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4-30-2015

Exploring mindfulness as a culturally sensitive intervention for the Deaf community

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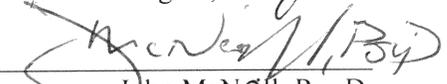
A DOCTORAL PAPER
PRESENTED TO THE FACULTY OF THE
GRADUATE SCHOOL OF PROFESSIONAL PSYCHOLOGY
OFFICE OF GRADUATE STUDIES
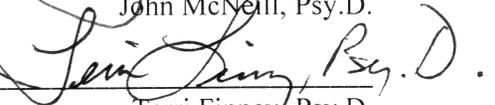UNIVERSITY OF DENVER

IN PARTIAL FULFILLMENT
OF THE REQUIREMENTS FOR THE DEGREE
DOCTOR OF PSYCHOLOGY

BY
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APRIL 30, 2015
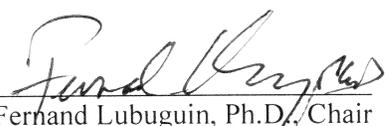
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Abstract

Mental health issues are as prevalent in the deaf community as the hearing community, if

not more. Yet, Deaf individuals are often treated by mental health professionals less

frequently and less effectively. Many systemic barriers exist that influence the lack of

services provided to the Deaf community, primarily related to a lack of cultural

understanding rooted in perceptions of Deaf individuals. However, the Deaf community

may be best understood as a cultural minority, a unique community sharing a distinct

culture, history, and language. This paper investigates the effects of systematic barriers

and cultural misunderstanding among mental health professions regarding the Deaf

community, explores the historical and current mental health problems Deaf individuals

most commonly struggle with, and proposes a potential culturally sensitive intervention

for the Deaf community based on these factors. To examine these issues, the author

conducted a thorough review of Deaf cultural history and values, as well as a review of

peer-reviewed articles regarding both Deaf mental health and mindfulness outcome

studies. Based on this review, mindfulness may be an effective, culturally sensitive

intervention that addresses both cultural and psychological components while working

with the Deaf population.

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The World Health Organization (2014) estimates that approximately 360 million people worldwide have "disabling hearing loss." Currently, statistics in the United States estimate more than 34 million people have some degree of hearing loss (Kochkin, 2009). Of those individuals, between 500,000 to 2,000,000 rely on American Sign Language (ASL), estimated to be the sixth-most-used language in the United States.[1] (Lane, Bahan & Hoffmeister, 1996). Although more extensive and thorough research is warranted, researchers suggested that the Deaf population has at least the same rate, and arguably higher rates of mental health problems, compared to the non-Deaf population. (Davidson, Cave, Reedman, Briffa & Dark, 2012; Fellinger, Holzinger, & Pollard, 2012; Hindley, Hill, McGuigan, & Kitson, 1994; Van Gent, Goedhart, Hindley, & Treffers, 2007; Vernon & Daigle-King, 1999). Consequently, the focus of the current paper is to examine mental health treatment in the Deaf population to determine its availability, efficacy, and unique challenges.

Based on a thorough understanding of these issues, as well as of Deaf culture, I propose intervention strategies that are most likely to be effective with the Deaf population. The primary intervention proposed, mindfulness, appears to address the psychological problems Deaf individuals encounter, as well as cultural factors that are often overlooked or misunderstood. Before discussing prevalence, specific intervention strategies, and typical outcomes in this population, it is important to obtain an understanding of the cultural factors relevant to psychotherapy with the Deaf population.

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[1] The prevalence of ASL use in the United States is greatly debated. In fact, some estimate ASL users to be as high as the third most used language in the United States. Mitchell and colleagues (2006) discussed this issue in depth. However, there is a common understanding that there are at least 500,000 ASL users in the United States.

Definition of Terms

Working with the Deaf community requires culturally sensitive interventions that use the appropriate terminology (Glickman & Harvey, 1996). Although the term "hearing impaired" is used frequently when describing deaf people, especially in the medical field, those who identify as deaf may find that term offensive because it implies pathology. The term *deaf* is more generally accepted among the community, although different contexts can alter its use. When referring to the deaf community as a distinct culture, one that shares a common language, tradition, and values, it is common to use an uppercase D for the term "Deaf." In contrast, when referring to people who have the condition of hearing loss, but do not identify with a culture, a lowercase d "deaf," is used (Glickman & Harvey, 1996; Landsberger, Sajid, Schmelkin, Diaz, & Weiler, 2013). Therefore, in this paper, when discussing the Deaf community or culture, a capital D will be used.

History of Deaf Culture

In the aforementioned statistics, deafness is equated with hearing loss, which is often associated with a deficit model of disability. Although it is true Deaf people have hearing loss, and this characteristic may make it easier to identify the Deaf population, it originates from a culturally privileged hearing perspective. In the United States, legally and medically, this is the societal perspective. Even in much of the historical research about the Deaf population, researchers assumed that deafness itself creates these problems. Glickman and Harvey (1996) expanded upon this issue. They noted that deafness itself is not pathological; rather, "the inept and oppressive responses of hearing people to Deaf people either create various forms of maladjustment or impose a pathological viewpoint on psychologically healthy Deaf people" (p. 135). This

perspective may contribute to many of the problems facing the Deaf community today, including mental health issues.

Therefore deafness, when labeled as a disability, can be best understood as a social construct. It may be useful to look at deafness through a perspective that considers the social and cultural aspects of deafness. Olkin (2001) discussed three different social constructions of disability—moral, medical, and minority—that may be useful to relate to the Deaf community. Olkin noted that the oldest model of disability, the moral model, views the problem as a "defect caused by moral lapse or sins" (2001, p. 25) that lies in the person. The medical model, which reflects the most common perception of the Deaf population, identifies disability as a "medical problem that resides in the individual" and is seen as "inherently pathological" (2001, p. 26). This is a problematic interpretation of a Deaf individual, yet one that continues to be pervasive, especially in medical fields. The last and most useful way to view the Deaf community is through the social model of disability (Oliver, 1983), also known as the Minority Model of Disability, studied in depth by Olkin (2001). This model considers the sentiments that Glickman and Harvey (1996) discussed, indicating that deafness itself is not pathological, but that society's treatment towards deafness is the problem. Olkin (2001) notes that:

> …disability is a social construction, that the problems lie not within the persons with disabilities but in the environment that fails to accommodate persons with disabilities and in the negative attitudes of people without disabilities. Person's with disabilities are seen as a minority group…that has been denied its civil rights, equal access, and protection. (p. 26)

Regarding persons with a disability as a minority group implies they will share certain commonalities with other minority groups; specifically, an experience of "prejudice, discrimination, and stigma" (Olkin, 2001, p. 28). Other similarities associated with minority-group status include inferior status, pressure to assimilate to the majority group, questions about intermarriage and procreation, underrepresentation in multiple professions (e.g., politics, medical, and mental health), and being underserved in mental health (Olkin, 2001). When perceiving the Deaf community through this lens, they are a distinct cultural minority, struggling with a long history of discrimination and oppression. Glickman (1996) echoed this sentiment, noting deafness is a cultural difference and best understood as a minority group, rather than a disability. Therefore, to fully understand and begin to conceptualize providing mental health services to the Deaf community, one must first briefly discuss Deaf culture, including its cultural history.

The Deaf community has an extensive history of being misunderstood, oppressed, and dismissed. As early as the sixteenth century, Deaf people were "sequestered" to ensure their chastity and were kept "out of sight" (Glickman & Harvey, 1996, p. 60). Regulations in Europe and the United States in the eighteenth, nineteenth, and even twentieth centuries called for the sterilization of Deaf people and discouragement or prohibition of intermarriage. For example, Alexander Graham Bell, a leader of the American Eugenics Section (of the American Breeders Association) in the late 1800's created to improve human breeding, specifically targeted Deaf individuals and recommended sterilization, prohibition of intermarriage, and even keeping Deaf people separate from each other as much as possible (Glickman & Harvey, 1996; Lane, 2005). This was also addressed by a German sterilization law (*Law for the prevention of*

hereditary diseases) that went into effect in 1934, calling for the sterilization and

execution of the Jewish Deaf (Glickman & Harvey, 1996). Deafness was generally seen

as an affliction and a defect, and thus, Deaf individuals were viewed as less than human

(Glickman & Harvey, 1996).

Generally speaking, people viewed Deaf individuals as inferior and in need of

help (Glickman & Harvey, 1996). Sign language was also perceived as illegitimate, even

"primitive." When ASL was developed, hearing people often dismissed it as an inferior

form of communication, and educators frequently prohibited sign language as it was

perceived to undermine the acquisition of the English Language (Lane, 1999). In fact, in

the late 1800's Alexander Graham Bell, who was worried about the rising deaf

population, targeted sign language as the main problem for this, and pushed heavily for

oral education of Deaf individuals (Glickman & Harvey, 1996). This included creating

"day schools" for Deaf children, which required using only oral methods of teaching in

an effort to discourage sign language and separate Deaf people as much as possible from

each other. The broader goal in taking these steps was discouragement of Deaf marriage

and reproduction. This sentiment of deafness equating to "less than" continues, as being

Deaf is generally perceived by the hearing population as a negative characteristic.

(Glickman & Harvey, 1996; Williams & Abeles, 2004).

Although this is not an exhaustive history of Deaf culture, it does reflect many of

the problems faced by a minority disability group. Most notably, a history of being

oppressed, viewed as inferior, and being discouraged from marriage or reproduction

(Glickman & Harvey, 1996). When working with the Deaf population, the significance of

knowing this cultural history cannot be overstated. A human services professional

without proper knowledge of Deaf oppression may inadvertently reinforce the idea of

Deaf people as inferior or impaired, thereby influencing the Deaf individual to accept the

dominant or majority view of themselves, rather than developing their own voice

(Glickman & Harvey, 1996). At the same time, in adhering to standards of cultural

sensitivity, professionals working with Deaf individuals should also be sensitive to and

aware of likely individual differences within Deaf culture, rather than making major

assumptions based on broad cultural differences.

