

Caring for the caregiver: A case study of the effect of music therapy on stress of a parent  
of a child with disabilities

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## **Abstract**

This thesis is a quantitative case study examining the effect of music therapy on stress in a parent of children with disabilities. The participant, referred to using the pseudonym Sue, participated in four music therapy sessions specifically tailored to address stress. Interventions used included improvisation exercises, verbal processing, and music-based mindfulness and relaxation exercises. A pre-test and post-test were administered to examine the effect of the music therapy sessions on Sue's reported parental stress. The scores indicated a reduction in reported parental stress, though these results are not meant to be generalizable to the population due to case study design. The author asserts that the therapeutic techniques of validation, nonjudgement, and the incorporation of Sue's own concepts into future music therapy interventions led to the reduction in stress. The researcher recommends further research could be focused on which specific therapeutic techniques are most effective in reducing stress in parents of children with disabilities.

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## Introduction

Stress is experienced by most parents. Parental stress is defined by Deater-Deckard (2004) as “a set of processes that lead to aversive psychological and physiological reactions arising from attempts to adapt to the demands of parenthood” (p. 6). Parents raising children with disabilities may encounter unique challenges that can cause increased stress (Baker-Ericzén, Brookman-Frazee, & Stahmer, 2005). Resch, Mireles, Benz, Grenwelge, Peterson, and Zhang (2010) conducted a study to gain an understanding of the factors that can be barriers to well-being in parents of children with disabilities. In the study four themes arose as factors, including obtaining access to information and services, financial barriers to obtaining services, school and community inclusion, and family support. Several factors have been shown to elevate stress in parents of children with disabilities, including greater financial responsibilities, physical burdens, maladaptive behaviors in children, feelings of social isolation, and concern about lifelong care of the child (Baker-Ericzén et al., 2005). Exposure to these stressful events have been shown to cause a reduction in overall health of these parents. These parents may engage in unhealthy behaviors such as not sleeping enough or smoking and show higher levels of the stress hormone cortisol (Gouin, da Estrela, Desmarais, & Barker, 2016). The stress caused by these factors could lead to impaired cognitive and thyroid function as well as raised blood pressure (Ebrecht, Hextall, Kirtley, Taylor, Dyson, & Weinman, 2004).

In a study conducted by Williams, Berthelson, Nicholson, Walker, and Abad (2012), short term music therapy groups were conducted with dyads composed of mothers and their children with disabilities. The results showed that participation in the group led to an improvement in the following areas: parent mental health, child communication and social skills, parenting sensitivity, parental engagement with child and acceptance of child, child

responsiveness to parent, and child interest and participation in program activities (Williams et al., 2012). The researchers in this study focused largely on the relationship between the mother and the child and lightly touched the issue of stresses of parenthood. They also did not focus on all varieties of parents, but rather just mothers.

There is a lack of literature showing a relationship between participation in group music therapy sessions and parental stress levels of those raising children with disabilities. This raises the question of whether participation in music therapy groups affects stress in parents of children with disabilities.

### **Research Question**

Does participation in a music therapy group reduce stress experienced by parents of children with disabilities? Possible limitations related to exploring this hypothesis may include a small sample size and lack of diversity based on the demographics of the geographical area from which the sample will come. It is important to note that the research question was adapted during the recruitment portion of the research study as the research design became a case study.

### **Operational Definitions**

For the purpose of this research study, parental stress is defined as “a set of processes that lead to aversive psychological reactions arising from attempts to adapt to the demand of parenthood” (Deater-Deckard, 2004, p. 6). A child with a disability is defined as any individual age 0 to 18 experiencing a diagnosed impairment in physical, learning, language, or behavior areas (Centers for Disease Control and Prevention, 2017). Music therapy is defined as “the clinical and evidence-based use of music interventions to accomplish individualized goals within a therapeutic relationship by a credentialed professional who has completed an approved music therapy program” (American Music Therapy Association, 2017).

## Literature Review

### Children with Disabilities

In the United States, approximately 1 in 6 children, or about 15% of children, are diagnosed with a developmental disability (Centers for Disease Control and Prevention, 2017). These disabilities may include ADHD, autism spectrum disorder, cerebral palsy, hearing loss, intellectual disability, learning disability, and vision impairment (Centers for Disease Control and Prevention, 2017). Causes include myriad factors, including genetics, parental health and behaviors (such as smoking and drinking) during pregnancy, complications during birth, infections the mother might have during pregnancy or early in the baby's life, and exposure of the mother or child to high levels of environmental toxins (Centers for Disease Control and Prevention, 2017). Individuals with developmental disabilities may experience impairment in physical, learning, language, or behavior areas, and these impairments affect the day-to-day living of both the individual and their support system (Centers for Disease Control and Prevention, 2017). The prevalence of disabilities in children today necessitates research in this population and the people who care for them.

### Parents of Children with Disabilities

Parents of children with disabilities may experience unique challenges. Some parents' day-to-day experiences with their children can present challenges. In a study by Olsen, Kruse, Miller, and Brussoni (2016), the safety-related concerns of parents of children between 1 and 5 years with disabilities and chronic conditions were examined in a qualitative study (Olsen et al., 2016). These participants were interviewed and the content of the interviews were coded using comparative methods (Olsen et al., 2016). The three themes that emerged were concerns

regarding the child's level of understanding about danger, the children interactions with their physical environment, and the child's interaction with their social environment (Olsen et al., 2016). The everyday tasks and experiences of parents of children with disabilities in caring for their children can be unique from those of parents of typical children.

Some challenges that contribute to decreased well-being of parents of children with disabilities arise from a lack of environmental supports. In a study by Resch, Mireles, Benz, Grenwelge, Peterson, and Zhang (2010) the barriers to well-being for parents of children with developmental disabilities were examined within four focus groups were conducted with 40 parent caregivers. The data gathered from these focus groups were coded into themes which included: access to information and services, financial barriers, school and community inclusion, and family support. By exploring these barriers, a better understanding of the challenges of parents of children with disabilities was achieved.

