

**DROP THE BEAT MUSIC THERAPY:  
A PSYCHOEDUCATIONAL MUSIC THERAPY PROGRAM PROPOSAL FOR  
INDIVIDUALS WITH TYPE 2 DIABETES**

by

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**Drop The Beat Music Therapy: A Psychoeducational Music Therapy Program Proposal  
For Individuals With Type 2 Diabetes**

**Summary Statement**

Drop the Beat Music Therapy will focus on individuals with type 2 diabetes by providing an outpatient music therapy psychoeducational group. This psychoeducational group will be addressing the needs and interests of the participants in order to help alleviate the burdens they experience due to their chronic medical condition. Drop the Beat will consist of various music therapy experiences that will be designed to provide opportunities to express creativity, expressive freedom, spontaneity, playfulness within structure, increase self-awareness, and enhance group cohesion. In addition, Drop the Beat will provide education about the effects of music and use of music for self-care, as an addition to the patient's existing self-care regimen. This paper presents a proposal for a music therapy program with collaboration with the Naomi Berrie Diabetes Center at Columbia University Irving Medical Center in New York, New York.

**Columbia University Irving Medical Center**

Columbia University Irving Medical Center (CUIMC) is a clinical, research, and educational enterprise (CUIMC, 2022). The top priority at CUIMC is patient care. CUIMC is a leader in providing comprehensive patient care and offers a range of general and specialized medical, dental, and nursing services. CUIMC has more than 1,800 physicians, surgeons, dentists, and nurses in locations throughout the New York City metro area. An emphasis of care at CUIMC is on personalized treatment, valuing each patient's uniqueness. They declare that their knowledge of innovative treatments is enhanced by compassion for patients and their families and a devotion to maintaining the highest standard of care (CUIMC, 2022).

**Naomi Berrie Diabetes Center at Columbia University Irving Medical Center**

Founded in 1998, The Naomi Berrie Diabetes Center at CUIMC and the Russ Berrie Medical Science Pavilion was founded in honor of Russ Berrie's late mother, Naomi. The Naomi Berrie Diabetes Center at CUIMC and the Russ Berrie Medical Science Pavilion has ongoing support for innumerable diabetes initiatives throughout the years including support for research fellowships and symposia, ophthalmology research and care, and the launch of a cutting-edge program in diabetes stem cell research aimed at curing diabetes (Naomi Berrie Diabetes Center, 2021).

**Personal Statement**

Growing up, I always gravitated towards music as a way of expressing myself. This was influenced by my delayed speech as a two-year-old child that led to a diagnosis of a speech and language impairment. I participated in speech and occupational therapy from two years of age through the end of sixth grade. I look up to the therapists that helped me as an inspiration to help others when they are in need. I believe overcoming my challenges has made me believe in other people's success. I was pre-diabetic in high school and was officially diagnosed with type 2 diabetes in November 2016. Mentally, emotionally, and physically, diabetes has taken a toll on me. It is difficult to have food restrictions and irregular blood sugar levels. I also must maintain regular exercise to help lower my blood sugar. My life revolves around pricking myself to test blood sugars, and injecting insulin every single day. Sometimes, I feel left out from doing the things I love. The one thing that kept me afloat was music. Music is a mode of expression and a way to take care of myself from the everyday difficulties of type 2 diabetes. In my studies in music therapy, my personal experience has led to an interest in helping others to connect with

music in a deeper way to help other people with type 2 diabetes to navigate their struggles with the condition. In the published literature, there is limited information regarding music therapy and diabetes education and research. One of my personal missions in music therapy practice is to expand diabetes research and education. By implementing this program, Drop the Beat Music Therapy can be one of potentially many support groups to serve type 2 diabetes.

### **Statement of Need**

In the United States there are 37.3 million Americans, or 11.3% of the population, that have been diagnosed with type 2 diabetes, with 1.9 million Americans being diagnosed every year (American Diabetes Association, 2022a). The Naomi Berrie Diabetes Center at CUIMC has a team of endocrinologists, nutritionists and dietitians, registered nurses and nurse practitioners, researchers, diabetes educators, a clinical trial coordinator, and an art therapist on staff. The Naomi Berrie Diabetes Center at CUIMC would benefit from the addition of music therapy as another creative arts therapy modality to address mental and physical health needs, and to educate patients and their caregivers on how music therapy can help alleviate the burdens of type 2 diabetes.

Fifteen percent of music therapists work in the medical/surgical populations. This includes patients with AIDS, cancer, chronic pain, comatose, hospice and palliative care, and medical/surgical (American Music Therapy Association [AMTA], 2021a, p. 17). At this time, there is limited literature in music therapy research to further support music therapy for individuals with type 2 diabetes. I am proposing a psychoeducational music therapy group for individuals with type 2 diabetes to offer support and education through participation in creative arts therapy. By providing and implementing a psychoeducational music therapy group, type 2

diabetic patients can experience the benefits music therapy can offer as an effective non-pharmacological intervention that could be beneficial to them and to their caregivers.

### **Theoretical Orientation**

My philosophy of music therapy incorporates psychotherapeutic approaches, including the person-centered approach, and resource-oriented music therapy. With these approaches, my role as a music therapist would be to assist those who are seeking growth, while engaging in different music therapy experiences using a supportive therapeutic rapport.

### **Music Psychotherapy**

Music psychotherapy is the use of music experiences in addition or in lieu of the traditional types of verbal discourse, using the music to facilitate interpersonal processes of therapist and client as well as the therapeutic change process itself (Bruscia, 1998). The term *psychotherapy* means a form of treatment for the psyche. It is essentially concerned with helping a person make those psychological changes deemed necessary or desirable to achieve well-being (Bruscia, 1998). One of the aims of psychotherapeutic music therapy is to help people with mental health problems develop relationships and address issues they may not be able to by only using dialogue (Gold et al., 2005). In music psychotherapy, the focus is on client issues that are psychological in nature. This approach relies on the relationships between the client, therapist, and the music. These music experiences facilitate interpersonal process of therapist and client, as well as the therapeutic change process itself (Bruscia, 1998). The two primary aims for music psychotherapy are a) to bring into the client's conscious experience material from the past that has been repressed and kept in the unconscious through defenses and resistances and that exerts adverse psychological effects on the present and b) to work through that material by using transference and countertransference to engage the client in corrective emotional experiences (Bruscia, 1998).