Central Characteristics of Deaf Culture

In addition to the cultural history, prominent characteristics of Deaf culture

include language, styles of communication, values, and customs. Arguably the most

important aspect of Deaf culture is the sharing of a language - sign language. It is

speculated that sign language has existed since before the fifth century B.C., was

observed as a form of communication between Native North Americans, and was

developed specifically for Deaf individuals in the 1600s by Juan Pablo de Bonet, a

Spanish priest (Butterworth & Flodin, 1995). For a member of the Deaf community, sign

language is not just a form of communication, but also provides a powerful sense of

identity that represents what it means to be culturally Deaf (Glickman & Harvey, 1996;

Lane, 1999). Historically, sign language gave Deaf people a voice, one that the Eugenics

Section of the American Breeders Association attempted to silence through an emphasis

on Oralist teaching methods for the Deaf community (Glickman & Harvey, 1996; Lane,

1999).

In sign language, many cultural differences exist that contrast with language in

the hearing culture. Sign language is primarily visual in nature, and emphasizes the use of

eyes, facial expressions, and gestures. For example, to indicate finishing one's sentence, signers might establish eye contact, decrease signing speed, and drop their hands (Glickman & Harvey, 1996). However, to indicate continuing a sentence, a signer's rate may accelerate and their gaze is typically averted. This differs dramatically from hearing rules for turn taking, which rely on voice inflection. Not knowing these cultural differences may result in a hearing person appearing rude or inattentive (Glickman & Harvey, 1996).

Eye contact, in particular, is of paramount importance in the Deaf culture and communication (Glickman & Harvey, 1996; Williams & Abeles, 2004). Baker (1977) noted that effective communication in signing involves consistent eye gaze upon the speaker, as well as periods of mutual eye contact that frequently lasts five seconds. When hearing people do not return such a gaze, or shift their gaze prematurely, it may be interpreted as disinterest or rudeness. These are important non-verbal cues that must be recognized by professionals working with the Deaf community. Other significant aspects of sign language include facial expressions, body language, and the concept of personal space (Williams & Abeles, 2004). For example, Deaf people are very sensitive to non-verbal messages sent through facial expression and body language. Additionally, the Deaf community frequently uses storytelling and metaphors as important means of communicating (Glickman & Harvey, 1996; Phillips, 1996; Williams & Abeles, 2004).

Cultural differences also exist regarding appropriate ways of getting others' attention in the Deaf community. Whether starting a conversation or contacting someone via the front door of a house, physical touch is generally more appropriate when interacting with Deaf individuals than with hearing people. While the hearing community

relies on auditory cues for getting the attention and physical touch is sometimes not appropriate in a given context, Deaf individuals often lightly tap or touch another to get someone's attention, or use visual signals. For example, rather than rely on hearing a phone or doorbell ring, Deaf individuals often use devices with flashing lights to signal their attention (Mindess, 1999).

Additionally, Deaf culture takes a more collectivist approach to community than is seen in the general hearing culture (Mindess, 1999). There is high value placed on community and gathering together face-to-face, especially in the form of Deaf clubs, theater, and organizations, which speaks to both the collectivist nature of Deaf culture and the value of visual communication. Membership in Deaf culture generally requires meeting certain criteria, most notably a proficiency in sign language, and there is a common expectation of reciprocity, creating a very supportive and tight-knit sense of community (Glickman & Harvey, 1996; Humphries & Padden, 2005; Mindess, 1999).

Other important cultural differences include the contrasting perspectives Deaf people and hearing people have about deafness, as well as the value placed on deafness. To Deaf individuals, they are complete and whole. In other words, "Deafness is not in itself a significant issue in the lives of culturally Deaf people" (Glickman & Harvey, 1996, p. 59). As noted earlier, being Deaf means being part of a community that shares a common culture, history, and language, and is a source of pride. The usual hearing response to deafness is that it is a tragic condition or affliction (Humphries & Padden, 2005). If employing that belief while working with a member of the Deaf community, one runs the risk of missing a key part of his or her identity.

Although strides have been taken toward cultural sensitivity with Deaf people, living in a majority-hearing-world, Deafness continues to be perceived primarily as pathological by some. Acting from that viewpoint, healthcare professionals will attempt to "fix" or alleviate the "affliction" of deafness rather than seek to understand Deaf individuals (Glickman & Harvey, 1996; Humphries & Padden, 2005). Generally speaking, providers who attempt to "fix the problem" of deafness do so with good, albeit misguided intentions. However, when Deaf people are urged to go to hearing schools, get cochlear implants, and learn to speak and lip read, it sends an unmistakable message that they are deficient in some way. Although these recommendations, and important technological advances, may have been created with the intent to help Deaf individuals, these very interventions often end up in conflict with Deaf cultural identity. This is not to say that all members of the Deaf community do not wish to hear, or that Deaf individuals have not benefited from such attempts to improve the Deaf experience; there are clearly individual differences within the Deaf community. Rather, that more often than not, the hearing community seeks first to "fix" Deaf individuals, which usually involves encouraging changes to be more like hearing culture, instead of seeking to understand and appreciate a Deaf individual's cultural experience. Again, the attempts to "fix" deafness often miss the importance and adaptive nature of cultivating and respecting Deaf culture.

One research study suggested that Deaf people who embrace their own cultural identity more adequately adjust to living in a hearing world than those who do not (Cornell & Lyness, 2004). Glickman and Harvey (1996) argued the importance of the development of a *bicultural identity* as most adaptive for Deaf individuals. In this model,

a bicultural identity is achieved when a Deaf individual exhibits deaf cultural pride, appreciates and respects both cultural identities (including languages of Deaf culture and hearing culture), while also maintaining awareness and opposition to intentional or unintentional Deaf oppression. Acceptance of Deaf culture and integrating it into a Deaf person's identify may lead to more flexible behaviors and positive self-concept (Cornell & Lyness 2004). Despite this research, Deaf individuals are often encouraged by professionals, including mental health professionals, to be more like hearing people. As Olkin (2001) described in the minority model of disability, "minority persons are encouraged and coerced to look, behave, and think like the majority" (p. 31). Regardless of whether members of the hearing culture are aware of their role in perpetuating a message of assimilation, the impact is the same; members of Deaf culture get the message that they are inadequate in some way.

A synthesis of the preceding literature review can be described as follows. The attitude that professionals know best is present in the medical and mental health fields. These fields of study are also areas in which Deaf people are often underserved. Understanding the cultural history of Deaf people gives important insight into the general systemic problems the community must address. This understanding also provides insight into the barriers to extending services to the Deaf as this history helped create and reinforce the problems that exist today. When services are provided, they are frequently unethical, unhelpful, and culturally insensitive, decreasing the likelihood those Deaf individuals will seek help from health providers in the future. Given the ideal that medical and mental health professions are "helping" fields, the question becomes: Why are the services provided to the Deaf community so ineffective? The answer starts with

an examination of the lack of cultural understanding. Specifically, significant cultural

differences between the Deaf community and hearing majority, primarily pertaining to

language, communication, and values, and the failure of the medical/mental health field

to address these factors, often create and maintain barriers to services for Deaf

individuals.

Barriers to Services

An extremely problematic barrier to services is the lack of communication, which

affects the Deaf community on multiple levels. First, communication barriers make it

very difficult for Deaf people to access mental health services (Cabral, Muhr, &

Savageau, 2013). Specifically, a small minority of clinicians are fluent in ASL to provide

adequate therapy to Deaf clients, and among those clinicians, many do not understand the

Deaf culture (Williams & Abeles, 2004). Additionally, although there is the option to use

an interpreter, this is not perceived by Deaf individuals as culturally sensitive. Once

again, the interpreter often knows little about the culture (Williams & Abeles, 2004). In

both instances, many times the interpreter or therapist continues to provide services

despite their incompetence, which can exacerbate the problems (Glickman & Harvey,

1996; Williams & Abeles, 2004).

This lack of ability to communicate creates other problems as well. For example,

Deaf clients in mental health settings are often misdiagnosed and conceptualized

inaccurately (Williams & Abeles, 2004). These inadequacies are a likely result of a lack

of culturally sensitive screening tools (Landsberger et al., 2013), as well as diagnostic

instruments that are not normed for Deaf individuals (National Association of State

Mental Health Program Directors, 2002). In addition, communication problems can

impede the development of a therapeutic relationship, arguably one of the most important

aspects of therapy and a facilitator of change (Bachelor & Horvath, 2008; Lambert &

Barley, 2001; Norcross & Wiley, 2011; Rogers, 1957). Connected with this is the idea

that in almost all therapeutic modalities, validating clients and understanding their

experience is an essential component of the therapeutic relationship (Sue & Sue, 2007).

Difficulties with communication, often due to clinicians with inadequate knowledge of

Deaf culture or a lack of proficiency in sign language, creates a clinical situation where

Deaf clients are often misunderstood, or worse, blamed for their problems. In effect,

when this occurs, it "perpetuates long established patterns of misunderstanding, isolation

and oppression in the client's life" (Williams & Abeles, 2004, p. 644). These maladaptive

practices among clinicians reinforce the client's fears and reluctance in seeking services.

The hearing community's bias and tendency to pity deaf people by viewing

hearing loss as a tragedy is another problem in providing services to the Deaf community.

Specifically, the hearing community's perspective conflicts with the Deaf perspective.

This creates an uncomfortable tension, and when combined with a lack of healthy

communication, creates a mistrust of mental health professionals (Williams & Abeles,

2004). In fact, historically, mental health professionals often harbored negative attitudes

towards Deaf individuals' ability to engage in therapy, including a belief that deaf people

were not feasible candidates for in-depth or insight oriented therapies because of their

"deficiencies" and communication difficulties (Leigh 2010). It is no wonder that Deaf

patients report mistrust and fear in health care settings, frustration about communication

barriers, and limitations in accessing health information. As a result, Deaf people tend to

drop out of treatment early, and many will not seek services in the first place (Williams &

Abeles, 2004).

