issues could, not only, help families of adolescents who are deaf or hard of hearing using listening and spoken language improve interaction and conversation techniques, but may also aid adolescents in learning language and vocabulary necessary for successfully completing the treatment program.

Although family involvement is an essential part of an effective treatment program, Chestnut Health System further serves as an available resource for adolescents with substance abuse issues who are deaf or hard of hearing using oral communication as an assortment of services are available in order to overcome such addictions. For instance, Chestnut Health

Systems offers outpatient, residential, and psychiatric services depending on the severity and complexity of an individual's condition. The organization also provides services to youths in the justice system, while additionally mentioning that treatment groups include drug and alcohol education, decision-making skills, coping styles, communication skills, self-esteem, life skills, relapse prevention and family issues (Chestnut Health Systems). Interestingly, such topics of concentration highlight areas that typically require specialized instruction when working with students who are deaf or hard of hearing. Consequently, adolescents who are deaf or hard of hearing using oral communication may have difficulty participating in conversations surrounding the specified subject areas, however consistent exposure could increase an adolescent's understanding and application of appropriate behaviors and societal conventions.

Similar to Chestnut Health System's inpatient, residential, and psychiatric chemical dependency treatment services, The Child and Adolescent Psychiatry Center at St. Louis Children's Hospital specializes in the diagnosis and the treatment of disorders, including substance abuse and chemical dependence. The Child and Adolescent Psychiatry Center offers an array of preventative and treatment services for adolescents on an inpatient and outpatient basis, while further emphasizing the importance of long-term follow-up management. For example, the department's website describes such drug and alcohol use management as formal group meetings, developmentally age-appropriate psychosocial support groups, and continuous medical supervision. Similar to previously mentioned resources, while described treatment services are intended to support normal hearing youths, The Child and Adolescent Psychiatry Center remains a useful resource for adolescents struggling with drug and alcohol addiction who are deaf or hard of hearing using listening and spoken language. Impressively, the St. Louis Children's Hospital, in collaboration with Washington University Department of

Otolaryngology, is nationally and internationally recognized for excellence in education, clinical and surgical skill, research, and particularly in the area of cochlear implants. Therefore, if an adolescent is receiving audiologic services at the hospital, it is possible that collaboration between Psychiatry Center staff and the cochlear implant team can occur in order to discuss strategies that best meet the adolescent's communication needs (St. Louis Children's Hospital, n.d. para.1).

In conjunction with The Child and Adolescent Psychiatry Center, Barnes Jewish Healthcare also offers chemical dependency treatment services through Christian Hospital in St. Louis, Missouri. Although mental health and substance abuse services are currently available for adults, the Christian Hospital website provides information in regards to Alcoholics Anonymous, Drug and Alcohol, and Chemical Dependency Information meetings which welcome alcoholics, drug addicts, along with affected family and friends. As a result, parents or guardians of adolescents with substance abuse issues who are deaf or hard of hearing may acknowledge listed support groups as a valuable resource for meeting and conversing with others encountering comparable difficulties. Support groups could additionally offer parents and guardians opportunities to speak with recovering alcoholics or drug addicts who dealt with effective strategies to implement in order to effectively support the adolescent throughout the recovery process.

Although it is apparent that available literature and information regarding substance abuse among adolescents who are deaf or hard of hearing using listening and spoken language is in immediate need of attention, it is important that educators and other involved parties are aware of adaptable curriculum materials and treatment resources. In addition, professional collaboration is significant in order to efficiently accommodate an adolescent's communication needs as

researchers further examine strategies, methods, and techniques implemented by the population of interest when struggling with substance abuse issues. For instance, educators, family members, and audiologists are responsible for active involvement in an adolescent's recovery process to prevent relapse and support the individual who is deaf or hard of hearing in the continued development of language and vocabulary skills necessary for successful completion of a chemical dependency treatment program.

Curriculum Components

After considering presented information regarding drug and alcohol addiction material available for normal hearing adolescents and American Sign Language using teens, it becomes evident that a curricula specially created for adolescents who are deaf or hard of hearing using listening and spoken language is necessary as such individuals require methods of instruction different from other youth dealing with substance abuse. For example, subject-related resources designed with normal hearing adolescents in mind often include language, vocabulary, and communication requirements that are challenging for adolescents who are deaf or hard of hearing who employ oral communication. Additionally, substance abuse habits of the specified adolescent population requires further attention as identity conflicts often occur when individuals enter into a mainstream educational environment. For example, adolescents who are deaf or hard of hearing using spoken language might engage in comparisons with hearing peers and, consequently, question memberships in the hearing world and the Deaf community which may lead to individual self-esteem deficits if a sense of belonging remains undiscovered. Therefore, as this literature review aims to highlight aspects of a drug and alcohol addiction curricula for adolescents who are deaf or hard of hearing using spoken language, an explanation of

components that educate, motivate, and link individuals to treatment is needed and desired by educators in the field of listening and spoken language.