Bruscia (1998) describes four different levels of music psychotherapy, ranging on a continuum from the exclusive use of music to the exclusive use of verbal discourse during sessions. These four levels of music psychotherapy are using music *as* psychotherapy, music-centered psychotherapy, music *in* psychotherapy and verbal psychotherapy with music. *Using music as psychotherapy* refers to identifying, working through, and resolving a therapeutic issue, through engagement in active or passive music experiences with no need for or use of verbal discourse (Bruscia, 1998, p. 19). At the *music-centered psychotherapy* level, the issue(s) are accessed, worked through, and resolved by creating or listening to music. Verbal discourse is then used to guide, interpret, or enhance the music experience and its relevance to the client's therapeutic process (Bruscia, 1998). *Music in psychotherapy* is when the therapeutic issue is present, worked through, and resolved through both musical and verbal experiences, occurring either alternatively or simultaneously. At this level, the music is used specifically to address and treat psychotherapeutic issues. Words are used to identify and consolidate insights gained during the process (Bruscia, 1998). Lastly, *verbal psychotherapy with music* pertains to the therapeutic issue is present, worked through, and resolved primary through verbal dialogue. Music experiences may be used to facilitate or enrich the discussion, but it is not considered in the therapeutic issue or its treatment (Bruscia, 1998). For Drop the Beat Music Therapy, the level of music therapy that will best fit the group will be music in psychotherapy. The client may not want to experience therapy by only verbal communication. Music in psychotherapy depends on the verbal discussions to the nonverbal experiences of the music.

### **Psychoeducation**

Psychoeducation is an evidence-based cognitive behavior therapy (CBT) approach that assists clients to understand their illness with additional information about their available internal

and external resources (Baker, 2015). Psychoeducation combines problem-solving and role-playing scenarios within a safe setting to increase understanding of how their behaviors – both the positive and the negative – impact themselves and others. Baker (2015) notes that psychoeducation is influenced by several psychological theories. The ecological systems theory is relevant in terms of how people understand their (experience of) illness in relation to other systems in their lives. The holistic model of practice is emphasized whereas the therapeutic focus is the “here-and-now,” the developments of participants’ competencies, and the promotion of coping behaviors (Lukens & McFarlane, 2004) With these theories, the goal is to aid the process of understanding of the chronic medical conditions. In Drop the Beat Music Therapy, the music therapist will use these theories to educate and further understand type 2 diabetes in addition facilitate different music experiences to stimulate reassurance, encourage personal exchange of experiences, and create an opportunity to experience a ‘shared fate’ with other group members.

### **Person-Centered Music Therapy**

In a person-centered approach to music therapy, the components and process of the work are understood according to the tenets of humanism, which posits that “all persons have innate capacities for actualizing their own unique potential for health and well-being, given conditions that can serve adequately as opportunities for change.” (Abrams, 2015 p. 148). Carl Rogers, a pioneer of person-centered psychology, believed the person-centered approach has three components to the therapeutic process. Those three components are genuineness, empathetic understanding, and unconditional positive regard (Beidel et al., 2014). In the person-centered approach to music therapy, clients are regarded first as persons. Humans are neither exemplified as biological nor psychological “things” nor an inanimate fact of science with a concrete reality located in measurable space and time (Abrams, 2015). Bugental (1964) states that there are five

principles to the person-centered approach: a) humans supersede the sum of their parts and cannot reduce to components; b) humans exist in a uniquely human context; c) humans are conscious and aware of being conscious and conscious of others (i.e., relationally); d) humans both have a choice and responsibility; and e) humans are intentional, have goals, are aware that they play a role in future events, and seek meaning, value, and creativity (pgs. 23-24). In person-centered music therapy processes, interventions are never understood as isolated techniques that accomplish isolated results; rather, they are understood within the larger context of the client's whole being (Abrams, 2015). In music therapy, person-centered influence can be seen in the focus on developing a therapeutic rapport within the interpersonal and musical engagement, while valuing and recognizing the patient's goals and responsibilities in the music therapeutic setting. By recognizing the patient's goals and their responsibilities while in the music therapeutic setting, the relationship in which the client is free to grow, with the therapist helping to clarify awareness of inner experiences. (Wheeler, 1981).

### **Outcome-Oriented Music Therapy**

Outcome-oriented music therapy is an approach in which music therapists establish goals and objectives in order to help the client achieve their needs. Music is understood as a tool to achieve a range of non-musical goals and is typically functions as a stimulus to reinforce or to elicit measurable changes in behaviors or skills that are deemed to be therapeutic value to the client (Baker, 2015). There are at least three different outcome-oriented strategies that can be implemented in a music therapy session, as well as subcategories within these strategies. Music as agent uses music experiences as a form of stimulus, reinforcer, or mediator to indicate specific targeted outcomes, operationally defined as therapeutic or pre-therapeutic (i.e., requisite to therapeutic change) (Bruscia, 2014). Music as skill uses music activities and specific tasks to

contain and require skill needed by the client. The main objective of this strategy is when relationship is enjoyable and rewarding, the clients will work within the music experience to gain skills that they need to participate fully (Bruscia, 2014). Music therapy protocols are based on assessments and clinical preparations and are very specific and operationally defined goals and objectives that are established. Outcomes are non-musical changes in the clients and that the music experiences are, and relationships are activated and supported the efficacy of the music therapy sessions (Bruscia, 2014). This approach would be applicable to Drop the Beat Music Therapy because while we are using a person-centered approach, goals are established with the client and can be changed within the session. By applying the outcome-oriented approach, the music therapist can establish and be able to be flexible with goals and objectives in order to help the client achieve their needs.