Last, there is a lack of education about Deaf culture in educational and training

settings. In an examination of multicultural textbooks in classrooms, information about

Deaf culture was limited to less than 1% of the total pages of text, and often the

information presented was inaccurate (Johnson & Nieto, 2007). Additionally, researchers

found that for teachers, parents, or therapists, a lack of cultural knowledge will be

problematic in working multiculturally, such as with the Deaf community (Glickman &

Harvey, 1996; Johnson & McIntosh, 2009; Sue & Sue, 2007). These systemic problems

create barriers between Deaf people and hearing people, and importantly, between Deaf

people and the mental health community, which is almost exclusively a hearing

community. In 1990, there were approximately only 20 Deaf psychologists in the entire

United States (Pollard, 1996).

These barriers, influenced by the oppression of Deaf individuals as well as the

lack of Deaf mental health professionals, often begin in their own families. In fact,

Glickman & Harvey (1996) suggested that most Deaf children can be thought of as

"culturally marginal within their own families" (p. 129). This has major implications for

development. The vast majority, approximately 90%, of Deaf children are born to hearing

parents (Schein, 1989), and recent estimates indicate that this number may actually be

closer to 92% or higher (Mitchell & Karchmer, 2002), producing a variety of issues, and

again, communication is one that has marked impact. For example, hearing parents of

Deaf children are less patient, spend less time communicating with their child, and are

less sensitive to their deaf children during interactions (Schlesinger & Meadow, 1972).

Mothers are also more intrusive and directive with Deaf children, giving them less freedom to explore and learn from mistakes (Rieffe, 2011). Many do not take the time to learn ASL (Sinnott, Looney, & Martin, 2012) creating an atmosphere in which Deaf children cannot communicate effectively with their families, which may negatively impact their social and emotional growth (Denman, 2007; Sinnott et al., 2012; Van Gent, 2011).

Early researchers estimated that 81% of hearing parents of Deaf children do not communicate effectively with their children (Phoenix, 1988). For those Deaf people who grow up in families that do not speak ASL, they also have less exposure to emotional material (words) and struggle to express their own feelings (Corker, 1996). Another contribution to the issues that Deaf people encounter is the everyday experience of Deaf children, such as when Deaf children are left out of family conversations. This is also known as "sustained conversational isolation," and is considered to be a form of trauma (Glickman & Harvey, 1996). This problem has major implications for psychopathology; given that the vast majority of Deaf children grow up in hearing families.

Mental Health Problems in the Deaf Community

As a result of the variety of psycho-socio-emotional factors growing up in a home and a world that is hearing, it is important to explore the mental health problems that may exist in the Deaf community. In the 1970s, early researchers on Deaf psychopathology indicated higher levels of serious mental illness in Deaf people than in the hearing population. One study examining more than 500 Deaf youth found that 11.6% were severely emotionally disturbed, more than double the rate for hearing children (Schlesinger & Meadow, 1972). Another body of research based on teacher reports found

that nearly 20% of Deaf youth had emotional and behavioral problems, much higher than

that of their hearing counterparts (Gentile & McCarthy, 1973). Other research at that time

pointed toward the higher levels of psychiatric disorders in the Deaf. These statistics

highlight the historical presence of mental health issues in the Deaf community (Willis &

McCay, 2002).

One of the major problems in research about psychopathology in the Deaf

community, which continues to exist today, is the lack of consistency in sampling and

methodology; thus, validity is called into question. Nevertheless, while reviewing the

research on Deafness and psychopathology, Vernon and Andrews (1990) estimated Deaf

people have higher rates of emotional disturbance than the hearing population.

Additionally, researchers Vernon and Daigle-King (1999) reviewed all of the studies

conducted on deaf inpatients from 1929 to 1994 and concluded that Deaf people have

higher rates of mental illness than hearing people.

More recently, over the past two decades an increasing number of studies

examined Deafness and psychopathology. Despite the emergence of such research, there

are insufficient reliable estimates of the exact prevalence of Deaf psychopathology

(Landsburger & Diaz, 2010; Ohre, Von Tezchner, & Falkum, 2011). Part of the reason

for this problem is rooted in the same issues that researchers found in the 1970s and

1980s: methodology, sampling issues, and inaccurate diagnoses. In fact, in a recent

review of 11 of the only studies published in peer-reviewed journals on the prevalence of

psychopathology of Deaf people from 1995 to 2011, researchers drew unclear

conclusions due primarily to methodology issues (Ohre et al., 2011). These issues

included most notably, a lack of representative samples and valid assessment instruments.

Clearly, more valid and properly controlled studies are needed to understand the psychological issues that face Deaf individuals over the life-span.

Nevertheless, some consistencies in the research may illuminate the prominent mental health issues that affect the Deaf community. First, there is a general trend in research that suggests a high prevalence of psychopathology, or at least distress, in the Deaf population (Fellinger et al., 2012; Hamerdinger & Hill, 2005; Hindley et al., 1994; Kvam, Loeb, & Tambs, 2006; Van Gent et al., 2007; Vernon & Daigle-King, 1999). The following research studies outline the primary mental health problems of the Deaf community, including significant stressors, trauma related issues, anxiety, and depression.

Several studies found that Deaf children experience more social problems, lower self-esteem, and more emotional and behavioral problems (Cornes, Rohan, Napier, & Rey, 2006; Van Gent et al., 2007; Williams & Abeles, 2004). Deaf adolescents also appear to experience more loneliness, isolation, difficulty forming a sense of self, trouble sustaining friendships, and bullying (Remine & Brown, 2010). These issues, although not quantifiable by grouping them in a specific mental health disorder, indicate that Deaf people appear to face significantly more stressors than hearing people. When looking deeply into the stressors Deaf children face, reliable research suggested certain stressors may lead to mental health problems. For example, social alienation and communication problems during early development, which often are experienced by Deaf children, are associated with mental health problems, especially pertaining to socio-emotional development (Sinnott et al., 2012; Van Gent, 2011; Denman, 2007). Consequently, it is

important to delve into the existing research to parse which specific mental health

problems may be most significant in the Deaf community.

Deaf people may experience more abuse and trauma than hearing people. In

general, Deaf people appear to have more vulnerability to trauma, especially

interpersonal trauma (Schild & Dalenberg, 2012). Sullivan and colleagues (1987)

estimated that as many as 50% of Deaf individuals have experienced sexual abuse, more

than twice as many as in the hearing population. In a recent study on Deaf female college

students, results indicated they experienced significantly higher numbers of physical

assault, as well as psychological and sexual victimization, than their hearing counterparts

(Anderson & Leigh, 2011). Schild and Dalenberg (2012) also found significantly high

rates of physical abuse and trauma in Deaf individuals. Moreover, exposure to trauma in

children is associated with high rates of mental health problems, such as emotional and

behavioral issues, as well as Post-Traumatic Stress Disorder (PTSD) (Sullivan &

Knudson, 1998; Stirling Jr & Amaya-Jackson, 2008).

When exploring the current research, Deaf people appear to have higher rates of

PTSD than hearing people. One body of research explored Deaf psychopathology and

found that mood disorders and post-traumatic syndrome were the most frequently

diagnosed disorders in the Deaf community (Cole & Zdanowicz, 2010). In another

research study of Deaf inpatients, Black and Glickman (2006) discovered PTSD was the

most frequent diagnosis in Deaf patients.

Emotional problems, such as mood and anxiety issues, are prominent in Deaf

people who seek mental health services (Landsberger & Diaz, 2010; Cornes et al., 2006;

Hamerdinger & Hill, 2005). One study of psychopathology in Deaf adolescents found

that 46% of them could be classified as having a diagnosis listed in the *Diagnostic and*

Statistical Manual of Mental Disorder, and the majority of those were classified as

emotional disorders (Van Gent et al., 2007). In an Australian study of the Deaf

community, researchers Cornes et al. (2006) found that Deaf people experienced more

clinically significant emotional and behavioral problems than did members of the hearing

community. Another study showed that of those Deaf people who do seek mental health

treatment, many have deficits in emotional regulation and coping skills (Leigh, 2010).

Ohre et al. (2011) reviewed 11 studies on Deaf psychopathology and found five

had participants from the general Deaf population, while six of them were from clinical

samples. Of those sampling the general Deaf population, which is a more representative

sample of prevalence, results indicated "heightened vulnerability for developing

depression and anxiety in the prelingually Deaf population" (Ohre et al., 2011, p. 11), and

also point toward a higher level of distress in the Deaf population. The results of those

five studies follow.

De Graaf and Bijl (2002) examined mental distress among over 300 Deaf adults

aged 18 years and older, in the Netherlands. They conducted all interviews in the

preferred language of the participants. Results indicated that 27.1% of Deaf men and

32.4% of Deaf women endorsed symptoms of mental distress, compared to 22.0% of men

and 26.6% of the general Dutch population. In 2005, Fellinger and colleagues conducted

research on 233 Austrian members of Deaf clubs, finding even more compelling results.

They used two assessment measures adapted for use in sign language to study mental

distress, anxiety, and depression among Deaf people, compared to members of the

hearing population. Results indicated that 70.3% of Deaf males and 84% of females had

significantly high levels of mental distress. In contrast, only 15% of hearing men and

17.5% of hearing women reached significant levels of mental distress. This study further

partitioned mental distress into anxiety and depressive symptoms, both of which were

significantly higher for the Deaf participants.

A year later, Kvam et al. (2006) conducted a Norwegian study on symptoms of

depression and anxiety among 431 Deaf adults, comparing their scores with a hearing

sample. They found that Deaf people experience more than twice the rate of mental

distress, as well as significantly more anxiety and depressive symptoms than the hearing

group. Kvam also took into account the possible methodological uncertainties (e.g.,

higher response rate among hearing people and possible misinterpretation of questions)

and determined that the differences were still significant enough to make a

methodological-issue explanation for the results unlikely.