Since the subject of adolescent drug and alcohol addiction is difficult to approach, it is important that concerned educators and guardians demonstrate a clear understanding in regards to the initiation of the intervention process. More specifically, in creating a curriculum appropriate for the population of interest, the first necessary component is an identification checklist that aids in screening youth who are deaf or hard of hearing using oral communication for possible substance abuse issues. Importantly, the existence of a checklist could help educators and guardians document alarming behaviors as such evidence may advance the assessment and referral process once individuals contact an appropriate treatment program. Moreover, the curriculum checklist must contain characteristics exclusive to the population of interest so that educators and guardians are able to report particular demeanor changes, such as upkeep of cochlear implants or hearing aids or any regression in advocacy skills that the adolescent previously demonstrated on a consistent basis.

In addition to providing educators and guardians with a beginning point, it is important to note that a variety of professionals may benefit from the creation of a curriculum checklist. For example, Griswold et al. (2008) report that many family physicians feel unprepared to diagnose substance abuse disorders. Researchers further explain that a screening tool may provide information that prompts an adolescent referral in the direction of an appropriate drug and alcohol addiction specialist. Additionally, this type of screening tool decreases the complexity of the assessment process as several articles describe an assortment of signs and symptoms that coincide with substance use disorder. For instance, Griswold et al. (2008) explain that behavioral changes which affect school performance or social functioning are indicative of

substance abuse, while DeGarmo et al. (2009) explicitly mention stealing, intimidation, and violence in relation to adolescent drug and alcohol use. Therefore, the compilation of such information into a single checklist relieves involved professionals and adults of overwhelming feelings surrounding the identification of a substance use disorder.

Besides the inclusion of a specialized screening tool to aid with the identification of substance use disorders in adolescents who are deaf or hard of hearing using spoken language, the second component of an appropriate curriculum focuses on the fact that the language of corresponding materials requires careful consideration. Although educators trained in a listening and spoken language preparation program may deem this component obvious, other professionals might be unaware of the language abilities and connected challenges faced by the adolescent population of interest. For example, the linguistic aspects and question types contained within a specialized curriculum must be simple, clear, and direct. Instructions for incorporated activities should be provided in a step-by-step manner, while curriculum facilitators outwardly highlight any change in a discussion topic so that adolescents are effortlessly able to follow conversations and participate accordingly. Furthermore, it is essential that curriculum materials are absent of figurative language, idioms, and slang phrases as adolescents within the specified population often require direct instruction regarding obscure language elements since such phrases relay messages which differ greatly from literal interpretations.

Along with carefully considering the language included within substance abuse curriculum materials, it is important that instructors support adolescents who are deaf or hard of hearing using oral communication in learning and strengthening pragmatic language skills. Although the overall goal of this specialized curriculum focuses on overcoming drug and alcohol addiction, adolescents need to express emotions and feelings throughout the treatment process in

order to understand subconscious reasons for relying on drugs and alcohol. Moreover, adolescents who are deaf or hard of hearing using listening and spoken language may benefit from conversing with other individuals who are also dealing with similar addiction issues. For that reason, curriculum facilitators must continuously model appropriate language for effectively expressing a range of emotions, while repeatedly offering reminders about conversation etiquette, such as turn taking, remaining on topic, and using facial expressions and eye contact.

As well as offering appropriate expressive language models and reminders about conversation expectations, the third component of a drug and alcohol addiction curriculum aimed at adolescents who are deaf or hard of hearing using oral communication must acknowledge the vocabulary selection of associated materials. Similar to ideas mentioned above, curriculum creators must avoid slang terminology as adolescents in the population of interest may be unaware of definitions behind such informal vocabulary. Also, after conducting extensive research pertaining to substance abuse curricula available for the normal hearing population, it is evident that materials refer to certain drugs in multiple ways. Since the inclusion of several labels for one drug causes difficulty in following a discussion or comprehending connected reading material, it is important that an appropriate substance curriculum denotes specific drugs by the proper title. Finally, a drug and alcohol addiction curriculum for the specified population must provide participants with a vocabulary word list during an initial introduction to corresponding materials and activities. The vocabulary list is significant as adolescents who are deaf or hard of hearing who employ spoken language typically benefit from repeated exposure to newly-learned vocabulary terms. As a result, participants may feel confident and well-prepared to participate in related activities and conversations as vocabulary continues to appear throughout the progression of the curriculum.