### **Resource-Oriented Music Therapy**

Resource-oriented music therapy for people with mental health problems focuses on the client's resources, strengths, and potentials, rather than primarily on problems and conflicts, and emphasizes collaboration and equal relationships (Gold et al., 2005). This perspective of music therapy builds the contextual understanding of therapeutic processes, the philosophy of empowerment, and positive psychology (Gold et al., 2005). In a resource-oriented approach to music therapy, the client's resources are the center of attention, involving more than an additional element of resource activation in an otherwise problem-oriented interaction (Rolvjord, 2010). Resource-oriented music therapy emphasizes the development and stimulation on the client's strengths and resources and can help with reducing the symptoms or cure of pathology. Resource-oriented music therapy involves a) the nurturing of strengths, resources, and potentials; b) collaboration rather than intervention; c) resource-oriented music

therapy views the individual within the context; and d) music is seen as a resource (Rolvjord, 2010). Therapy focuses on positive experiences, mastery, and coping which can help with difficult emotions, psychological conflicts, and problems. In addition, the music therapist is creating a safe therapeutic space for all patients. By creating the safe space, this can activate self-healing. Releasing self-healing forces is an important characteristic of resource-oriented music therapy, including gaining access to the patient's personality in order to further developmental processes (Schwabe, 2005). This approach would work best with Drop the Beat Music Therapy because this approach focuses on the client's strengths and potentials, as well as the resources they have available to collaborate with the music therapist to facilitate different conversations to alleviate some burdens of type 2 diabetes, such as anxiety about blood sugar numbers.

### **Literature Review**

#### **Type 2 Diabetes**

Type 2 diabetes is a chronic health condition that affects how the body turns food into energy (Centers for Disease Control and Prevention, 2021). The different cells in muscles, fat, and the liver become resistant to insulin, a hormone naturally released in the human body that breaks down all forms of digestible sugar. Because these cells do not interact in a normal way with insulin, they do not take in enough sugar. Therefore, the pancreas is unable to produce enough insulin to manage blood sugar levels (Mayo Clinic, 2020). As a result, an individual's blood sugar will rise and will cause damage to the body and the brain. If left untreated, type 2 diabetes can lead to severe complications, such as cardiovascular disease, retinopathy (eye damage), nephropathy (kidney damage), strokes, which can then lead to coma and death (Mayo Clinic, 2022).

### ***Impact on Physical Health***

Physical health is significantly important when it comes to managing type 2 diabetes. Physical health impacts body mass index and biomarkers such as cortisol and hemoglobin HbA1c (A1C) levels (Annesi & Johnson, 2013). Cortisol is a steroid hormone produced by the adrenal glands, essential for regulating the body's response to stress, helping control the body's metabolism, and regulating blood pressure and blood sugar (Cleveland Clinic, 2021). Cortisol is one of the hormones that is secreted from the adrenal cortex and regulating mineralocorticoids, immune system function, blood pressure and metabolism. Conditions such as hypertension, hypercholesterolemia, central obesity and glucose intolerance are associated with increased levels of cortisol (Salehi et al., 2019). Adam et al. (2010) found that cortisol is negatively associated with potential compensatory mechanisms for insulin resistance, such as increased  $\beta$ -cell function and increased insulin release to a glucose challenge. Cioca (2013) noted that stress is a psychosomatic aspect of the disease. They note that though the primary etiology leading to type 2 diabetes is insulin resistance and eventual reduction in insulin secretion, stress also plays a key role. Stress, being the etiology as well as the consequence, thereby creates a cycle (Cioca, 2013). In relation to cortisol management, patients who experience higher levels of cortisol can have a harder time adjusting to the shift in glucose levels. The symptoms of having higher levels of cortisol include but are not limited to weight gain, muscle weakness in the upper arms and thighs, excessive hair growth, and osteoporosis (Cleveland Clinic, 2021). By experiencing heightened levels of cortisol and the symptoms mentioned for an extended period of time can lead to the diagnosis of Cushing's syndrome, a rare condition (Cleveland Clinic, 2021).

A1C is a diagnostic marker of glycemic control in patients with diabetes that has been validated in clinical trials to correlate with diabetes-related complications (Zhu et al., 2020). Normal A1C levels should be measured below 5.7%. Prediabetic levels are between 5.7% and 6.4%, and anything percentage higher than 6.5% results in a type 2 diabetes diagnosis (National Institute of Diabetes and Digestive and Kidney Diseases, 2016). To keep blood sugar and A1C levels down, many individuals with type 2 diabetes take oral medications, insulin injections, or a combination of the two. In addition, many type 2 diabetics deal with unnecessary hyper- and hypoglycemic episodes. If left untreated, individuals who have hyperglycemia could develop a condition called diabetic ketoacidosis (DKA) (Mayo Clinic, 2020). Ketoacidosis occurs when there is very little to no insulin to use in order to break down the body's glucose for fuel. Instead of using glucose for fuel, the body breaks down fat to use for energy. Ketones are developed when the body breaks down fat rather than glucose (American Diabetes Association, 2022). Because of high blood glucose levels, as a result, extremities such as hands, legs, and feet are at risk of amputation due to poor blood flow and nerve damage (National Institute of Diabetes and Digestive and Kidney Diseases, 2016). Moreover, individuals who experience hypoglycemia can have symptoms of anxiety, irritability, fatigue, an irregular or elevated heartbeat. If the condition's symptoms worsen, type 2 diabetic individuals can experience blurred vision, seizures, and loss of consciousness (Mayo Clinic, 2020). Patients who have type 2 diabetes need to control blood glucose levels to diagnose, treat, and track their medical condition.

### ***Impact on Mental Health***

Diabetes is a demanding illness, bringing complex physical and psychological challenges to an individual's life (Abdoli et al., 2021). While modern medicine is an effective intervention to help those individuals with type 2 diabetes, the need for blood sugar monitoring and injections

can be taxing to a patient's mental health. These complex demands can lead to a phenomenon termed *diabetic burnout*. Diabetic burnout is the psychological reaction resulting in emotional exhaustion and disconnect when faced with type 2 diabetes (Abdoli et al., 2021).