Two studies provided a more comprehensive focus on depression. Leigh and

Tolbert (2001) conducted a study of 53 Deaf undergraduates in the United States and

found 26% of participants reported having been seriously depressed. Despite having no

specific comparison group, the 26% was about double the general prevalence rate among

hearing undergraduate students, at 13.8%. In 2003, Werngren-Elgstrom and associates

found similar results in a much older population of Deaf individuals. In this study of

elderly Swedish Deaf individuals, 31% had mild depressive symptoms compared to only

9–19% of hearing individuals.

These five studies provide important evidence for high anxiety, depression, and

distress among members of the Deaf community. However, when considering the six

clinical sample studies in the meta-analysis, the results are mixed, making clear

conclusions difficult to determine (Ohre, 2011). Although these six studies provided

more evidence that the Deaf population appears to experience higher prevalence of

mental health problems than their hearing counterparts, some of these studies had

significant methodological limitations. Ohre and colleagues (2011) discussed some of

those major deficits, including the lack of representative samples, and culturally

insensitive assessment and diagnostic instruments. Across these six studies, Ohre (2011)

determined that deaf and hearing samples were not comparable in rates of depression,

anxiety, and somatoform disorders, as well as delusional, psychotic and personality

disorders.

It is clear that the Deaf community struggles with a variety of mental health issues

and stressors, including depression, anxiety, isolation, social alienation, and traumatic

experiences. However, it is estimated that as few as 2% of Deaf individuals needing

support for mental health issues received services (Pollard, 1996). This number is

unacceptable, and gives a powerful illustration of the impact of the barriers to services for

the Deaf, as well as the growing need for creating culturally sensitive services at this

time.

Need for culturally sensitive therapy

Given the systemic barriers to treatment, while also considering the dire need for

services, providing services that are culturally sensitive and specific to the Deaf

population is imperative. As Glickman (1996) wrote:

One must be culturally aware as a hearing or deaf person; one must have

extensive knowledge of Deaf community and of the history of Deaf-hearing

relations; and one must have a broad array of skills in particular competence in

the different forms of signed communication. (p. 51)

Glickman's words align with Sue and Sue's (2007) guidelines for multicultural

competence, including having sufficient knowledge, skills, and awareness. Social

workers and other mental health professionals who have been engaged in treating Deaf

people with psychiatric issues share this perspective (Glickman & Gulati 2003;

Landsberger et al., 2013; Sinnott et al., 2012; Williams & Abeles 2004). For example,

Sinnott and colleagues (2012) recommended that social workers or teachers convey

information in culturally sensitive ways, such as using concrete instructions, visual

strategies, stories, and maintaining eye contact. Williams & Abeles (2004) provided

similar recommendations, while also outlining the harm of not being culturally sensitive.

Likewise, Landsberger and colleagues (2013) highlighted the necessity of being sensitive

to language, differences in social norms, and differences in cultural values in the

treatment and assessment of Deaf individuals. Therapy grounded in cultural

understanding may combat the distrust the Deaf population has for the hearing, and

ideally lead to improved communication and outcomes.

Another aspect of cultural understanding needed to provide treatment to Deaf

individuals includes knowledge and skills in sign language, while also being sensitive to

potential individual differences. In particular, not only being able to physically sign

proficiently, but also knowing the cultural differences in that form of communication,

such as eye contact, turn taking in conversations, personal space, and body language, all

of which differ from traditional hearing rules for conversation. For example, it is

generally recommended that clinicians working with Deaf individuals maintain eye gaze

for appropriate levels of time (around 5 seconds), know which gesture means continuing the conversation versus stopping it, and how much personal space is culturally appropriate. However, being sensitive to individual differences, such as matching the preferred communication mode of the individual (ASL vs. Signed English), is also a major component of culturally appropriate interventions. These styles of communication are especially important to know in the mental health field due to the necessity of shared communication. If these recommendations are not considered, the psychologist may appear rude or disinterested (Williams & Abeles, 2004).

Treatment should also address multiple levels: cultural and psychological (Glickman & Harvey, 1996). Additionally, therapy works best if the modality matches the culture. For example, treatment interventions with the Deaf that include role plays and psychodrama, or metaphors, align with the nature of ASL (which is inherently overtly expressive) and would be beneficial. Freedman (1994), as cited in Glickman and Harvey (1996), offered alternative interventions, that may be specifically suited to a visual or gestural method of communication. Freedman discussed externalizing the problem, which through signing allows abstract concepts such as anxiety to be located in space. Freedman also noted the use of storytelling as a culturally sensitive intervention. In addition, the Deaf community values subjective experience and emotional expression, and interventions that evoke and reflect on this may be particularly useful (Miller, 2004; Mindess, 2009). Lastly, Deaf cultural values of collectivism may be addressed by using a treatment intervention that emphasizes group processes. Engaging in treatment with these guidelines creates a space that promotes a safe, connected, and understanding atmosphere where differences are appreciated rather than devalued.

The Deaf population needs culturally sensitive services, specifically aimed at treating problems such as general mental distress, anxiety, trauma, and mood disorders. Additionally, an intervention that may be available in a group format, may align more effectively with the collectivist nature of Deaf culture, as well as reach more people, could be helpful given the lack of services for the Deaf community. One such intervention, which emphasizes non-verbal processes and has been shown to be particularly effective in treating mental health problems like anxiety and mood disorders (Miller, Fletcher, & Kabat-Zinn, 1995; Vollestad, Nielsen, & Nielsen, 2012), is mindfulness.

Mindfulness

Mindfulness is rooted in Buddhist spirituality. Although many different definitions of mindfulness exist, there does appear to be a general consensus about its emphasis on awareness. Kabat-Zinn (1994), one of the pioneers of mindfulness in the West, defines it as "paying attention in a particular way: on purpose, in the present moment, and non-judgmentally" (p. 4). Kabat-Zinn noted mindfulness does not necessarily pertain to controlling emotions, or even relaxation, but rather paying attention and opening up to them. This openness allows for awareness and acceptance of experience and emotion, ideally creating greater psychological flexibility and psychological well-being. However, Buddhist mindfulness does not emphasize striving for such outcomes; rather, it stresses choiceless practice aimed at deferential accommodation for any and all experiences. Improved well-being may be an outcome, but it is not the goal. Unfortunately, much of the existing research regarding mindfulness uses it as an intervention for symptom control, such as for relaxation or as a coping skill

for stress management. Although the research still emphasizes psychological acceptance of aversive thoughts and feelings, the focus on outcome based symptom reduction is more prominent. Because of this, the current paper will explore mindfulness as a means of symptom control, while addressing it as purely a process of openness to and acceptance of experience, in the future research section.

As mindfulness gained popularity in the West, research regarding its usefulness in the field of psychology emerged. Speaking broadly, mindfulness has been shown to improve psychological, physiological, and physical problems, and is commonly taught in a group format (Keng, Smoski, & Robins, 2011). Mindfulness has been effective in treating depression and anxiety (Hoffman, Sawyer, Witt, & Oh, 2010; Miller et al., 1995; Teleki, 2010; Vollestad et al., 2012), chronic pain (Kabat-Zinn , Lipworth, Burney, & Sellers, 1986), eating disorders (Safer, Telch, & Agras, 2001), attention deficit hyperactivity disorder (Zylowska et al., 2008), substance abuse (Bowen et al., 2006), self-esteem (Brown & Ryan, 2003), coping with stress (Grossman, Niemann, Schmidt, & Walach, 2004; Teleki, 2010), and physical and mental well-being (Brown & Ryan, 2003; Grossman et al., 2004; Williams, Kolar, Reger, & Pearson, 2001). It has also proven to be beneficial physiologically (Burg, Wolf, & Michalak, 2012), such as by lowering blood pressure (Hughes et al., 2013). A variety of therapeutic interventions have been developed with mindfulness as one of the core components, including Mindfulness-Based Stress Reduction (MBSR; Kabat-Zinn, 1990), Mindfulness-Based Cognitive Therapy (MBCT; Segal, Williams, & Teasdale, 2002), Acceptance and Commitment Therapy (ACT; Hayes, Strosahl, & Wilson, 1999) and Dialectal Behavior Therapy (DBT; Linehan, 1993).

Researchers have increasingly studied mindfulness and acceptance-based interventions for anxiety and depression over the past decade, and the results are compelling for the usefulness of mindfulness in mental health. Kabat-Zinn, one of the most influential proponents of mindfulness, developed an MBSR program and conducted extensive research on it. Kabat-Zinn found reductions in anxiety and depression (as cited in Miller et al., 1995). Vollestad, Nielsen, and Nielsen (2012) conducted a comprehensive meta-analysis of 19 studies focusing on using mindfulness interventions for anxiety; results indicated significant reductions in symptoms of anxiety. That same meta-analysis also analyzed levels of depression, finding similar results. In another broad research analysis covering the effectiveness of MBSR, a meta-analysis of 17 randomized clinical trials revealed that MBSR was effective in treating depression, anxiety, and distress, and was most effective with stress (Teleki, 2010).

Little direct empirical research explored the outcomes of mindfulness as a treatment for trauma. However, emerging research (Follette, Palm, & Pearson, 2006; Vujanovic, Youngwirth, Johnson, & Zvolensky, 2009) suggested mindfulness, when combined with other treatment, could be a potentially effective treatment for trauma-related disorders, such as PTSD. One reason for this hypothesis, according to Thompson, Arnkoff, & Glass (2011), is the emphasis mindfulness places on psychological acceptance, rather than on avoidance of negative thoughts or feelings. When analyzing the costs of such avoidance, researchers indicated that active avoidance actually increases the amount of intrusive thoughts and can increase negative emotional experiences (Karekla, Forsyth & Kelly, 2004; Wegner & Smart, 1997). Additionally, in studies of PTSD symptoms, higher levels of awareness and acceptance correlated with reduced

PTSD symptoms (Vujanovic et al., 2009). Other signals that pointed to the potential

effectiveness of mindfulness with trauma are its benefits in reducing physiological

arousal (Burg et al., 2012).