Some challenges may arise from parents' perception of services available for their children with disabilities. In a study by Ryan & Quinlan (2017), researchers aimed to examine the impact of parents' perceptions and evaluations of services on their well-being and adaptation to their child's disability. The study was qualitative in nature and consisted of four focus groups with 24 parents total (Ryan & Quinlan, 2017). Thematic analysis revealed the following key themes: lack of child/family centeredness, resources, and uncertain access to a complex system (Ryan & Quinlan, 2017). It was concluded that the parents in the study desired greater collaboration between parents and professionals assisting their children (Ryan & Quinlan, 2017).

In another study by Faw and Leustek (2015), researchers sought to explore the challenges that parents of children with disabilities discuss with their informal networks (such as their

family and friends). Forty conversations between parents of children with disabilities and members of their informal networks were recorded and following themes were uncovered: isolation, relationships, stigma, parenting, logistics, socialization, and transitioning to adulthood (Faw & Leustek, 2015). It seemed that parents of children with disabilities regularly discuss with their informal networks the specific challenges they experience.

According to Brown and Clark (2017), work and family balance among parents of children with disabilities can present a challenge to this group as well. The authors reviewed literature from several search engines and databases to determine the main factors that affect work-family balance, including individual and organizational factors (Brown & Clark, 2017). The individual factors discovered were child age, number of children, childcare availability, relationship status, perception of one's work role, and type and severity of the child's disability (Brown & Clark, 2017). The organizational factors were supervisory support, workplace policies, and organizational culture (Brown & Clark, 2017). Both individual and organizational factors contribute to the challenges of establishing a balance between work and family for parents of children with disabilities.

### **Stress in Parents of Children with Disabilities**

The challenges that are faced by parents of children with disabilities can lead to heightened levels of stress, which can impact the health of the parent. According to Lindo, Kliemann, Combes, and Frank (2016), the prolonged stress associated with raising a child with a disability can take a toll on the parents' health if not addressed. The researchers examined the interventions used to address stress levels of parents of children with developmental disabilities. The article cites family systems theory as a rationale for examining stress of the parents

specifically (Lindo et al., 2016). The researchers examined all empirically-supported literature on stress of parents of children with disabilities and coded the findings into themes (Lindo et al., 2016). Behavioral parent training (BPT) programs and coping skills interventions (CSI) were the interventions that had the most marked effects on parental stress levels (Lindo et al., 2016).

Another intervention that has been used to address stress in parents of children with disabilities is mindfulness-based stress reduction (MBSR). Mindfulness is the practice of observing life moment to moment and is a structured, evidence-based group program that aims to increase awareness, non-judgment of events, and relaxation (Bazzano, Wolfe, Zylowska, Wang, Schuster, Barrett, & Lehrer, 2015). In a study by Bazzano et al. (2015), parents of children with disabilities participated in an eight-week MBSR program. Both quantitative and qualitative data was collected in the form of stress-measuring Likert scales and interviews/discussions. Participants showed lasting improvements in stress reduction and self-compassion two months following the study, though these improvements had decreased from the initial findings immediately following the study (Bazzano et al., 2015).

Several different strategies for addressing stress in parents with disabilities have been cited. Many of the strategies include didactic practices in which parents are taught skills related to stress-reduction. Behavioral parent training, though not directly related to reducing stress, teaches parents how to manage their child's challenging behaviors and could in turn lead to stress reduction (Lindo et al., 2016). Mindfulness-based stress reduction (Bazzano et al., 2015) and coping skills interventions (Lindo et al., 2016) focus on teaching parents' skills to directly reduce their stress. It is possible that music therapy interventions incorporating aspects of these didactic interventions could also help parents of children with disabilities reduce their stress levels.

## **Music Therapy and Stress**

The use of music therapy to address stress has been the subject of studies in a variety of studies with a variety of populations. However there is not yet a study about using therapy to specifically address stress in parents of children with disabilities.

A meta-analysis of the effect of music on stress was conducted by Pelletier (2004). This analysis consisted of an in-depth examination of 22 articles about music and stress. Features of the articles such as sources of publication, demographic information about the participants, procedures employed, and types of stress were examined and coded to determine overall themes and limitations of the studies. From this information, suggestions for clinical practice in music therapy to address stress were developed. The suggestions included information about the most effective number of participants; demographic considerations (age, musician vs. non-musician); music recordings, interventions, and music therapy techniques to use; and methods of evaluating the effectiveness of treatment (Pelletier, 2004, p. 209).

The effectiveness of music therapy specifically in addressing and treating stress has been the subject of research in a variety of settings and populations. Whether music therapy is effective in addressing stress may rely on the underlying question of whether music alone has an effect on stress. According to Dileo and Bradt (2007), simply listening to music considered to be ‘relaxing’ (that is, music with a slow tempo, low pitch, and no lyrics) has been shown to reduce stress overall in studies of both healthy individuals and individuals experiencing health issues. However, individual responses to music are still complex and variable, and these variations can be better accommodated in the context of music therapy. A music therapist can adapt and tailor a music therapy treatment plan to address the specific needs of an individual experiencing stress

and achieve an outcome that is more significant than music listening alone (Dileo and Bradt, 2007).

Holland (1995) used music therapy to address stress in a variety of individuals (Wigram, Saperston, West, 1995). Holland (1995) noted that using specific techniques and interventions seemed to be more effective in addressing stress, and one such technique was improvisation. During improvisatory interventions, individuals were able to externalize feelings and emotions that contributed to their stress, and then work to identify and cope with these feelings through continued improvisation and/or verbal processing (Holland, 1995, p. 423-424).