A common recommendation for diabetics is to follow a consistent self-care routine. There are seven essential self-care behaviors in people with diabetes which predict good outcomes, namely healthy eating, being physically active, monitoring of blood sugar, medication compliance, good problem-solving skills, healthy coping skills, and risk-reduction behaviors (Shrivastava et al., 2013). Many individuals who have type 2 diabetes take preventative measures to prevent the condition from getting worse. Some of the self-care activities that individuals with type 2 diabetes maintain are keeping a healthy diet, getting enough sleep, exercising, taking medications as prescribed, and taking care of their body, especially their hands and feet (National Institute of Diabetes and Digestive and Kidney Diseases, 2016).

Even if a person with diabetes follows all the recommendations; their blood sugar may still be elevated. This may lead to more problems, in that some people may relapse back to their unhealthy behaviors if they encounter problems or barriers to achieving self-care activities (Pun et al., 2009). For example, poor-quality sleep affects the energy balance via modulation of neuroendocrine function and glucose metabolism. As a result, the body tends to call for increased food intake and conserves energy. In short, poor-quality sleep predisposes the risk of type 2 diabetes (Trivedi & Saboo, 2019). This may cause a great deal of stress, even leading to mental health issues, such as eating disorders and depression. Champaneri et al. (2010) note that depression is associated with hypercortisolism and hypothalamic-pituitary-adrenal axis activation. Depression is also associated with enhanced sympathetic nervous system tone as well as cytokinemia, known to induce insulin resistance. Svenningsson et al. (2012) showed that there

is a strong association among type 2 diabetes, obesity, and depression in both men and women. More than 33% of obese women and more than 20% of obese men with type 2 diabetes are more likely to exhibit anxiety and depression (Svenningsson et al., 2012). Newly diagnosed type 2 diabetics are twice as likely to have a lifetime prevalence of suicide attempts than the general population (Myers et al., 2013).

Music therapy may address mental health needs of those individuals living with type 2 diabetes. Music therapy interventions may improve depressive symptoms, decrease anxiety, and improve quality of life (AMTA, 2021b). In addition, research has shown that group positive psychotherapy significantly increased the general well-being in patients with type 2 diabetes (Sorbi et al., 2018). Thus, it is reasonable to assume that group music therapy experiences may be an effective means of therapy for those with type 2 diabetes. Shahbeik et al. (2019) conducted a quasi-experimental study to evaluate the effectiveness of group psychotherapy based on a type 2 diabetic individual's psychological connections of their thoughts and feelings in relation to the chronic medical condition. The connections of acceptance, commitment, and emotional expressiveness in relation to self-care behaviors in patients with type 2 diabetes were carefully examined. This study lasted eight weeks with additional pre- and post-session meetings. Results showed a significant increase between emotional expressiveness and self-care behaviors in group psychotherapy for patients with type 2 diabetes.

### **Music Therapy**

Music therapy is the clinical and evidence-based practice that uses different music interventions to achieve non-musical goals. Music therapy interventions can address a variety of healthcare and educational goals, including but not limited to, promoting wellness, managing stress, and expressing feeling (AMTA, 2005). The AMTA is a membership organization that

helps advance public awareness of the benefits of music therapy and increase access to quality music therapy service (AMTA, 2019). Music therapy practices are facilitated by a credentialed professional. Music therapists, in conjunction with patients and other caregivers, determine and utilize music therapy approaches that effectively aid in the restoration, maintenance, and improvement in mental and physical health (AMTA, 2021c).

***Music Therapy Methods***

Bruscia (2014) identifies four main music therapy methods: re-creative, receptive, improvisational, and compositional. Table 1 describes each method and includes sample goals that may be addressed through these experiences.

**Table 1**

*Music Therapy Methods Description and Sample Goals\**

<b>Method</b>	<b>Description</b>	<b>Sample Goals</b>
Re-creative	Patients learn, sing, play, or perform pre-composed music or reproduce any kind of musical form. Re-creative methods include structured music activities and games in which the patient performs roles or behaviors that have been specifically given.	<ul style="list-style-type: none"> <li>• Promote identification and empathy with others.</li> <li>• Experience and release feelings within a safe and appropriate medium.</li> <li>• Develop skills in perceiving, interpreting, and communicating ideas and feelings.</li> <li>• Learn specific role behaviors in various interpersonal situations</li> <li>• Improve interactional and group skills.</li> <li>• Develop a sense of community</li> <li>• Identify with a value or belief of a group, community, society, or culture.</li> </ul>
Receptive	The clients listens to music and responds to the experience silently, verbally, or through another modality. The music listening experience may be focused on the patient’s physical, mental,	<ul style="list-style-type: none"> <li>• Promote receptivity.</li> <li>• Evoke specific body responses.</li> <li>• Stimulate or relax the person.</li> <li>• Develop auditory/motor skills.</li> <li>• Evoke affective states and experiences.</li> <li>• Explore ideas and thoughts of others.</li> <li>• Facilitate memory, reminiscence, and regression.</li> </ul>