Recently, King and colleagues (2013) compared MBCT with brief treatment-as-

usual (TAU) in treating combat veterans suffering from PTSD. The procedure for MBCT

involved an eight week program. The results indicated the patients who engaged in

MBCT had lower levels of PTSD symptoms, in particular the avoidant/numbing

symptoms, as well as self-blame. In the TAU group, there were no significant

improvements noted. Additionally, both ACT and DBT, two approaches of which

mindfulness is a core component, show effectiveness in treating trauma (Follette et al.,

2006).

One additional area of research that may apply to the Deaf community is the

application of mindfulness with experiences to which the majority of Deaf individuals

can relate, such as isolation and loneliness. In one study, Degi and Szlagy (2013)

examined the effectiveness of mindfulness on symptoms of anxiety, depression and

quality of life in Romanian breast cancer inpatients, and found significant reductions in

one specific symptom, isolation. Creswell and colleagues (2012) examined the

effectiveness of an MBSR program for older adults struggling with loneliness compared

with a control group. Results indicated that the mindfulness program reduced loneliness,

whereas the control group showed slight increases. Additional research exploring MSBR

applied to individuals with social anxiety also found significant improvements in

loneliness as assessed by the *UCLA-8 Loneliness Scale* (Jazieria, Goldin, Werner, Ziv, &

Gross, 2012).

Furthermore, taking a theoretical approach may provide insight into the potential effects of mindfulness on isolation. Generally, when people judge themselves harshly, feelings of isolation increase (Brown, 1999). Given the emphasis mindfulness places on non-judgment, one can imply an inverse relationship between non-judgment and isolation, although research is needed to support this hypothesis.

Mindfulness Application to the Deaf Population.

After reviewing the literature on mindfulness, it becomes clear that it can be an effective treatment for a variety of mental health issues, and also provides physiological benefits. Here I discuss whether mindfulness would also be an appropriate treatment modality for Deaf people. A variety of factors suggest that it could. Specifically, mindfulness would address the primary mental health problems the Deaf community encounters: depression, anxiety, and mental distress. Recent research suggests that mindfulness may benefit individuals who struggle with trauma and loneliness, both of which are prevalent in the Deaf community.

 Second, mindfulness may be an intervention that effectively meets the need for culturally sensitive services. Mindfulness practice emphasizes attending to one's inner world of experience, which aligns with Deaf cultural values. The process of teaching mindfulness can be adapted by using sign language, while also incorporating relevant metaphors and stories, all of which are important in Deaf culture. Additionally, it can be easily adapted to visual methods, such as videotape or visual mindfulness meditation practices, such as imagery. Adapting mindfulness in this manner respects Deaf culture in that it is visual and uses sign language. Rather than having the Deaf client meet the needs of the mental health provider, as is often the case currently, teaching mindfulness

appropriately would be tailored to the Deaf client. Additionally, mindfulness, which can be taught in a group format, may also meet the collectivist nature of the Deaf community, which emphasizes group discussion and interconnectedness.

Last, it is necessary to develop services that may reach a wider range of people, which is important due to the current underserved nature of Deaf mental health care. Mindfulness alone will not effectively eradicate all of the problems of the Deaf community. However, using mindfulness aligned with other forms of treatment, such as individual therapy, could prove to be quite useful.

There is a lack of research that describes applying mindfulness to the Deaf community. This absence speaks to the immediate need to conduct such research. One of the only areas mindfulness has been studied with Deaf individuals is as part of DBT, in which mindfulness is one piece of the intervention.

In 2012, Davidson and colleagues conducted a study of the Australian Deaf Community, specifically following three Deaf people fluent in Australian Sign Language for nine months. While using DBT-informed treatment, they observed positive outcomes at the end of the study; specifically, the ability to identify and use relevant skills learned from the program such as mindfulness (Davidson et al., 2012). However, it is not yet clear how the mindfulness aspect specifically correlated with the effectiveness of their intervention. O'Hearn and Pollard (2008) discussed the challenges and the potential of DBT with the Deaf population. They suggested that the aspect of mindfulness that emphasizes validation of emotions may be particularly useful.

Regarding conducting culturally sensitive therapy with members of the Deaf community, Glickman (2009) discussed using mindfulness in the context of DBT.

Glickman has not been able to teach mindfulness sufficiently for Deaf clients to use it as a major coping skill. However, Glickman indicated the potential of mindfulness practice in improving the mental health of the Deaf community, and listed possibilities of how to teach mindfulness without the use of auditory information. First, Glickman found teaching Deaf client's diaphragmatic breathing could be useful. Another promising practice involved using an experiential mindful eating exercise in which Deaf clients are asked to notice their reactions to food on their tongue. The author noted the potential implications of an exercise like this to address impulse-control problems, which are prevalent in the Deaf community (Landsberger & Diaz, 2010). In describing mindfulness practice to Deaf individuals, Glickman used a visual model of a traffic light to symbolize the slowing process that comes with mindfulness. In this example, the red light represented "stop and notice." However, these interventions were limited to parts of DBT work, rather than using mindfulness by itself (Glickman, 2009).

In Glickman's (2009) work, many of the mindfulness exercises evidenced mindfulness as a culturally sensitive tool. Using diaphragmatic breathing, as well as the process of turning awareness inward are inherently nonverbal activities. Additionally, the use of a traffic light to represent these processes provides a metaphor that is understandable and visual. The mindful eating exercise taps into an everyday activity that all people, hearing and Deaf, experience. These simple examples of teaching mindfulness address Deaf cultural experiences/values of non-verbal experience, and the appreciation for stories and metaphors.

Furthermore, on a broader scale, the process of mindfulness can involve observing and acknowledging aversive emotions like depression and anxiety through

visualization or imagery of those thoughts/feelings. This practice aligns with Freedman's

(1994, as cited in Glickman & Harvey, 1996) recommendation for such interventions

emphasizing visual/spatial processes with the Deaf community. Additionally,

mindfulness involves opening up to one's own inner world, and accepting whatever is

there: positive, negative, or neutral. It is not an intervention that is more suited to the

majority, nor is it an intervention that requires the Deaf community to be more like their

hearing counterparts. Because of this, mindfulness may be well suited for Deaf

individuals in that it creates a space to understand and validate one's own experience,

instead of pushing it away or altering it.

Moreover, as noted earlier, the effectiveness of mindfulness in general with major

mental health problems in the Deaf population, such as anxiety, depression, and emerging

research with trauma and isolation/loneliness, points to an intervention that may be useful

both culturally and psychologically. Additionally, mindfulness is often taught in a group

format, which may partially address the need for services to reach a greater number of

people, while also respecting the value of groups in Deaf culture. Nevertheless,

challenges are clear in creating such a mindfulness intervention, as the treatment would

need to be Deaf-specific and culturally sensitive. This paper proposes a number of

considerations to begin this process.

Recommendations for Culturally Specific Mindfulness Treatment

In developing a culturally specific mindfulness intervention program for the Deaf

community, there are many aspects to consider. Instead of proposing a specific

intervention program, this paper provides an outline of recommendations, including

practices, techniques, and strategies, when adapting mindfulness to the Deaf community,

while also addressing the possible challenges that may be encountered. It is important to note that while this paper discusses the common aspects of Deaf cultural experience, a culturally competent clinician is aware of and sensitive to individual differences within culture.

First, the most important aspect to consider is culture. A culturally Deaf clinician would be the best option for this type of intervention. Or, if that is not feasible, at the very least a culturally competent clinician is recommended. This means clinicians need to have the necessary knowledge, skills, and self-awareness (Sue & Sue, 2007) when working with the Deaf community. These skills include being sensitive to a variety of Deaf cultural factors, such as understanding the Deaf community's cultural history and values, having proficiency in sign language, having an understanding of Deaf modes of communication, and being aware of one's own cultural background and biases. Without these abilities and characteristics, the intervention automatically loses credibility and usefulness, and reinforces a model of Deaf inferiority. Additionally, the clinician must have adequate experience teaching mindfulness, as well as experience in working with mental health disorders.

The teaching of mindfulness creates a unique challenge. Traditionally, mindfulness is taught and practiced using auditory methods, with a teacher explaining or guiding the client. Often, the eyes are closed or drawn down. Teaching mindfulness to the Deaf community would require a visual/gestural model of training. One way to establish this model, at least initially, would be using an introductory video adapted to sign language. This is recommended because it will respect the visual way Deaf people take in information and the language of the Deaf community (Glickman & Harvey, 1996). The

video would explain the history and definition of mindfulness and briefly introduce

diaphragmatic breathing through visual examples. Although a video could be used

throughout the whole mindfulness program, it may be more useful just as an introductory

method, and then the instructor continue to teach experientially while using sign

language.

The next recommendation for a culturally specific mindfulness intervention

involves having the instructor take Deaf individuals through a story about an experience

of being mindful or not mindful. This is an important component as storytelling is an

important Deaf cultural value (Glickman & Harvey, 1996; Phillips, 1996). Next,

providing an experiential exercise of mindfulness, starting with the practice of mindful

breathing, will be necessary. The instructor, using sign language, would show the Deaf

individuals how to mindfully breathe by taking part in the exercise with them, placing

their own hands on their diaphragms to practice mindful, diaphragmatic breathing.

Throughout teaching, space should be created for group discussion and asking questions

using the preferred mode of sign language, which would allow members to process their

experiences together, which connects with the collectivist aspect of Deaf culture.