Research on the effects of music on stress are vast and appear in a variety of publications, including those not specific to music therapy, as evidenced in the meta-analysis by Pelletier (2004). The research done by Dileo and Bradt (2007), as well as Holland (1995) assert the benefits of music therapy in addressing stress versus music alone, citing the ability of the music therapist to tailor interventions specifically to the individual, and using active music-making to promote expression and processing of challenging emotions.

### **Music Therapy Interventions Addressing Stress in Parents of Children with Disabilities**

Music therapy is defined as “the clinical and evidence-based use of music interventions to accomplish individualized goals within a therapeutic relationship by a credentialed professional who has completed an approved music therapy program” (American Music Therapy Association, 2017). In music therapy, the strengths and weaknesses of an individual or group are assessed to develop a treatment plan, which delineates the goals, duration, and frequency of music therapy as well as the interventions that may be employed. Interventions used during

implementation may include re-creating pre-composed music, improvising music using instruments or vocalization, composing new music, and listening to live or recorded music. Following the implementation of the treatment plan, the progress of the individual or group is evaluated to determine the next course of action, which may include continuing music therapy with the same or different goals or discontinuing/terminating music therapy.

There is no existing literature on the use of music therapy interventions to specifically address stress in parents of children with disabilities. However, there have been other studies that examined the impact of music therapy on the parent-child relationship when the child has a disability. In a study conducted by Williams, Berthelson, Nicholson, Walker, and Abad (2012), short term music therapy groups were conducted with dyads composed of mothers and their children with disabilities. The results showed that participation in the group led to an improvement in the following areas: parent mental health, child communication and social skills, parenting sensitivity, parental engagement with child and acceptance of child, child responsiveness to parent, and child interest and participation in program activities. There was also evidence for high parental satisfaction and that the program brought social benefits to families.

Other similar studies included information about the use of music therapy interventions to foster positive parent-child relationships and behaviors. In a study by Nicholson, Berthelsen, Abad, Williams, & Bradley (2008), a music therapy program was employed for underprivileged parents and their children with disabilities. This study showed an improvement in parent and child behaviors following the program, reported by both the researchers and the parent participants. These included decreased instances of irritable parenting, more play and educational activities used in the home, improved parent mental health, and improved child communication

and social play skills. In another study by Jacobsen, McKinney, and Holck (2014), researchers examined the use of music therapy interventions to foster improved parent-child relationships in dyads where the child was identified as emotionally neglected. The results of this study showed a reduction in the parents' stress in relation to the behaviors and emotions of their children, as well as increased positive parenting behaviors and decreased negative parenting behaviors. Though each of these studies involved the use of music therapy interventions with parents, none specifically addressed stress in parents of children with disabilities.

### **Measuring Stress**

The perceived stress scale (PSS) is a widely used scale that measures an individual's perception of stress (Cohen, Kamarck, & Mermelstein, 1983). It is composed of items that were designed to gauge how unpredictable, uncontrollable, and overloaded respondents find their lives (Cohen, Kamarck, & Mermelstein, 1983). The items are rated by the participant by the frequency of encounters with the event (Cohen, Kamarck, & Mermelstein, 1983). There is evidence for validity in as higher PSS scores are associated with failure to quit smoking, failure among diabetics to control blood sugar levels, greater vulnerability to stressful life-event-elicited depressive symptoms, and more colds (Cohen, Kamarck, & Mermelstein, 1983).

Though the PSS aims to measure stress in a variety of individuals, the parental stress scale is adapted to measure stress specifically in parents. The parental stress scale is a self-report scale that measures positive themes of parenthood and negative components (Berry & Jones, 1995). Participants mark each item as "agree" or "disagree" on a five-point scale (strongly disagree, disagree, undecided, agree, strongly agree) (Berry & Jones, 1995). The scale is intended to assess stress of both mothers and fathers of children without clinical concerns (Berry

& Jones, 1995). It shows satisfactory internal reliability and test-retest reliability (Berry & Jones, 1995).

This literature review examined the existing literature on stress in parents of children with disabilities, the factors contributing to this stress, the effect of music therapy on stress, and interventions that have been used to address stress in this group. Factors that contribute to stress in parents of children with disabilities include environmental barriers (support services, financial issues), reduced work-family balance, and the challenges of day-to-day parenting practices. From the existing literature, a question arises: Does participation in a music therapy group reduce stress experienced by parents of children with disabilities?

## **Methods**

### **Research Design**

Due to challenges in recruiting enough participants to conduct music therapy groups, a quantitative case study of one individual was employed. The researcher used the Parental Stress Scale (See appendix A: Berry & Jones, 1995) as a pre-test and post-test to assess the participant's stress before and after four weekly music therapy sessions.

### **Participant**

Initially, the researcher attempted to recruit participants for a study of music therapy groups for parents of children with disabilities. Flyers describing the study and how to participate were placed in the community and shared with various groups for parents of children with disabilities via e-mail. The flyer instructed potential participants to e-mail the researcher for the dates and times of four music therapy groups. One individual e-mailed the researcher, and due to lack of response to participate, this individual was asked to participate in individual sessions exploring the effect of music therapy on stress in a parent of children with disabilities. Thus the research question was adapted to "Does participation in music therapy reduce stress experienced by a parent of a child with disabilities?".

The participant, to be referred to by the pseudonym Sue henceforth, is a mother of two children with disabilities. Her children are 14 and 19 years of age, and they are diagnosed with Down Syndrome and Autism Spectrum Disorder respectively. Sue resides with her partner and her younger child. Her older child is attending college, where they live on-campus.

### **Procedure**

Following recruitment, Sue participated in four music therapy sessions. Sue and the music therapist/researcher attempted to schedule the sessions as close together as possible,

though there were breaks of 2-3 weeks between the second and third sessions as well as between the third and fourth sessions. During the first and fourth sessions, Sue completed the Parental Stress Scale (Berry & Jones, 1995) as a pre-test and post-test respectively.