	emotional, spiritual, intellectual, and aesthetic aspects. The patient’s responses are intended for the purpose of the therapeutic experience.	<ul style="list-style-type: none"> <li>• Evoke imagery and fantasies.</li> <li>• Connect the listener to a community or sociocultural group.</li> </ul>
Improvisation	The client makes up music while playing or singing extemporaneously creating a melody, rhythm, song, or instrumental piece. The patient can improvise music alone (solo) or can improvise with others in a group. Patients can use any musical source to fulfill the improvisational experience.	<ul style="list-style-type: none"> <li>• Establishing a nonverbal channel of communication and a bridge to verbal communication.</li> <li>• Providing a means of self-expression.</li> <li>• Explore various aspects of self in relation to others.</li> <li>• Identify, express, and work through difficult emotions.</li> <li>• Develop the capacity for interpersonal respect and intimacy.</li> <li>• Develop interpersonal or group skills.</li> <li>• Develop creativity, expressive freedom, spontaneity, and playfulness within various degrees of structure.</li> </ul>
Composition	The music therapist helps the client to write songs, lyrics, or instrumental pieces or to create any kind of musical product, such as music videos or audiotapes. Typically, the music therapist would assist the patient with technological aspects of the compositional process and the patient’s participation with musical capacities.	<ul style="list-style-type: none"> <li>• Develop skills in creating a structure within which to express one's own thoughts and feelings and/or the thoughts and feelings one shares with others.</li> <li>• Develop skills in organizing thoughts and feelings so that they fit within adopted structures.</li> <li>• Develop the ability to explore various ways of expressing thoughts and feelings within a structure.</li> <li>• Develop the ability to document and communicate a way for others to re-create the composition.</li> </ul>

\*Note: Description and sample goals taken from Bruscia (2014), pp. 127-140

***Medical Music Therapy***

Medical music therapy is defined as a reflexive process where in the music therapist helps the clients to optimize the client’s health, using various facets of music experiences and the relationships formed through them as the impetus for change (Bruscia, 2014, p. 36). The goals of

medical music therapy may include the biomedical needs of the patients, as well as working through emotional, interpersonal, social, spiritual, and ecological issues that arise for the patient and family during the illness and its treatment (Bruscia, 2014). Medical music therapists need to address goals in multiple domains simultaneously as well as the interrelationship of these goals (Dileo, 2015). There are different levels of medical music therapy practice, each of which vary according to the following: the differential roles of music and the client-therapist relationship, whether the goals of music therapy are of primary or secondary medical significance, whether the medical treatment is short or long-term, and what the clinical setting is (home, hospital, rehabilitation center, hospice, etc.) (Bruscia, 2014).

### ***Music Therapy and Depression***

Sorbi et al. (2018) studied the importance of diabetic patients' psychological health, acknowledging the effect of group positive psychotherapy on life expectancy of type 2 diabetic patients. Positive psychotherapy is the therapeutic approach that is based on the principles of positive psychology, integrating symptoms with strengths, resources with risks, weaknesses with values, and hopes with regrets in order to understand the inherent complexities of human experiences in a way that is more balanced than the traditional deficit-oriented approach to psychotherapy (Rashid, 2015). Sorbi et al. (2018) assessed the effect of group positive psychotherapy on reducing somatic symptoms, anxiety and sleep disorders and increasing life expectancy on type 2 diabetic patients. These psychotherapy sessions were 1.5 hours per week over the course of ten weeks. Results showed that group positive psychotherapy resulted in a significant enhancement of life expectancy. However, the effects of group positive psychotherapy on social dysfunction, depression symptom and general health were not confirmed.

Erkkilä (2011) noted that while psychotherapy has also been found to be effective, verbal psychotherapy processing may be difficult or insufficient for some individuals. Therefore, therapies that allow non-verbal processing, such as music therapy, may offer a workable alternative (Erkkilä, 2011). Mandel et al. (2013) compared the effects of music-assisted relaxation and imagery on selected health outcomes of patients enrolled in diabetes self-management education and training. The randomized controlled trial had 200 individuals of a wide age range (30-85), and diabetic diagnoses (types 1 + 2 and pre-diabetic). The group of participants were split into three groups: the group that participated in music-assisted relaxation and imagery, compact disc (MARI CD) without therapeutic intervention; a group that was in music therapy, facilitated by a board-certified music therapist; and a control group. The outcome measures for all study participants included blood pressure, hemoglobin (A1C), body mass index (BMI), anxiety, and stress. Each of the outcomes is relevant to the health of patients with diabetes. Results showed over time, there were significant changes from pre- to post-session for systolic blood pressure, state anxiety, and stress in the experimental group. Aalbers et al. (2017) assessed the effects of music therapy on clinical depression in people of any age and then compared to treatment as usual (TAU), which includes psychological, pharmacological, and/or other therapies. The authors concluded that different music therapy interventions can help improve depression based on the different depression rating scales. One of the conclusions made from Aalbers et al (2017) was to consider those music therapists to use active, receptive, and mixed music therapy methods. It was shown and recommended by the authors to consider active, receptive, and mixed music therapy methods due to the importance of individual music therapy. Individual music therapy can be personalized and tailored to the characteristics of individual patients and might show a more beneficial effect than group sessions.

### ***Music Therapy and Anxiety***

Anxiety is characterized by restlessness or agitation, excessive worry and rumination, procrastination, avoidance of perceived anxiety-producing experiences and events, and physical tension (Jackson, 2012). Anxiety is generally regarded as a negative emotional response to situations that are appraised to be threatening (Elliott et al., 2011). Pridy et al. (2021) conducted a study with two purposes, a) to identify the core reasons for listening to music among university students and (2) to explore associations between anxiety sensitivity and core reasons for music listening. Anxiety sensitivity is as the intense fear of anxiety-related sensations that consistently lead to the belief that severe “bodily sensations” have potentially harmful consequences (e.g., social humiliation) for the individual (Osman et al., 2010). The authors used the Anxiety Sensitivity Index-3, an 18 item self-report measuring anxiety sensitivity, assessing three dimensions: physical, cognitive, and social concerns. The authors found that anxiety sensitivity is associated with listening to music for relief from negative emotions (e.g., coping and conformity) and is not associated with listening to music for rewards (e.g., for arousal/emotional or social enhancement) (Pridy et al., 2021).

Thaut and Davis (1993) compared the effects of subject-selected and experimenter-chosen music on measures of anxiety, perceived relaxation, hostility, and depression as measured by the Spielberger State Anxiety Inventory, the Multiple Affective Adjective Checklist, and a visual analog scale. There was a significant reduction in anxiety scores from pre- to post-test on all three measures.