In teaching mindfulness, visual metaphors and visual practices are recommended,

as they are culturally valued. For example, as Glickman (2009) described, using a traffic

light as a technique to teach and use mindfulness, emphasizing the colors of red, yellow

and green, is one option. In fact, not only does this possibility connect with cultural

values of the visual nature of sign language, it also provides a metaphor that emphasizes

time and sequence, important features of Deaf communication (Williams & Abeles,

2004). Connected with the visual idea of a stoplight is using the popular acronym of

STOP to help remember the mindfulness process. STOP stands for - *s*top, *t*ake a breath, *o*bserve, and *p*roceed (Stahl & Goldstein, 2010). Use of this acronym could provide an active complement to the visual metaphor of a traffic light, as the instructor could fingerspell S-T-O-P, while explaining what each letter represents. One potentially robust visual mindfulness-meditation practice that may be particularly helpful with Deaf individuals is a loving-kindness meditation, also called *metta* (Pāli derivation). In fact, this type of mindful meditation may have positive effects on low self-esteem and feelings of alienation (Nilsson, 2014), issues with which Deaf individuals often struggle.

Other recommendations that would be beneficial in teaching mindfulness include alternative mindfulness practices, such as mindful eating, mindful walking, and yoga. These exercises may help Deaf clients gain more experience with mindfulness using different senses, including taste and touch. The key here would be to teach these practices using sign language, and incorporate videotape and stories as needed.

These components are all important pieces in applying mindfulness as a culturally specific tool to use with the Deaf community. However, the challenge remains of how to structure this practice into an individual or group program. One step in that direction may be in exploring the creation of a program similar to Kabat Zinn's 8-week MBSR program, but adapted specifically for the Deaf community. This would entail incorporating culturally specific models of teaching mindfulness with the Deaf, such as using visual metaphors and stories, while also translating all teaching materials into sign language or videotapes with sign language. Given MBSR's effectiveness with mental health problems, loneliness, and stress, it may be particularly useful in helping the Deaf community with notable mental health problems.

The MBSR program typically includes nine 2-3 hour sessions over the course of 8 weeks, as well as one all-day session. Group size is typically 15-30 people. Each week includes different types of mindful practice, including mindful breathing, sitting mindfulness meditation, mindful body scan, and yoga. The program also includes intergroup discussions and homework, such as listening to audiotapes of mindfulness exercises. Following a similar structure, a culturally sensitive mindfulness intervention for the Deaf may include these aspects, but would need to be taught in an entirely different manner. The key challenge would be adapting all teaching material to culturally sensitive ones. For example, instead of using audio CDs for mindfulness-meditation exercises, adapting the material to videotapes in sign language would be necessary.

Limitations

Although mindfulness may have the potential to be a culturally sensitive tool to use with the Deaf community, there are certain limitations. Most notably, mindfulness will not be able to address the realities that Deaf people face every day, in their families and in society. From the standpoint of the minority model of disability, this inability points to a more important issue – that Deafness continues to be interpreted as inferiority or a deficit. As such, although mindfulness may help with aversive emotions/feelings that arise due to issues Deaf people experience, it will not eradicate the problems that contribute to such mental health issues in the first place. Moreover, even if a culturally sensitive mindfulness program is created, there may be hesitancy and mistrust due to historical oppression that the Deaf community has faced historically.

Another limitation of such an application is that mindfulness alone may not be enough to treat the mental health problems of Deaf individuals. In other words,

mindfulness is not a universal or comprehensive intervention. Mindfulness would ideally

be used as an aspect or helpful technique in individual therapy, or in a group setting.

Additionally, there is no substitute for culturally sensitive professionals when

working with Deaf individuals. If such a program were implemented or used, and the

professional did not have a working understanding of Deaf culture, the same problems

this paper has attempted to address would be perpetuated. This aspect is quite relevant

because currently, few mental health professionals are both competent in mindfulness and

competent in providing therapy to Deaf individuals.

Finally, an important limitation is the paucity of research in applying mindfulness

with the Deaf community. Currently, apart from mindfulness as an aspect of a particular

therapy approach (e.g., DBT), it is not known whether mindfulness correlates with

positive mental health outcomes within the Deaf community. However, before combining

mindfulness and mental health outcomes, it is important to better understand the

prevalence of Deaf psychopathology to know which problems mindfulness would need to

address most. The dearth of research extends to the effectiveness of mindfulness in areas

of Deaf mental health issues. For example, although mindfulness shows promise in

working with trauma related mental health issues, there is insufficient research to make it

empirically supported.

Future Research

To more accurately conceptualize the mental health needs of the Deaf community,

as well as potential treatment modalities, researchers need to start on a broad scale.

Currently, research studies on Deaf psychopathology continue to be very limited.

Increased research on the prevalence of mental health problems in the Deaf community,

using proper sampling and culturally sensitive methodology, will be important. Doing so would help eliminate the ambiguity regarding the psychopathology Deaf people struggle with most, while also bolstering additional research pertaining to those issues.

Next, the most pressing need for future research revolves around developing empirical studies that delve into the effectiveness of using mindfulness as an intervention with the Deaf community. Additionally, studying mindfulness in different treatment modalities, such as group and individual, as well as when applied to different mental health problems, would yield a more accurate understanding of where it could be most effective. Special care should be taken in these prospective studies to use culturally sensitive assessment and screening instruments, to ensure reliability and validity.

Another possible avenue to explore may be in searching for alternative treatment interventions that identify with Deaf cultural values. Given the promising research regarding using mindfulness within a broader therapeutic modality, such as DBT with Deaf people, exploring other therapeutic modalities that use mindfulness may be useful. For example, ACT, developed by Hayes, could be an intriguing option. ACT is a behavioral therapeutic modality that involves learning to commit to a meaningful life, while accepting the pain that automatically comes with it. Specifically, ACT addresses the importance of receptive, accommodating, flexible awareness aimed at movement toward rather than away from psychological distress. The ACT approach therefore emphasizes psychological acceptance when doing so honors and validates one's life and circumstances, and where doing so advances values-inspired living. As acceptance-based practice begins to take hold, so does the urge to control one's private world ease, thereby

reducing suffering while opening life up to other possibilities lived (Hayes, Strosahl, & Wilson, 1999).

Some preliminary evidence suggests that ACT may be effective with the Deaf community for the following reasons. First, ACT is an empirically supported treatment for a variety of mental health problems, such as depression and anxiety (Forman, Herbert, Moitra, Yeomans, & Geller, 2007), as well as traumatic experiences, such as child abuse (Wilson, Follette, Hayes, & Batten, 1996). Second, ACT not only employs mindfulness as a major aspect, but also emphasizes metaphors and experiential exercises, both of which are valued in Deaf culture. Third, ACT is rooted in Relational Frame Theory, a contemporary research program focused on language and cognition (Hayes, Barnes-Holmes, & Roche, 2001). Using a modality that stresses the significance of language may align with Deaf cultural values of sign language. In addition, an important focus of ACT intervention centers on cognitive defusion work aimed at deliteralizing conceptualized content. This intervention fits nicely with Freedman's (1994, as cited in Glickman & Harvery, 1996) proposition of externalizing experiences, or observing and noticing abstract notions in a visual/spatial manner, when working with the Deaf community. Once again, sound and reliable research should be established before considering use of ACT with the deaf community.

Conclusion

Future research will ideally help clarify many of the mental health problems of the Deaf community, while also suggesting potentially effective, culturally sensitive treatments. Mindfulness, as one prospective treatment, offers a unique possibility that appears to meet the needs of the Deaf community culturally and psychologically.

Developing a mindfulness based intervention for the Deaf community may begin to remedy the lack of effective services for Deaf individuals. However, without adequate cultural understanding and competence when teaching mindfulness, the potential benefits will be lost. The most pertinent need may be in educating the hearing community. No substitute exists for increased education, both in general schools and in training for professional service, about Deaf culture. By stressing education on Deaf culture and history, ideally, medical and mental health service providers will begin to destroy the barriers that have so long marginalized the Deaf community. This education would, in effect, create a society that appreciates and values the cultural differences and similarities of the Deaf community, wherein mental health professionals focus on understanding Deaf individuals as a prerequisite for providing effective treatment.

References

Anderson, M. L., & Leigh, I. W. (2011). Intimate partner violence against deaf female college
    students. *Violence Against Women, 17(7),* 822-834. doi: 10.1177/1077801211412544

Bachelor, A. & Horvath, A. O. (1998). The therapeutic relationship. In Hubble, M. A., Duncan,
    B. L., & Miller, S. D. (Eds.), *The Heart and Soul of Change: What Works in Therapy*
    (133-179). Washington, DC: American Psychological Association.

Baker, C. (1977). Regulators and turn-taking in American Sign Language. In Friedman, L. (Ed.),
    On the other hand: New perspectives on American Sign Language (215–36). New York,
    NY: Academic Press.

Black, P. A., & Glickman, N. S. (2006) Demographics, psychiatric diagnoses, and other
    characteristics of North American deaf and hard-of-hearing inpatients. *Journal of Deaf
    Studies and Deaf Education*; *11(3),* 304–321. doi: 10.1093/deafed/enj042

Brown, B. (1999). *Soul without shame: A guide to liberating yourself from the judge within.*
    Boston, MA: Shambala.

Brown, K. W, & Ryan, R. M. (2003). The benefits of being present: Mindfulness and its role in
    psychological well-being. *Journal of Personality and Social Psychology, 84*, 822–848.
    doi: 10.1037/0022-3514.84.4.822.

Bowen, S., Witkiewitz, K., Dillworth, T.M., Chawla, N., Simpson, T.L., Ostafin, B.D., &
    Marlatt, A. (2006). Mindfulness meditation and substance use in an incarcerated
    population. *Psychology of Addictive Behaviors, 20,* 343–347.
    doi: 10.1037/0893164X.20.3.343

Burg, J. M., Wolf, O. T., & Michalak, J. (2012). Mindfulness as self-regulated attention:
    Associations with heart rate variability. *Swiss Journal Of Psychology/Schweizerische*

Zeitschrift Für Psychologie/Revue Suisse De Psychologie, *71*(3), 135-139.

doi:10.1024/1421-0185/a000080

Butterworth, R. & Flodin, M. (1995). "History of American Sign Language." *The Pedigree Visual Dictionary of Signing.* Berkley.