Similar to acknowledging and accepting the language and vocabulary needs of adolescents who are deaf or hard of hearing using oral communication, an appropriate substance abuse curriculum must contain a component associated with improving participants' self-esteem levels. In a 2006 article that compares the self-esteem levels of adolescent cochlear implant users with a normal hearing study group, Sahli and Belgin (2006) explain that the social and emotional conflicts adolescents experience are an extremely challenging aspect of life. Researchers continue on to describe that adolescents' overwhelming concern with appearance and self-perceptions often leads to the development of self-esteem, which involves how important or unimportant an individual feels on a consistent basis. Although Sahli et al. (2006) determine similar self-esteem levels among the comparison groups, particular characteristics play a large role in the construction of a positive self-image. For example, researchers explain that adolescents with educated and employed mothers are more likely to develop a positive self-image. Sahli et al. (2006) additionally mention that a preschool education, high levels of family income, and the existence of siblings typically connects with a poised self-image.

Subsequent to gaining information regarding adolescent cochlear implant users' self-esteem levels, Sahli, Arslan, and Belgin (2009) examine the levels of depressive emotioning in the specified population and compare results with normal hearing adolescents. While researchers define depressive emotioning as internal sadness, combined with overwhelming feelings of hopelessness, despair, helplessness, low self-worth, and loss of control; the article reports like findings between the groups of interest. Importantly though, Sahli et al. (2009) again denote that a highly educated mother, attendance at a preschool program, and existence of siblings in the home are factors that help reduce the occurrence of depressive emotioning among adolescents with cochlear implants. Therefore, as adolescents who are deaf or hard of hearing using listening

and spoke language turn to drugs and alcohol, it is likely that negative feelings of self-worth connect with the absence of one or more of the factors described above. An appropriate substance abuse curriculum must support adolescents in overcoming such personal barriers by promoting conversation and connections with similar individuals in hopes that the void of a mother figure, for example, may be filled by an extensive support team of educators and other adolescents. All in all a specialized drug and alcohol addiction curriculum must include activities and discussions that aid adolescents in highlighting strengths so that participants eventually enter into a treatment program with the idea that personal characteristics are valuable and worth sharing with the world.

While creating an appropriate substance abuse curriculum for adolescents who are deaf or hard of hearing using spoken language, it is necessary to design components and corresponding materials with participants' language, vocabulary, and self-esteem levels in mind. Ultimately though, as a specialized curriculum aims to educate and motivate the specified population, the final and most significant component must link adolescents to a variety of suitable substance abuse treatment programs. Unfortunately, after extensive research the inability to locate specially designed drug and alcohol addiction programs for the population of interest remains evident as facilities that serve individuals with hearing loss report that sign language is the preferred communication method of patients. Even though this obstacle is apparent, an appropriate curriculum absolutely requires linkage to treatment and, consequently, educators assume an increased amount of responsibility surrounding this final component. For example, connection to treatment extends beyond simply offering words of encouragement and, instead, includes contacting centers and visiting programs with adolescents or families. It is also important to note that different areas of the country provide adolescents with varying resources. As a result,

curriculum facilitators must seek out available programs and centers willing to accommodate adolescents who are deaf or hard of hearing using oral communication in order to ensure that suggested links to treatment are appropriate and effective.

Although it is difficult to pinpoint specialized treatment programs for adolescents who are deaf or hard of hearing using listening and spoken language, it is necessary to offer curriculum educators several recommendations for seeking appropriate treatment programs. For instance, the first suggestion involves locating a facility sensitive to adolescent needs and development, such as Chestnut Health System's inpatient, outpatient, and psychiatric chemical dependency treatment programs. A drug and alcohol addiction program aimed at adolescent recovery may demonstrate practices that strive to balance typical adolescent behaviors and those attitudes influenced by substance abuse issues. Moreover, information concerning adolescents' cochlear implant teams and surgery hospitals is pertinent as educators work to identify appropriate addiction services. As previously mentioned, medical facilities, such as St. Louis Children's Hospital, offer adolescent substance abuse services, while also earning recognition for countless cochlear implant surgeries. Therefore, if an educator determines an adolescent receives audiology services at a similarly structured hospital, there may be opportunities for both teams of professionals to discuss methods for effectively meeting the student's communication needs, while treating apparent addiction issues. Lastly, it is essential that educators obtain information about treatment programs' values, beliefs, or vision statements. Although this recommendation may appear simple, it could immensely benefit an adolescent's situation if such statements promote collaboration and cooperation with numerous professionals. As a result, treatment facilities are increasingly likely to welcome educators, audiologists, and guardians to share knowledge about the needs of adolescents who are deaf or hard of hearing using spoken

language in order to appropriately and successfully help patients overcome drug and alcohol addictions.