During each session, Sue participated in music therapy interventions designed to reduce and process Sue's experience of stress. Interventions included mindfulness-based music listening, improvisation, re-creating familiar songs, and verbal processing. Each intervention will be described in more detail in the following sections which discuss the interventions used in each session.

### **Session One**

This purpose of this session was to introduce Sue to the study. After explaining the study to Sue and gaining informed consent, the music therapy/researcher administered the Parental Stress Scale (Berry & Jones, 1995), and then conduct an informal assessment to gather background information about Sue. The music therapy/researcher discussed the concept of mindfulness with Sue, and then engaged Sue in a music-supported mindfulness exercise. This exercise involved the therapist/researcher leading Sue through a script focused on tuning in to the breath and body, while accompanying and supporting with soft instrumental music on the guitar. The music was predictable, cyclic, and slow in tempo. Following the music and mindfulness exercise, the music therapist/researcher and Sue engaged in verbal processing of the experience.

### **Session Two**

For the next three weeks, Sue was unable to meet due to traveling to visit her older son and illness. At the second meeting, the music therapist/researcher began the session by engaging Sue in a verbal check-in and provided a supportive presence and validation of Sue's

experience. Following the verbal check-in, Sue was asked to participate in two music-listening interventions focused on mindfulness. During the first, the music therapist/researcher invited Sue to get comfortable and focus on the sounds of the guitar. The music therapist/researcher instructed Sue to raise her hand when she heard a tone, and to lower her hand when the sound stopped. She also instructed Sue to verbally say whether each tone was louder or softer than the tone previous. Initially, the music therapist/researcher plucked consecutive tones on the guitar that were vastly different in tone and duration. After about six tones, the music therapist/researcher reduced the difference in volume and duration, requiring Sue to focus more.

During the second music-listening intervention, the music therapist/researcher played a simple, repetitive melody on the guitar, inviting Sue to focus on the melody while allowing her thoughts to come and go and using the cyclical melody played on the guitar to guide Sue's breath. She then asked that Sue bring her attention back to the room by noticing the sounds around her and opening her eyes.

Following the mindful listening interventions, the music therapist/researcher engaged Sue in an instrument playing intervention. The instruments included the ocean drum, kokoriko, cabasa, and tambourine, which were placed on a table in front of Sue. The music therapist/researcher invited Sue to explore the instruments as if it were the first time she had ever encountered them. The music therapist/researcher and Sue improvised on the instruments together. The music therapist/researcher played a simple, grounding rhythm on a frame drum as Sue selected and played different instruments, verbally instructing Sue in how to play them when Sue asked, and nonverbally validating Sue's musical choices by making eye contact, smiling, nodding, and sometimes repeating similar rhythms back to her. Following the improvisation

intervention, the music therapist/researcher and Sue engaged in verbal processing about Sue's experiences during each intervention.

### **Session Three**

The third session was conducted differently than the first two. Because Sue entered the session displaying signs of upset, the music therapist/researcher engaged Sue in a verbal check-in and supported Sue as she shared about an upsetting situation that had been unfolding in her life. The therapist validated and supported Sue as she shared.

Following the verbal processing intervention, the music therapist/researcher invited Sue to participate in a mindful listening intervention, during which the music therapist/researcher played a guitar melody that was predictable, cyclic, and slow in tempo. She invited Sue to observe her thoughts without attempting to stifle or change them. She instructed Sue to entrain her breath to the tempo of the music if she ever found herself becoming fixated on a specific thought or feeling. The music therapist/researcher continued this intervention until she observed a change in Sue's disposition that seemed to indicate reduced upset. Following this exercise, the music therapist/researcher and Sue engaged in verbal processing of the experience.

### **Session Four**

The fourth and final session began with the initial verbal check-in, during which the music therapist/researcher provided validation and reflected Sue's statements. Prior to the session, the music therapist/researcher had placed several small instruments on the table to prepare for an instrumental improvisation intervention. Sue picked up the ocean drum and began to explore its sounds before the planned improvisation intervention and started to reminisce on a past beach vacation. The music therapist/researcher asked open-ended and clarifying questions to encourage continued reminiscence and positive affect.

Sue was then invited to participate in a music and relaxation intervention which would include a visualization component. Sue was instructed to play the ocean drum to mimic the sound of waves hitting a beach. The music therapist/researcher played a simple, cyclical melody on the guitar while verbally inviting Sue to visualize sitting on the beach, asking her to focus on imagining the physical sensations that may accompany this experience (such as the warmth of the sun on her shoulders, the coolness of the water on her feet). When the intervention was concluded, Sue was encouraged to “return to the room” by noticing the stimuli in the space. Sue and the music therapist/researcher then discussed the experience, and then processed the concept of this session being the final session. The music therapist/researcher provided validation and support, informing Sue of several resources she could contact should she need more support and offering to make referrals for her.

The music therapist/researcher then left the space while Sue completed the Parent Stress Scale (Berry & Jones, 1995) post-test, collecting the paper copy when she was finished. The music therapist/researcher thanked Sue for her participation, and then encouraged Sue to contact her if she felt she needed future support in the form of a referral to another helping professional or resource.

### **Data Analysis**

The music therapist/researcher collected pre-test and post-test data using the parental stress scale (Berry & Jones, 1995). The test was administered and scored on paper, and the results were digitized from written format to a table format for the purpose of ease of comparison. The music therapist/researcher compared the total scores from the pre-test and post-test, as well as examined the item scores for each item from pre-test to post-test. She noted which items showed the most change from pre-test to post-test.

## **Ethical Precautions**

Before commencing this case study, the music therapist/researcher completed an IRB (Institutional Review Board) application and submitted it to the Saint Mary-of-the-Woods College IRB committee. Following several revisions, the case study was approved and the recruitment process began.