Cabral, L., Muhr, K., & Savageau, J. (2013). Perspectives of people who are deaf and hard of hearing on mental health, recovery, and peer support. *Community Mental Health Journal*, *49*(6), 649-657. doi: 10.1007/s10597-012-9569-z

Cole, P., & Zdanowicz, N. (2010). Does it exist?: 'A psychopathology of deafness.'. *Psychiatria Danubina*, *22*, 114-116.

Corker, M. (1996). *Deaf transitions: Images and origins of deaf families, deaf communities and deaf identities*. Bristol, PA: Kinsley.

Cornell, S. & Lyness, K. (2004). Therapeutic Implications for Adolescent Deaf Identity and Self-Concept. *Journal of Feminist Family Therapy, 16(3),* 31-49. doi:10.1300/jo86v16n03_02

Cornes, A., Rohan, M. J., Napier, J., & Rey, J. M. (2006). Reading the signs: impact of signed versus written questionnaires on the prevalence of psychopathology among deaf adolescents. *Australian and New Zealand Journal of Psychiatry*, *40(8),* 655-673. doi: 10.1080/j.1440-1614.2006.01866.x

Creswell, D., Irwin, M., Burklund, L., Lieberman, M., Arevalo, J., Ma, J., Breen, E. C., & Cole, S. (2012). Mindfulness-Based Stress Reduction training reduces loneliness and pro-inflammatory gene expression in older adults: A small randomized controlled trial. *Brain, Behavior, and Immunity, 26*(7), 1095-1101.

Davidson, F., Cave, M., Reedman, R., Briffa, D., & Dark, F. (2012). Dialectical behavioral

    therapy informed treatment with Deaf mental health consumers: an Australian pilot

    program. *Australasian Psychiatry*, 20(5), 425-428. doi: 10.1177/1039856212458981

De Graaf, R., & Bijl, R. (2002). Determinants of mental distress in adults with a severe auditory

    impairment: Differences between prelingual and postlingual deafness. *Psychosomatic*

    Medicine, 64, 61–70. doi: 10.1097/00006842-200201000-00009

Degi, C. L., & Szilagy, T. (2013). Mindfulness-based stress reduction intervention in Romanian

    breast cancer inpatients. *Cognition, Brain, Behavior: An Interdisciplinary Journal*, *17*(2),

    135-148.

Denman, L. (2007). Enhancing the accessibility of public mental health services in Queensland

    to meet the needs of deaf people from an Indigenous Australian or culturally diverse

    background. *Australasian Psychiatry*, *15,* 85-89. doi: 10.1080/10398560701701262

Fellinger, J., Holzinger, D., Dobner, U., Gerich, J., Lehner, R., Lenz, G., & Goldberg, D. (2005).

    Mental distress and quality of life in a deaf population. *Social Psychiatry and Psychiatric*

    Epidemiology. 40(9), 737–742. doi: 10.1007/s00127-005-0936-8

Fellinger J., Holzinger D., & Pollard R. (2012). Mental health of deaf people. *The Lancet,* 379,

    1037–1044. doi: 10.1016/S0140-6736(11)61143-4

Follette, V., Palm, K. M. & Pearson, A. N. (2006). Mindfulness and trauma: Implications for

    treatment. *Journal of Rational-Emotive & Cognitive-Behavior Therapy, 24,* 45–61.

    doi: 10.1007/s10942-006-0025-2

Forman, E. M., Herbert, J. D., Moitra, E., Yeomans, P. D., & Geller, P. A. (2007). A randomized

    controlled effectiveness trial of acceptance and commitment therapy and cognitive

    therapy for anxiety and depression. *Behavior Modification*, *31*(6), 772-799.

Freedman, P. (1994). Counseling with deaf clients: The need for culturally and linguistically sensitive interventions. *Journal of the American Deafness and Rehabilitation Association, 27*(4), 16-28.

Glickman, N. (2009). *Cognitive-behavioral Therapy for Deaf and Hearing Persons with Language and Learning Challenges.* New York, NY: Routledge.

Glickman, N., & Gulati, S. (2003). *Mental Health Care of Deaf People: A Culturally Affirmative Approach*. London, UK: Lawrence Erlbaum Publishers.

Glickman, N. S., & Harvey, M. A. (1996) *Culturally Affirmative Psychotherapy with Deaf Persons*. New Jersey: Lawrence Erlbaum Associates, Inc.

Grossman, P., Niemann, L., Schmidt, S., & Walach, H. (2004). Mindfulness-based stress reduction and health benefits: A meta-analysis. *Journal of Psychosomatic Research, 57*, 35–43. doi:10.1016/S0022-3999(03)00573-7

Hamerdinger, S. & Hill, L. (2005). Serving Severely Emotionally Disturbed Deaf Youth: A Statewide Model. *Journal of the American Deafness & Rehabilitation Association, 38(3),* 1-31.

Hayes, S. C., Strosahl, K. D., & Wilson, K. G. (1999). *Acceptance and commitment therapy.* New York, NY: Guilford Press.

Hayes, S.C., Barnes-Holmes, D., & Roche, B. (Eds.). (2001). *Relational Frame Theory: A Post-Skinnerian account of human language and cognition.* New York, NY: Plenum Press.

Hindley, P. A., Hill, P. D., McGuigan, S. & Kitson, N. (1994), Psychiatric Disorder in Deaf and Hearing Impaired Children and Young People: A Prevalence Study. *Journal of Child Psychology and Psychiatry, 35,* 917–934. doi: 10.1111/ j.1469–7610.1994.tb02302.x

Hoffman, S. G., Sawyer, A. T., Witt, A. A., & Oh, D. (2010). The effect of mindfulness-based

therapy on anxiety and depression: A meta-analytic review. *Journal of Consulting and*

*Clinical Psychology, 78,*169–183. doi: 10.1037/a0018555

Hughes, J. W., Fresco, D. M., Myerscough, R., van Dulmen, M. H., Carlson, L. E., & Josephson,

R. (2013). Randomized controlled trial of mindfulness-based stress reduction for

prehypertension. *Psychosomatic Medicine, 75(8),* 721-8.

doi: 10.1097/PSY.0b013e3182a3e4e5.

Humphries, P., & Padden, C. (2005). *Inside Deaf Culture*. London, UK: Harvard University

Press.

Jazaieri, H., Goldin, P. R., Werner, K., Ziv, M., & Gross, J. J. (2012). A randomized trial of

MBSR versus aerobic exercise for social anxiety disorder. *Journal Of Clinical*

Psychology, *68*(7), 715-731. doi: 10.1002/jclp.21863

Johnson, J. R., & McIntosh, A. S. (2009). Toward a cultural perspective and understanding of the

disability and deaf experience in special and multicultural education. *Remedial And*

Special Education, *30*(2), 67-83. doi: 10.1177/0741932508324405

Johnson, J. R., & Nieto, J. (2007). Towards a cultural understanding of the disability and deaf

experience: A content analysis of introductory multicultural education textbooks.

Multicultural Perspectives, *9*(3), 33-43.

Kabat-Zinn, J. (1994). *Wherever you go, there you are: Mindfulness meditation in everyday life.*

New York, NY: Hyperion Books.

Kabat-Zinn, J., Lipworth, L., Burney, R., & Sellers, W. (1986). Four year follow-up of a

meditation-based program for the self-regulation of chronic pain: treatment outcomes and

compliance. *Clinical Journal of Pain*, 2, 159–173.

Karekla, M., Forsyth, J. P., & Kelly, M.M. (2004). Emotional avoidance and panicogenic

     responding to a biological challenge. *Behavior Therapy, 35,* 725-746.

Keng, S. L., Smoski, M. J., & Robins, C. J. (2011). Effects of mindfulness on psychological

     health: A review of empirical studies. *Clinical Psychology Review, 31(6);* 1041-1056.

King, A. P., Erickson, T. M., Giardino, N. D., Favorite, T., Rauch, S. M., Robinson, E., & ...

     Liberzon, I. (2013). A pilot study of group mindfulness-based cognitive therapy (MBCT)

     for combat veterans with posttraumatic stress disorder (PTSD). *Depression and Anxiety*,

     30(7), 638-645. doi:10.1002/da.22104

Kochkin, S., (2009). MarkeTrak VIII: 25-year trends in the hearing health market

     The Hearing Review, 16(11), 12-31.

Kvam, M. H., Loeb, M., & Tambs, K. (2006). Mental health in deaf adults: Symptoms of anxiety

     and depression among hearing and deaf individuals. *Journal of Deaf Studies and Deaf*

     Education. 12(1), 1–7. doi: 10.1093/deafed/enl015

Lambert, M. J., & Barley, D. E. (2001). Research summary on the therapeutic relationship and

     psychotherapy outcome. *Psychotherapy: Theory, Research, Practice, Training, 38(4),*

     357-361. doi: 10.1037/0033-3204.38.4.357

Landsberger, S. A., & Diaz, D. R. (2010). Inpatient psychiatric treatment of Deaf adults:

     Demographic and diagnostic comparisons with hearing inpatients. *Psychiatric Services,*

     61(2), 196-199. doi: 10.1176/appi.ps.61.2.196

Landsberger, S. A., Sajid, A., Schmelkin, L., Diaz, D. R., & Weiler, C. (2013). Assessment and

     treatment of deaf adults with psychiatric disorders: A review of the literature for

     practitioners. *Journal Of Psychiatric Practice*, *19*(2), 87-97.

Lane, H. (1999). *The Mask of Benevolence: Disabling the Deaf community* (2nd ed.). San Diegno, CA: Dawn Sign Press.