### ***Music as Self-Care***

Self-care is defined as “the ability of individuals, families, and communities to promote health, prevent disease, maintain health, and to cope with illness and disability with or without

the support of a healthcare provider” (World Health Organization, [WHO] 2022, para. 1).

Further, “Self-care interventions included evidence-based, quality drugs, devices, diagnostics and/or digital products which can be provided fully or partially outside of formal health services and can be used with or without health worker” (WHO, 2022, para. 3). Some examples of self-care activities include but are not limited to regular exercise; eating healthy, regular meals; relaxing activities; and focusing on positivity (National Institute of Mental Health, 2021). Music based interventions, including music therapy, can also be used for self-care. Music can be used as part of a self-care routine for individuals with type 2 diabetics.. Music listening might be particular to those individuals who are anxiety sensitive and could help them with emotional relief such as relaxation, coping with negative mood through catharsis, mood enhancement, and emotional intensification (Pridy et al., 2021).

### **Detailed Description of Proposed Program**

Drop the Beat Music Therapy will provide psychoeducation through a person-centered approach designed to help participants to improve their mood and increase self-confidence in managing their type 2 diabetes, while valuing and being conscious about participants’ goals in music therapy. Consistent with the resource-oriented approach, participants will be encouraged to focus their attention on adding the use of music as a resource in their everyday lives. In addition, the program will focus on nurturing strengths, resources, and potentials, as well as collaboration with and consideration of the personal contexts of each participant.

This support group will focus on optimizing overall mental and emotional health as well as providing educational tools to help patients with type 2 diabetes use music as a form of self-care. Lukens and McFarlane (2004) define psychoeducation as “a professionally delivered modality that integrates and synergizes psychotherapeutic and educational interventions” (p. 206).

Psychoeducation is an evidence-based approach that assists people with mental health challenges to cope with their illnesses. Psychoeducation combines problem-solving and role-playing scenarios within the therapeutic space to better understand different behaviors, positive or negative, to impact themselves and others (Lukens & McFarlane, 2004). The theory about psychoeducation is the more knowledge clients know about their illnesses, the more likely they will succeed in living with these illnesses (Lukens & McFarlane, 2004).

Over the course of eight weeks, Drop the Beat Music Therapy will provide sessions that will use the four music therapy methods (receptive, recreative, improvisation, and composition). Each group will include 10-15 participants. Each group will last an hour. Table 2 provides an outline of the program.

**Table 2**

*Proposed Program Outline*

<b>Week #</b>	<b>Topic + Music Therapy Method/Intervention Used</b>
Week 1	Introductions & What is Music Therapy? Music therapy experience: Improvisation
Week 2	Effective Communication about Diabetes Music Therapy experience: Drumming Circle
Week 3	How Can Music Therapy Help with Type 2 Diabetes? Music Therapy experience: Music Relaxation
Week 4	Let's Discuss Music Music Therapy Experience: Song Dedication
Week 5	Using Music Interventions as a Part of Self -Care Music Therapy Experience: Music Collage
Week 6	Rewriting the Diabetes Blues Music Therapy Experience: Song Writing
Week 7	Let's Play! Music Therapy Experience: Instrument Recreation
Week 8	Closing/Takeaways Music Therapy Experience: Vocal Recreation

## **Descriptions of Weekly Groups**

### ***Week One: Introductions & What is Music Therapy?***

In our first group meeting, the focus will be on building relationships between group members, with me as the therapist, and with music. I will present a brief overview of music therapy and of the group. Group members will be given the opportunity to introduce themselves and share their current experiences with type 2 diabetes. The introductions will be followed by a nonreferential improvisation. Participants will choose a preferred instrument and will be welcome to also use body percussion, or voice in the improvisation experience. Directives for the improvisation will be shared and then group members will be invited to begin playing their instrument. After the improvisation is complete, group members will be invited to reflect on and then share anything they would like about the experience. The goals of the improvisation group are to increase self-expression, establish non-verbal communication to then build the bridge to verbal communication, and to identify, express, and work through difficult emotions.

### ***Week Two: Effective Communication with Music***

In the second group meeting, the focus of the support group will be centered on communication, the difficulties talking about diabetes, and how to have an effective conversation about diabetes in a safe and non-judgmental setting. Participants will be invited to participate in a nonreferential, rhythmic improvisation. Each participant will choose a percussion instrument. One by one, each member of the group play improvised rhythmic patterns for the next participant to “answer” with their own rhythmic response, as if they are having a “conversation.” After the music experience, there will be a discussion. The goals for this intervention are identifying, expressing, and working through difficult emotions; establishing a nonverbal channel of

communication and a bridge to verbal communication; and developing creativity, expressive freedom, spontaneity, and playfulness within various degrees of structure.

***Week Three: How Can Music Therapy Help with Type 2 Diabetes?***

In week three, the group will explore how music and music interventions can help with the diagnosis of type 2 diabetes. There will be a presentation of information about stress and the hormone, cortisol, and how stress can affect diabetes blood sugar levels, how there is current and limited research on music therapy being implemented within the diabetes education system. The informational session will be followed by an invitation for participants to discuss their personal experiences with type 2 diabetes. Individuals will have the opportunity to rate their anxiety pre- and post-music therapy experience. Participants will then be guided through a music assisted relaxation exercise, focusing on deep breathing and muscle relaxation. Information will be provided to help participants complete these types of exercises at home. The overall goal for this intervention is for participants to reduce anxiety and stress.

***Week Four: Let's Discuss Music***

Week four of the support group will provide an opportunity for participants to share more about themselves as a person. The receptive experience will be song communication. Participants will be asked to identify a song that communicates something about themselves they would like to share with the group, or that contains a message they would like to share with the group. After the opening conversation, each patient will have a turn to share their chosen song. After the music is complete, the participant who brought in the song will be invited to share thoughts or feelings associated with the song and how the song relates to their life experiences. The overall goals for this music therapy experience are to promote receptivity, evoke specific body

responses, evoke affective states and experiences, explore ideas and thoughts of others, and connect the listener to a community or sociocultural group.