The pseudonym Sue was adopted to protect the anonymity of the participant. Sue was asked to sign an informed consent form prior to participating in the study, which informed her of the expectations and potential risks of participation. Pre-test and post-test data were initially collected on paper, then the results were immediately digitized to protect Sue's anonymity and for ease of analysis. The digital data was kept in a password-protected computer folder, and the paper copies were shredded and discarded. The non-identifiable digital data was kept for the purpose of writing the research study, and may continue to be used for future presentations or research on the topic. The potential of using non-identifiable data was included in the informed consent form.

The music therapy sessions were held in a private room in a local community center. The windows of the room were covered prior to each session to facilitate confidentiality and privacy during the interventions.

## **Results**

To examine results of the study, Sue's responses to the pre-test, post-test, and each individual music therapy session will be discussed.

### **Assessment and Pre-Test**

The Parental Stress Scale (Berry & Jones, 1995) was administered to Sue in the first session following signing the informed consent form. The music therapist/researcher also

conducted an informal verbal assessment of Sue's background to gather information about Sue's strengths and needs.

**Table 1**

*Parental Stress Scale (Berry & Jones, 1995) Responses and Scores – Before Music Therapy Sessions*

<b>ITEM</b>	<b>RATING BEFORE MUSIC THERAPY</b>	<b>ITEM SCORE</b>
1. I am happy in my role as a parent.*	5	1
2. There is little or nothing I wouldn't do for my child(ren) if it was necessary.*	5	1
3. Caring for my child(ren) sometimes takes more time and energy than I have to give.	4	4
4. I sometimes worry whether I am doing enough for my child(ren).	4	4
5. I feel close to my child(ren).*	5	1
6. I enjoy spending time with my child(ren).*	5	1
7. My child(ren) is an important source of affection for me.*	5	1
8. Having child(ren) gives me a more certain and optimistic view for the future.*	3	3
9. The major source of stress in my life is my child(ren).	1	1
10. Having child(ren) leaves little time and flexibility in my life.	3	3
11. Having child(ren) has been a financial burden.	5	5
12. It is difficult to balance different responsibilities because of my child(ren).	4	4
13. The behavior of my child(ren) is often embarrassing or stressful to me.	2	2
14. If I had it to do over again, I might decide not to have child(ren).	1	1
15. I feel overwhelmed by the responsibility of being a parent.	3	3
16. Having child(ren) has meant having too few choices and too little control over my life.	3	3
17. I am satisfied as a parent.*	4	2
18. I find my child(ren) enjoyable.*	4	2
	<b>TOTAL SCORE:</b>	<b>42</b>

**Session One**

Sue arrived at the first session displaying excited affect as indicated by eye contact, smiling, and readily engaging in discussion with the music therapist/researcher. As the music therapist/researcher gathered basic demographic information from Sue and acquired informed consent, Sue shared openly past experiences with music and about her children. She expressed excitement to participate in a research study about music therapy, as her younger child had received music therapy as a toddler. Following the completion of the informed consent form, the music therapist/researcher and Sue discussed the expectations for participating in the study, including attending four music therapy sessions focusing on stress, the first of which would take place that day.

After the music therapist/researcher left the room and Sue was asked to complete the Parental Stress Scale questionnaire (Berry & Jones, 1995), Sue shared her thoughts about some of the items on the questionnaire. She stated that she found it challenging to rate some of the items, in particular the items that she perceived to suggest she may have negative feelings toward her children. When the therapist asked Sue to elaborate, she stated that though she felt stressed by being a parent, it did not stem from her children themselves, but rather from wanting to ensure that they received the care and resources they needed. This led to a discussion of Sue's experiences surrounding raising her children. Topics included her challenges in two areas: accessing resources for her children and advocating for their needs in the public school setting. The music therapist/researcher provided a supportive presence and validation during this portion of the session.

Following this discussion, the music therapist/researcher opened a brief discussion about mindfulness. She provided a definition, and Sue shared that she had read about mindfulness, but

had not spent time participating mindfulness-based activities. The music therapist/researcher invited Sue to participate in a music and mindfulness exercise, to which Sue consented.

The music therapist/researcher lead Sue through a script focused on tuning in to the breath and body, while accompanying and supporting with soft instrumental music on the guitar. The music was predictable, cyclic, and slow in tempo. Following the music and mindfulness exercise, the music therapist/researcher and Sue engaged in verbal processing of the experience. Sue stated that when she felt her mind wandering, the melody played on the guitar assisted her in returning to her breath. The session was concluded with the music therapist/researcher and Sue discussing the best date and time for the next session.

### **Session Two**

For the next three weeks, Sue was unable to meet due to traveling to visit her older son and illness. At the second meeting, the music therapist/researcher began the session by engaging Sue in a verbal check-in, during which she shared about the challenges of finding transportation for her older child to return home for spring break. As Sue recalled this event, she expressed how much she had missed her older child, and how challenging it was to advocate for and support them while they were away. She displayed body language that indicated worry, rubbing her temples and frowning slightly. The music therapist/researcher provided a supportive presence and validation.

Following the verbal check-in, Sue was asked to participate in two music-listening interventions focused on mindfulness. During the first, the music therapist/researcher invited Sue to get comfortable and focus on the sounds of the guitar. Sue sat back in her chair and closed her eyes. The music therapist/researcher instructed Sue to raise her hand when she heard a tone, and to lower her hand when the sound stopped. She also instructed Sue to verbally say whether each

tone was louder or softer than the tone previous. Initially, the music therapist/researcher plucked consecutive tones on the guitar that were vastly different in tone and duration. It seemed as if Sue was forcing her focus – her eyebrows were initially drawn together and she strained her neck forward toward the music therapist/researcher. She raised her hand quickly and set it down quickly. As the music therapist/researcher continued to play the tones, reducing the difference in tones and duration between them, Sue appeared to relax. She settled back in her chair and raised her hand with less urgency. Her facial expression softened.

During the second music-listening intervention, the music therapist/researcher played a simple, repetitive melody on the guitar, inviting Sue to focus on the melody while allowing her thoughts to come and go and using the cyclical melody played on the guitar to guide Sue's breath. Sue's posture and facial expression continued to soften.