After thoroughly examining resources and materials currently available for various adolescent populations, it is evident that adolescents who are deaf or hard of hearing using spoken language require a specialized substance abuse curriculum which contains necessary, supportive components. As described above, educators responsible for curriculum delivery must utilize an appropriate identification checklist, while focusing attention on language, vocabulary, and self-esteem levels of students in the specified population. Most importantly, a specialized drug and alcohol addiction curriculum must link adolescents to appropriate treatment programs as educators locate successful facilities willing to meet the communication and learning needs of adolescents who are deaf or hard of hearing using listening and spoken language.

Conclusion

As this paper highlights the components necessary for a substance abuse curriculum to educate, motivate, and link adolescents who are deaf or hard of hearing using spoken language to effective treatment, it is important to conclude by explicitly stating differences between the specified population and adolescents with normal hearing who are dealing with similar addiction issues. For example, language and vocabulary abilities represent the majority of variations among members of the described adolescent populations. For individuals who are deaf or hard of hearing, learning to speak and listen requires direct, intensive instruction; whereas adolescents with normal hearing naturally develop language through incidental learning experiences. Moreover, adolescents who are deaf or hard of hearing often miss opportunities to gain knowledge and new vocabulary through instance of overhearing. Therefore, individuals benefit

from consistent and direct practice with complex language structures and unfamiliar vocabulary terms, such as those included within conventional substance abuse curricula.

Besides requiring intensive language and vocabulary instruction, training, and review, adolescents who are deaf or hard of hearing obviously differ from teenagers with normal hearing who are struggling with drug and alcohol addiction in the area of audiological abilities. For instance, adolescents in the population of interest depend on cochlear implants and hearing aids to perceive speech and sound. Therefore, any sort of device malfunction causes difficulty for adolescents in the population of interest to effectively participate in daily activities and conversation, while typical adolescents understandably take such capabilities for granted. The use of cochlear implants and hearing aids further complicates life for adolescents who are deaf or hard of hearing using oral communication as individuals often question membership in separate communities. More specifically, many adolescents experiment with involvement in the hearing world and Deaf culture in order to find an eventual sense of belonging, while typically developing youths naturally assume belonging in the hearing world.

Acknowledging marked differences between adolescents who are deaf or hard of hearing using spoken language and normal hearing adolescents dealing with comparable substance abuse issues additionally validates the need for a specialized substance abuse curriculum. As this paper comes to a close, a description of related services provided for incarcerated youth is critical in order to foreshadow possible outcomes for the population of interest if efficient drug and alcohol addiction materials remain unavailable. In Missouri, the Division of Youth Services (DYS) is the state agency charged with the care and treatment of delinquent adolescents sentenced to treatment programs which range from non-residential day centers through secure residential institutions. DYS also addresses the academic, emotional, physical, and social needs of

committed adolescents through a variety of programs, including special education services offered by certificated, special needs instructors. The Missouri Commission for the Deaf or Hard of Hearing additionally reports that, as of 2002, the law requires interpreter services for individuals who are Deaf in juvenile detention centers and correction proceedings (Department of Youth Services, 2009).

While such special education services aid adolescent ASL users, it is evident that such support overlooks the specific communication needs of adolescents who are deaf or hard of hearing using spoken language. It is also important to note that the Missouri Division of Youth Services is recognized as the national leader in dealing with youth who break the law. Consequently, in other parts of the country, incidents of adolescent suicides are common within juvenile detention centers as large, prison-like lockups that emphasize harsh punishment and isolation (Warren, 2004). In hopes of avoiding outcomes involving juvenile detention centers, future research is needed regarding adolescents with substance abuse issues who are deaf or hard of hearing using spoken language. For instance, researchers must observe the specified populations' drug and alcohol habits after transitioning from a small, private school into the public school environment. In addition, it is necessary to investigate the success rate of current treatment programs when working with adolescents who are deaf or hard of hearing using oral communication, while noting a program's willingness to collaborate with outside professional to best meet an individual's needs. Finally, once an appropriate substance abuse curriculum is available, it is essential that researchers continually examine outcomes and adolescents' relapse rates in order to ensure that specialized materials for the population of interest are more efficient and effective than conventional drug and alcohol treatment programs.

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