***Week Five: Using Music Interventions as a Part of Self-Care***

In week five, the group will explore how various forms of musical engagement can be used outside of the music therapy space, as a part of a self-care routine. Participants will list different ways music can be used in their lives and how they can further implement music into their diabetic self-care routine. I will collaborate with the participants to curate playlists of their preferred music based on various moods and mental health needs, and we will discuss the use of music to influence their moods and feeling states. The overall goals are promoting the exploration of therapeutic themes through lyrics and collaborating together as a group to get a project complete.

***Week Six: Rewriting the Diabetes Blues***

Week six of the support group will focus on writing songs about the experience of living with diabetes. We will use the 12-bar blues form to write individual songs. I will review the blues form. Each participant will be encouraged to write their own blues song using the standard form. I will offer assistance as needed. When everyone has completed their songs, each will be performed for the group in whatever way suits the preferences of each participant. The objectives for this compositional intervention are developing skills working within a musical structure to express one's own thoughts and feelings and/or the thoughts and feelings one shares with others; promoting the exploration of therapeutic themes through lyrics; and develop the ability to explore various ways of expressing thoughts and feelings within a structure.

***Week Seven: Let's Play!***

Week seven of the support group will focus on creativity, playfulness, and spontaneity. One of the overall essences of instrumental re-creation is to have a musical instrument reproduce structured or precomposed musical materials. Participants will choose songs to sing and play with the group. While I play accompaniment on guitar, patients will choose an instrument to play along with the beat of the music. If a participant knows how to play the accompanying instrument, they are allowed to join me to play the accompaniment. All other participants will be invited to sing along with me as well. After the music-making, we will discuss their experiences creating music and how the participants can incorporate some form of music re-creation outside of the music therapy program. The overall objectives for this music experience are to build a sense of community, to promote identification and empathy towards others, and experiencing and releasing feelings within a safe and appropriate medium.

***Week Eight: Closing/Takeaways***

This final week of the group will focus on closure, discussing any takeaways/closing thoughts about the experiences of the participants. At the end of the previous session, participants will be asked to identify songs that in some way embody the themes of motivation, success, and saying goodbye to bring to this session. The chosen songs will either be re-created by the group, either vocally, instrumentally, or in some combination, or recordings will be played. Verbal processing of the songs and the experience will occur throughout the session. . The goals for this last music therapy intervention will be to experience a sense of community, promote empathy with others, and to identify the value of being a part of a group, community, society, or culture. At the end of this session, participants will be asked to complete a questionnaire to elicit feedback about the program. See Appendix A for the questionnaire.

**Documentation*****Referral***

Referrals will be made by the patient's endocrinologist at Naomi Berrie Diabetes Center at CUIMC. The potential participant will have the ability to self-refer to Drop the Beat Music Therapy. Advertisements will be posted in endocrinologist offices within the CUIMC network and at recreation centers around the Naomi Berrie Diabetes Center. Referrals will be made either electronically or through the provided referral form. The referral form include the patient's background, reasons for the referral, and information that could help the music therapist provide further assistance before the sessions begin. The referral form can be found in Appendix B.

***Assessment***

Initial assessments will be completed with the participant and the music therapist to identify participants' preferred music, their musical backgrounds, and their personal goals for attending the group. Participants will meet with the music therapist individually and complete the sample intake music assessment form. This can be done in-person, via video conferencing, or by telephone. The intake music assessment form can be found in Appendix C.

***Evaluations***

Patient check-ins will take place at the mid-point of the program (between weeks 4 and 5) via individual meetings, either in-person, through video conferencing, or by telephone. These meetings are intended to inquire about the participants' progress in the program and to ask if there are suggestions regarding the sessions.

An evaluation of the group will occur at the end of the scheduled sessions. During group sessions, I will keep group notes after each music therapy experience. These notes will help me to reflect on the music therapy interventions and progress towards the group goals. During the

last week of the program, the patients will be asked to fill out a survey to share their thoughts about the group experiences, and the impact on their diabetes treatment. A sample of the progress notes chart can be found in Appendix D).

**Financial Justifications**

I will serve the Naomi Berrie Diabetes Center as an independent contractor, with Drop the Beat Music Therapy through my limited liability corporation (LLC). As such, the costs for Drop the Beat include payment as an independent music therapy contractor and funds to advertise the groups. A portion of the profits will go towards space rental at the Naomi Berrie Diabetes Center. Tables 3 and 4 go into detail about how the expenses would be justified as a contracted music therapist, as well as the materials needed for the music therapy group sessions. The average group session rate per hour for an entry-level contractual music therapy position for a state within the Mid-Atlantic region is \$117.66 (AMTA, 2021a), which includes client contact per hour, time for assessment, and consulting services.

**Table 3**

*Projected and Initial Expenses*

Advertisement	\$500
Space Rental	\$1,000
Refreshments	\$150
<b>Total cost</b>	<b>\$1,650</b>

<b><u>Instruments:</u></b>	<b>Cost</b>
Remo DP-0300-00 Comfort Sound Drum Collection <ul style="list-style-type: none"> <li>• 1 - Versa Combo Pack - Contains 1 each of 13" Timbau, 13" Djembe, and 13" Tubano Skyndee heads</li> <li>• 2 - CST Versa Tubano Packs - 2 Nested sets of 1 each 9", 11", and 13" Tubanos CST heads</li> <li>• 12 - Lemon Shakers</li> <li>• 1 - 14" CST Buffalo Drum w/ Mallet</li> </ul>	1,987.95