Following the mindful listening interventions, the music therapist/researcher engaged Sue in an instrument playing intervention. The instruments included the ocean drum, kokoriko, cabasa, and tambourine, which were placed on a table in front of Sue. The music therapist/researcher invited Sue to explore the instruments as if it were the first time she had ever encountered them. Sue shared that she had never encountered the kokoriko or the ocean drum. As the music therapist/researcher supported with a simple, steady rhythm on the frame drum, Sue freely picked up the instruments, sometimes playing them in rhythm, and sometimes simply engaging with them in a tactile-sense. She asked the music therapist/researcher questions about where she had acquired them and how to play them. She also shared about having encountered similar instruments when her younger son had participated in music programs in the past. Sue's facial expression had transitioned to a slight smile through the improvisation experience.

Sue and the music therapist/researcher engaged in verbal processing following the intervention. When the music therapist/researcher asked how Sue felt about exploring unfamiliar instruments, Sue stated that she was able to experience them with a sense of “childlike wonder”. When asked to elaborate, Sue stated that she felt she had always felt she was well-suited to be a parent of children with disabilities because she felt that she had this innate sense of “childlike wonder” and that it was a feeling or emotional experience that she found was easy for her to access.

At the end of the second session, Sue and the music therapist/researcher identified a song that was familiar to Sue and they engaged in re-creating the song with their voices and the guitar. The music therapist/researcher encouraged Sue to maintain her described sense of “childlike wonder”. Sue sang along for the portions of the song she was familiar and closed her eyes, swayed, and hummed along with the melody for other portions. Following the song, Sue displayed relaxed posturing and a pleasant, slightly smiling facial expression, sharing that she felt a sensation of “lifting” during the following verbal processing. When the music therapist/researcher asked if Sue could regularly remind herself to enter challenging situations with “childlike wonder” after this session and report back at the next session, Sue consented with a smile. It seemed that this concept resonated with her.

### **Session Three**

The third session differed from the format of the first two as the music therapist/researcher was obligated to address Sue’s emerging needs in the moment. When Sue entered the room, it immediately seemed to the music therapist/researcher that she was upset as indicated by her furrowed brow and lack of usual level of verbal interaction. The session began with the verbal check-in. During this, Sue shared with the music therapist/researcher that she had

been dealing with an interpersonal conflict with an individual with whom her older child had a relationship in the past. Her facial expression appeared tense as indicated by furrowed brow and frowning, transitioning to tearfulness as she shared feeling frustrated and upset about the situation. The music therapist/researcher provided validation and used verbal processing techniques to foster a sense of support. She sometimes asked clarifying questions, and sometimes maintained moments of silence to allow space for Sue to fully express the depth of her feelings regarding the situation. When Sue's verbalizations decreased and she appeared to reach a place where she had nothing more to share, the music therapist/researcher asked how she could support Sue, and Sue stated that talking about the situation had helped substantially.

The music therapist/researcher asked if she would like to participate in a mindful listening intervention similar to interventions she had participated in in the past, and Sue consented. The music therapist/researcher played a guitar melody that was predictable, cyclic, and slow in tempo. She invited Sue to observe her thoughts once again with a sense of "childlike wonder" without attempting to stifle or change them. She instructed Sue to entrain her breath to the tempo of the music if she ever found herself becoming fixated on a specific thought or feeling. Following this exercise, the music therapist/researcher and Sue engaged in verbal processing of the experience. Sue stated using the sense of "childlike wonder" allowed her to "slow down" her thoughts and emotional reactions. Her affect appeared relaxed as indicated by softened facial muscles and a smile. The music therapist/researcher mentioned that she had adopted the term "childlike wonder" into the intervention because it had seemed to resonate with Sue in the previous session. Sue recalled how easily she had accessed the feeling once again, and the music therapist/researcher encouraged Sue to use this feeling. Sue agreed that she felt this was a strength of hers.

## Session Four

The fourth and final session began with the initial verbal check-in, in which Sue provided an update of several stress-inducing events that had taken place since the last visit, and how she had been coping. One such event was a school project assigned to her younger child. She discussed how she had been working with her child's teacher to adapt the project to meet her child's needs. The assignment in question was for a life skills class, in which her son was assigned to bring home and to care for an electronic training "baby". Sue laughed and shared how she and her son had come up with ways to meet the needs of the "baby" while ensuring that her son did not feel overwhelmed. The music therapist/researcher provided validation and reflected Sue's statements, directing her attention to how she had used her strengths of humor and creativity to support her child, and Sue smiled.

Prior to the session, the music therapist/researcher had placed several small instruments on the table to prepare for an instrumental improvisation intervention. Before the intervention even began, Sue picked up the ocean drum and began to explore its sounds. She recalled a trip she and her younger child had taken to Hawaii the previous summer. She smiled as she recalled the specific details of the trip, and the music therapist/researcher asked open-ended and clarifying questions to encourage continued reminiscence and positive affect.

Sue was then invited to participate in a music and relaxation intervention which would include a visualization component. Sue was instructed to play the ocean drum to mimic the sound of waves hitting a beach. The music therapist/researcher played a simple, cyclical melody on the guitar while verbally inviting Sue to visualize sitting on the beach, asking her to focus on imagining the physical sensations that may accompany this experience (such as the warmth of the sun on her shoulders, the coolness of the water on her feet). When the intervention was

concluded, Sue was encouraged to “return to the room” by noticing the stimuli in the space. As Sue discussed the experience with the music therapist/researcher, she displayed a content facial expression and relaxed posture. She stated she was especially in touch with the idea and sensation of the waves hitting the shore, and felt that the shifting weight of the ocean drum had contributed to this feeling.