Lane, H. (2005). Ethnicity, Ethics, and the Deaf-World. *Journal of Deaf Studies and Deaf Education, 10(3),* 291-310. doi: 10.1093/deafed/eni030

Lane, H., Bahan, B., & Hoffmeister, R. (1996). *A Journey into the Deaf-World*. San Diego, CA: Dawn Sign Press.

Leigh, I. (2010). *Psychotherapy with Deaf Clients from Diverse Groups (2nd ed.)*. Gallaudet University Press.

Leigh, I. W. & Anthony-Tolbert S. (2001) Reliability of the BDI-II with deaf persons. *Rehabilitation Psychology,* 46(2), 195–202. doi: 10.1037/0090-5550.46.2.195

Linehan, M. M. (1993). *Cognitive Behavioral Treatment of Borderline Personality Disorder*. New York, NY: Guilford Press.

Miller, J. J., Fletcher, K., & Kabat-Zinn, J. (1995). Three-year follow-up and clinical implications of a mindfulness meditation-based stress reduction intervention in the treatment of anxiety disorders. *General Hospital Psychiatry*, *17*(3), 192-200. doi:10.1016/0163-8343(95)00025-M.

Miller, R.H. (2004). *Deaf Hearing Boy: A Memoir*. Washington, D.C.: Gallaudet University Press.

Mindess, A. (1999). *Reading between the signs: Intercultural communication for sign language interpreters*. Yarmouth, ME: Intercultural Press.

Mitchell, R., Young, T., Bachleda, B., and Karchmer, M. (2006). How many people use American Sign Language? Why estimates need updating*. *Sign Language Studies, 6(3)*, 306-335.

Mitchell, R. E., & Karchmer, M. A. (2002). Chasing the mythical ten percent: parental hearing status of deaf and hard of hearing students in the United States. *Sign Language Studies. 4*, 128–163.

National Association of State Mental Health Program Directors (2002) *Reducing the Use of Seclusion and Restraint Part III: Lessons from the Deaf and Hard of Hearing Communities.* Retrieved from

http://www.nasmhpd.org/docs/NCMHDI/Seclusion_Restraint_3.pdf

Nilsson, H. (2014). A four-dimensional model of mindfulness and its implications for health. *Psychology Of Religion And Spirituality*, *6*(2), 162-174. doi: 10.1037/a0036067

Norcross, J. C., & Wampold, B. E. (2011). Evidence-based therapy relationships: Research conclusions and clinical practices. *Psychotherapy, 48,* 98-102. doi: 10.1037/a0022161

O'Hearn, A., & Pollard, R. (2008) Modifying dialectical behavior therapy for deaf individuals. *Cognitive and Behavioral Practice*, *15*, 400-414. doi: 10.1016/j.cbpra.2008.02.007

Ohre, B., Von Tezchner, S., & Falkum, E. (2011). Deaf adults and mental health: a review of recent research on the prevalence and distribution of psychiatric symptoms and disorders in the prelingually deaf adult population. *International Journal on Mental Health and Deafness, 1,* 3–22.

Oliver M. (1983). *Social Work with Disabled People*. Basingstoke: Macmillan.

Olkin, R. (2001). *What Psychotherapists Should Know about Disability*. New York, NY: Guilford Press.

Phoenix, S. (1988). A study of the Deaf population in Northern Ireland. Belfast: University Queen's Press.

Pollard, R. (1996). Professional psychology and Deaf people: The emergence of a discipline. *American Psychologist*, *51(4),* 389-396. doi: 10.1037/0003-066X.51.4.389

Remine, M., & Brown, M. (2010). Comparison of the prevalence of mental health problems in deaf and hearing children and adolescents in Australia. *Australian and New Zealand Journal of Psychiatry, 44*, 351-357. doi: 10.3109/00048670903489866

Rieffe, C. (2011). Awareness and regulation of emotions in deaf children. *British Journal of Developmental Psychology, 30*, 477-492. doi: 10.1111/j.2044-835X.2011.02057.x

Rogers, C. R. (1957). The necessary and sufficient conditions of therapeutic personality change. *Journal of Consulting Psychology, 21,* 95-103. doi: 10.1037/0033-3204.44.3.240

Safer, D.L., Telch, C.F., Agras, W.S. (2001). Dialectical behavior therapy for bulimia nervosa. *American Journal of Psychiatry, 158,* 632–634.

Schein, J. D. (1989). *At home among strangers.* Washington, DC: Gallaudet University Press.

Schild, S., & Dalenberg, C. J. (2012). Trauma exposure and traumatic symptoms in deaf adults. *Psychological Trauma: Theory, Research, Practice, And Policy*, *4*(1), 117-127. doi:10.1037/a0021578

Schlesinger, H. & Meadow, K. (1972). *Sound and Sign: Childhood Deafness and Mental Health*. Berkeley: University of California Press.

Schwenke, T. (2011). Childhood trauma: Considering diagnostic and culturally sensitive treatment approaches for deaf clients. *Journal Of The American Deafness And Rehabilitation Association*, *45*(1), 158-173.

Segal Z. V., Williams J. M. G., & Teasdale J. D. (2002). *Mindfulness-based cognitive therapy for depression: A new approach to preventing relapse.* New York, NY: Guilford Press.

Sinnott, C., Looney, D., & Martin, S. (2012). Social Work with Students Who Are Deaf or Hard

of Hearing. *School Social Work Journal*, *36*(2), 1-14.

Stahl, B., & Goldstein, E. (2010). *A Mindfulness-Based Stress Reduction Workbook.* Oakland,

CA: New Harbinger Publications.

Stirling Jr., J., & Amaya-Jackson, L. (2008). Understanding the behavioral and emotional

consequences of child abuse. *Pediatrics, 122*(3), 667-673. Retrieved

from www.scopus.com

Sue, D. W., & Sue, D. (2007). *Counseling the culturally different: Theory and practice* (5th ed.).

New York, NY: Wiley.

Sullivan, P.M., Vernon, M. & Scanlan, L. (1987) Sexual abuse of deaf youth. *American*

Annals of the Deaf, 32(4), 256–262. doi: 10.1353/aad.2012.0614

Sullivan, P. M., & Knutson, J. F. (1998). The association between child maltreatment and

disabilities in a hospital-based epidemiological study. *Child Abuse & Neglect*, 22, 271-

288. doi:10.1016/S0145-2134(97)00175-0

Teleki, J. W. (2009). *Mindfulness-based stress reduction: A meta-analysis of psychological*

outcomes. Retrieved from ProQuest Dissertations and Theses. (3396779, Palo Alto

University).

Thompson, R., Arnkoff, D., Glass, C. (2011). Conceptualizing mindfulness and acceptance as

components of psychological resilience to trauma. *Trauma, Violence, & Abuse*, *12(4),*

220-235. doi: 10.1177/1524838011416375

Van Gent, T. A. (2011). Self-concept and psychopathology in deaf adolescents: preliminary

support for moderating effects of deafness-related characteristics and peer problems.

Journal Of Child Psychology & Psychiatry, *52*(6), 720-728. doi: 10.1111/j.1469-7610.2011.02392.x.

Van Gent, T., Goedhart, A., Hindley, P., & Treffers, P. (2007). Prevalence and correlates of psychopathology in a sample of deaf adolescents. *Journal of Child Psychology and Psychiatry*, *48*(9), 950-958. doi:10.1111/j.1469- 7610.2007.01775.x

Vernon, M., & Daigle-King. (1999) Historical overview of inpatient care of mental patients who are deaf. *American Annals of the Deaf*, *144(1)*, 51-61.

Vøllestad, J., Nielsen, M., & Nielsen, G. (2012). Mindfulness- and acceptance-based interventions for anxiety disorders: A systematic review and meta-analysis. *British Journal Of Clinical Psychology*, *51*(3), 239-260. doi:10.1111/j.2044-8260.2011.02024.x

Vujanovic, A. A., Youngwirth, N. E., Johnson, K. A., & Zvolensky, M. J. (2009). Mindfulness-based acceptance and posttraumatic stress symptoms among trauma-exposed adults without axis I psychopathology. *Journal of Anxiety Disorders, 23(2)*, 297-303. doi: 10.1016/j.janxdis.2008.08.005

Wegner, D. M., & Smart, L. (1997). Deep cognitive activation: A new approach to the unconscious. *Journal of Consulting and Clinical Psychology, 65(6),* 984-995. doi: 10.1037/0022-006X.65.6.984

Werngren-Elgström, M., Dehlin, O., & Iwarsson, S. (2003) Aspects of quality of life in persons with pre-lingual deafness using sign language: subjective wellbeing, ill-health symptoms, depression and insomnia. *Archives of Gerontology and Geriatrics, 37(1),* 13–24. doi: 10.1016/S0167-4943(03)00003-7

Williams, K. A., Kolar, M. M., Reger, B. E., & Pearson, J. C. (2001). Evaluation of a wellness-based mindfulness stress reduction intervention: A controlled trial. *American Journal of Health Promotion, 15(6),* 422-432.

Williams, C., & Abeles, N. (2004). Issues and implications of Deaf culture in therapy. *Professional Psychology: Research and Practice*, *35(6),* 643-648. doi: 10.1037/0735-7028.35.6.643

Willis, R. G., & McCay, V. (2002). Residential psychiatric treatment of emotionally disturbed deaf youth. *American Annals Of The Deaf*, *147*(1), 31-37.

Wilson, K. G., Follette, V. M., Hayes, S. C., & Batten, S. V. (1996). Acceptance theory and the treatment of survivors of childhood sexual abuse. *National Center for PTSD Clinical Quarterly*, 6(2), 34-37.

World Health Organization. (2014). *Deafness and Hearing Loss* (Fact sheet No. 300). Retrieved from http://www.who.int/mediacentre/factsheets/fs300/en/

Zylowska, L., Ackerman, D.L., Yang, M.H., Futrell, J.L., Horton, N.I., Hale, S., Smalley, S.L. (2008). Mindfulness meditation training in adults and adolescents with ADHD: A feasibility study. *Journal of Attention Disorders, 11*, 737–746.