Sue was asked about her feelings regarding this session being the final session in the study. She expressed her gratitude for participating in the study, stating that it had been “fun” and that she felt it had been helpful to her. The music therapist/researcher then left the space while Sue completed the post-test, collecting the paper copy when she was finished. The music therapist/researcher thanked Sue for her participation, and then encouraged Sue to contact her if she felt she needed future support in the form of a referral to another helping professional or resource.

## **Table 2**

### *Parental Stress Scale (Berry & Jones, 1995) Responses and Scores – After Music Therapy*

#### *Sessions*

<b>ITEM</b>	<b>RATING AFTER MUSIC THERAPY</b>	<b>ITEM SCORE</b>
1. I am happy in my role as a parent.*	5	1
2. There is little or nothing I wouldn't do for my child(ren) if it was necessary.*	5	1
3. Caring for my child(ren) sometimes takes more time and energy than I have to give.	3	3
4. I sometimes worry whether I am doing enough for my child(ren).	4	4
5. I feel close to my child(ren).*	5	1
6. I enjoy spending time with my child(ren).*	5	1
7. My child(ren) is an important source of affection for me.*	5	1

8. Having child(ren) gives me a more certain and optimistic view for the future.*	5	1
9. The major source of stress in my life is my child(ren).	2	2
10. Having child(ren) leaves little time and flexibility in my life.	3	3
11. Having child(ren) has been a financial burden.	4	4
12. It is difficult to balance different responsibilities because of my child(ren).	3	3
13. The behavior of my child(ren) is often embarrassing or stressful to me.	2	2
14. If I had it to do over again, I might decide not to have child(ren).	1	1
15. I feel overwhelmed by the responsibility of being a parent.	3	3
16. Having child(ren) has meant having too few choices and too little control over my life.	2	2
17. I am satisfied as a parent.*	5	1
18. I find my child(ren) enjoyable.*	5	1
	<b>TOTAL SCORE:</b>	<b>35</b>

\*Denotes item that was reverse scored

Sue's post-test score of 35 was lower than her pre-test score of 42. The scores of each item different by one point for all responses from pre-test to post-test, with the exception of item 8, in which there was a difference in score of two points from pre-test to post-test. In all items, the scores decreased or remained the same from pre-test to post-test, with the exception of item 9, in which the score increased by 1 point from pre-test to post-test.

### Discussion

The purpose of this study was to answer the following question: Does participation in music therapy reduce stress experienced by a parent of a child with disabilities? This question had changed from the original research question to adapt to the case study design with one participant. In examining the results of the parental stress scale (Berry & Jones, 1995), the total score of Sue's responses decreased from the pre-test, indicating an overall decrease in reported parental stress. Between the administration of the pre-test and post-test, Sue attended four music therapy sessions

and actively participated in the interventions presented, which included improvisation exercises, verbal processing, and music-based mindfulness and relaxation exercises.

During the initial session, Sue identified stressors in her life. She commented on item 9 on the parental stress scale, which reads “the major source of stress in my life is my children” (Berry & Jones, 1995). Sue stated she felt she needed to clarify that she did not necessarily feel stressed *by* her children, but rather *about* her children. She identified challenges that had arisen in the past in securing educational resources to ensure the success of her children, and how this had changed since her older child began attending college. This topic was brought up several times over the four music therapy sessions, and each time the music therapist/researcher provided validation to facilitate an atmosphere of safety and non-judgment. In item 9 on the post-test, Sue responses received a higher score than in the pre-test, indicating higher agreement with the statement “the major source of stress in my life is my children”. It is the opinion of the music therapist/researcher that Sue’s change in response may be a result of the strengthened relationship between the music therapist/researcher and Sue, thus resulting in a response more consistent with her true feelings and perceptions.

The biggest change in Sue’s responses from pre-test to post-test appeared in item 8, which reads “having child(ren) gives me a more certain and optimistic view for the future” (Berry & Jones, 1995). During the pre-test, Sue rated this statement as “undecided”, then rated it as “strongly agree” in the post-test. In session 2, Sue was invited to improvise using small percussion instruments as if it were the first time she had ever encountered any of them (some of which Sue confirmed having never encountered). Sue used the term “childlike wonder” to describe the experience of improvising with percussion instruments and noted that this sense seemed to come to her quite easily.

The concept of “childlike wonder” was revisited and reinforced in the next session, when the music therapist/researcher encouraged Sue to observe her thoughts with a sense of “childlike wonder” during a mindful listening experience. Sue responded to the suggestion and intervention by reporting she was able to “slow down” her thoughts and emotional reactions. Additionally, her affect appeared relaxed as indicated by softened facial muscles and a smile following the intervention. The reinforcement of Sue’s own experience and positive coping strategy may have contributed to Sue’s change in response in item 8.

Several therapeutic techniques were used by the music therapist/researcher in attempts to facilitate an overall reduction of reported parental stress from Sue. The techniques that seemed to garner the most success with Sue were validation, nonjudgement, and incorporating the participant’s own concepts into later interventions. In doing so, the music therapist/researcher created a safe space for Sue to share and explore her perceptions of her role as a parent and empowered her with the knowledge that she already possessed skills that she could use to combat stress in the future. These specific techniques could be examined more in depth in future studies to determine their effectiveness in treating stress in parents of children with disabilities. It is possible that these techniques happened to be successful with Sue but may not be successful across the broader population.

Specific considerations for conducting research or music therapy sessions with parents of children with disabilities in the future may include how to accommodate single parents or parents who do not have access to childcare. This was a challenge for the music therapist/researcher during the recruitment process, as many potential participants were not able to leave their child(ren) for extended periods of time.

In conclusion, Sue showed a reduction in reported parental stress after participating in four music therapy sessions tailored to address stress specifically. Interventions including improvisation exercises, verbal processing, and music-based mindfulness and relaxation exercises combined with therapeutic techniques including validation, nonjudgement, and the incorporation of Sue's own concepts into future interventions facilitated an environment in which Sue could share openly and explore her strengths and resources.

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## Appendix A – Parental Stress Scale (Berry &amp; Jones, 1995)

## Parental Stress Scale

The following statements describe feelings and perceptions about the experience of being a parent. Think of each of the items in terms of how your relationship with your child or children typically is. Please indicate the degree to which you agree or disagree with the following items by placing the appropriate number in the space provided.

1 = Strongly disagree 2 = Disagree 3 = Undecided 4 = Agree 5 = Strongly agree

\_\_\_\_ 1. I am happy in my role as a parent.

\_\_\_\_ 2. There is little or nothing I wouldn't do for my child(ren) if it was necessary.

\_\_\_\_ 3. Caring for my child(ren) sometimes takes more time and energy than I have to give.

\_\_\_\_ 4. I sometimes worry whether I am doing enough for my child(ren).

\_\_\_\_ 5. I feel close to my child(ren).

\_\_\_\_ 6. I enjoy spending time with my child(ren).

\_\_\_\_ 7. My child(ren) is an important source of affection for me.

\_\_\_\_ 8. Having child(ren) gives me a more certain and optimistic view for the future.

\_\_\_\_ 9. The major source of stress in my life is my child(ren).

\_\_\_\_ 10. Having child(ren) leaves little time and flexibility in my life.

\_\_\_\_ 11. Having child(ren) has been a financial burden.

\_\_\_\_ 12. It is difficult to balance different responsibilities because of my child(ren).

\_\_\_\_ 13. The behavior of my child(ren) is often embarrassing or stressful to me.

\_\_\_\_ 14. If I had it to do over again, I might decide not to have child(ren).

\_\_\_\_ 15. I feel overwhelmed by the responsibility of being a parent.

\_\_\_\_ 16. Having child(ren) has meant having too few choices and too little control over my life.

\_\_\_\_ 17. I am satisfied as a parent.

\_\_\_\_ 18. I find my child(ren) enjoyable.

#### Scoring

To compute the parental stress score, items 1, 2, 5, 6, 7, 8, 17, and 18 should be reverse scored as follows: (1=5) (2=4) (3=3) (4=2) (5=1). The item scores are then summed.

Berry, J. O., & Jones, W. H. (1995). The Parental Stress Scale: Initial psychometric evidence. *Journal of Social and Personal Relationships, 12*, 463-472.

## Appendix B – Informed Consent Form

1

**Saint Mary-of-the-Woods College****CONSENT TO PARTICIPATE IN RESEARCH**

You are being asked to participate in a research case study conducted by Abigail Walters, MT-BC (and Dr. Tracy Richardson, Ph.D., MT-BC, faculty sponsor, Annette Whitehead-Pleaux, MA-, MT-BC) from the Master of Arts in Music Therapy program at Saint Mary-of-the-Woods College. This research is being conducted for a thesis. Your participation in this study is entirely voluntary. Please read the information below and ask questions about anything you do not understand before deciding whether or not to participate. You have been asked to participate because you are a parent of a child with a disability.

**PURPOSE OF THE STUDY**

The purpose of the research is to investigate whether participation in music therapy reduces stress in a parent of a child with disabilities.

**PROCEDURES**

If you volunteer to participate, you will attend four weekly individual music therapy sessions focused on stress reduction. You will complete a pre-test consisting of 18 rating-style questions on paper prior to the beginning of the first group session. Each session will include several interventions. These interventions include: verbal check-in, instrument improvisation, music-led relaxation, verbal processing, and a closing chant. Following the fourth and final session, you will complete a post-test consisting of 18 rating-style questions on paper. Between each session, you will be encouraged to use a music and mindfulness exercise in your day-to-day life. Each session will last between 50-60 minutes.

**POTENTIAL RISKS OR DISCOMFORTS**

The procedure involves minimal risk for the participant. You may feel uncomfortable discussing stress in your life. You may feel challenged by the interventions presented. The researcher will provide support and direction as needed. If potential feelings of discomfort or distress persist, the researcher will assist you in locating a helping professional in your geographical area.

**POTENTIAL BENEFITS**

Though there are no anticipated benefits for participation in this study, the participant may experience some reduction in stress.

#### **CONFIDENTIALITY AND RIGHTS OF RESEARCH PARTICIPANTS**

The data collection forms (hard copies of pre- and post-tests) will be uploaded digitally into the researcher's computer and placed into a password-protected digital folder to ensure security. These documents will be kept for no longer than three years following the research study. Paper forms will be shredded and disposed of immediately following digital input. Only the researcher will have access to the data obtained. Non-identifiable data may be cited in future research or presentations on the topic.

The participant may withdraw from the study at any time without penalty, by notifying the researcher. The participant may also participate in the music therapy sessions, but decline from completing the pre- and post-tests. There are no repercussions for withdrawal.

If you have questions about your rights as a participant in this research, you may contact Dr. Lamprini Pantazi, Ph.D., MBA, MS, chair of the Human Subjects Institutional Review Board at Saint Mary-of-the-Woods College. Her contact information is on the final page of this form. The IRB is an independent committee composed of members of the College community, as well as lay members of the community not connected with SMWC. The IRB has reviewed this study and has determined that it is exempt from IRB oversight.

This study was approved by the Saint Mary-of-the-Woods College Human Subjects Institutional Review Board.

If you have questions or concerns about this study, please contact the researcher, the researcher's supervisor, or the chair of the Human Subjects Institutional Review Board.

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**SIGNATURE**

**My signature below indicates that I am 18 years of age or older, I have been informed about this study, I consent to participate, and I have received a copy of this consent form.**

\_\_\_\_\_

Participant Printed Name

\_\_\_\_\_

Signature

\_\_\_\_\_

Date

*Note: If participant is under the age of 18, participant's parent or guardian must sign the consent form and the participant must sign an assent form.*

*Adapted from research consent form by Dr. Tracy Richardson, Saint Mary-of-the-Woods College, 2018*