<ul style="list-style-type: none"> <li>• 1 - 16" CST Buffalo Drum w/ Mallet</li> <li>• 1 - 22" CST Buffalo Drum w/ Mallet</li> <li>• 1 - 16" CST Ocean Drum</li> <li>• 1 - 9" CST Drumhead</li> <li>• 1 - 11" CST Drumhead</li> <li>• 1 - 13" CST Drumhead</li> <li>• 2 -Folding Lock Top Drum Risers for use with the djembe or timbau</li> </ul> <p>Retrieved from <a href="https://www.westmusic.com/drums-percussion/group-drumming/remo-dp-0300-00-comfort-sound-drum-collection-204796?returnurl=%2fdrums-percussion%2fgroup-drumming%2f%3fcount%3d18">https://www.westmusic.com/drums-percussion/group-drumming/remo-dp-0300-00-comfort-sound-drum-collection-204796?returnurl=%2fdrums-percussion%2fgroup-drumming%2f%3fcount%3d18</a></p>	
<p>Yamaha P125B 88-Key Digital Piano, w/GHS Action Black Beginner Bundle</p> <p>Retrieved from <a href="https://www.westmusic.com/digital-pianos-keyboards/home-keyboards/digital-pianos/yamaha-p125b-88-key-digital-piano-w-ghs-action-101112">https://www.westmusic.com/digital-pianos-keyboards/home-keyboards/digital-pianos/yamaha-p125b-88-key-digital-piano-w-ghs-action-101112</a></p>	\$799.99
<p>Alvarez AF60AGP Acoustic Guitar</p> <p>Retrieved from <a href="https://www.riskomusic.com/products/guitars/af60agp">https://www.riskomusic.com/products/guitars/af60agp</a></p>	\$399.99
<p>Apple iPad Pro Wi-Fi 128 GB</p> <p>Retrieved from <a href="https://www.apple.com/shop/buy-ipad/ipad-pro/11-inch-display-128gb-space-gray-wifi">https://www.apple.com/shop/buy-ipad/ipad-pro/11-inch-display-128gb-space-gray-wifi</a></p>	\$799.00
<p>JBL Charge 5 Bluetooth speaker</p> <p>Retrieved from <a href="https://www.jbl.com/bluetooth-speakers/CHARGE5-.html">https://www.jbl.com/bluetooth-speakers/CHARGE5-.html</a></p>	\$179.95
<p>Spotify Premium account</p> <p>Retrieved from <a href="https://www.spotify.com/us/premium/">https://www.spotify.com/us/premium/</a></p>	\$119.88 (\$9.99 per month)
<b>Total cost</b>	<b>\$4287.75</b>

<p><b>Salary Total</b> \$117.66 X 8 weeks of the program</p>	\$941.28
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**Conclusion**

Drop the Beat Music Therapy will serve individuals with type 2 diabetes by providing an out-patient music therapy support group, addressing their needs and interests in order to help alleviate the burdens they experience due to their chronic medical condition. A music therapy

support group for individuals with type 2 diabetes at Naomi Berrie Diabetes Center at CUIMC will provide the patients with another resource to help type 2 diabetes patients learn the benefits of including music in their self-care routine. Potentially this could contribute to not only the management of their type 2 diabetes, but even contribute to reversing their type 2 diabetes by addressing the psychosocial issues and stress they experience on a daily basis.

### References

- Aalbers, S., Fusar-Poli, L., Freeman, R.E., Spreen, M., Ket, J.C.F., Vink, A.C., Maratos, A., Crawford, M., Chen, X.J., & Gold, C. (2017). Music therapy and depression (review). *Cochrane Database of Systematic Reviews*.  
<https://doi.org/10.1002/14651858.CD004517.pub3>
- Abdoli, S., Hessler, D., Doosti-Irani, M., Chang, B. P., & Stuckey, H. (2021). The value of measuring diabetes burnout. *Current Diabetes Reports*, 21(8), 25.  
<https://doi.org/10.1007/s11892-021-01392-6>
- Abrams, B. (2015). Humanistic approaches. In B. Wheeler (Ed.), *Music therapy handbook* (pp. 148–160). Guilford Publications.
- Adam, T., Hasson, R., Ventura, E., Toledo-Corral, E., Le, K., Mahurkar, S., Lane, C., Weigensberg, M., & Goran, M. (2010). Cortisol is negatively associated with insulin sensitivity in overweight Latino youth. *The Journal of Clinical Endocrinology & Metabolism*, 95(10), 4729-4735. <https://doi.org/10.1210/jc.2010-0322>
- American Diabetes Association. (2022a). *Diabetes statistics*.  
<https://www.diabetes.org/resources/statistics/statistics-about-diabetes>
- American Diabetes Association. (2022b). *Mental health*. <https://www.diabetes.org/healthy-living/mental-health>
- American Diabetes Association. (2022c). *Type 2 diabetes*. <http://www.diabetes.org/diabetes-basics/type-2>
- American Diabetes Association. (2022d). *Diabetes & DKA (Ketoacidosis)*.  
<https://diabetes.org/diabetes/dka-ketoacidosis-ketones>

American Music Therapy Association. (2005). *AMTA official definition of music therapy*.

<https://www.musictherapy.org/about/musictherapy/>

American Music Therapy Association. (2019). *About music therapy and AMTA*.

<https://www.musictherapy.org/about/musictherapy/>

American Music Therapy Association. (2021a). *2021 Workforce analysis: A descriptive statistical profile of the 2021 AMTA membership and music therapy community*.

[https://www.musictherapy.org/assets/1/7/2021\\_Workforce\\_Analysis\\_final.pdf](https://www.musictherapy.org/assets/1/7/2021_Workforce_Analysis_final.pdf)

American Music Therapy Association. (2021b). *Music therapy for adults with mental health and substance use conditions* [Fact sheet].

[https://www.musictherapy.org/assets/1/7/FactSheet\\_Music\\_Therapy\\_for\\_Adults\\_with\\_Mental\\_Health\\_and\\_Substance\\_Use\\_Conditions\\_2021.pdf](https://www.musictherapy.org/assets/1/7/FactSheet_Music_Therapy_for_Adults_with_Mental_Health_and_Substance_Use_Conditions_2021.pdf)

American Music Therapy Association. (2021c). *Who are music therapists?*

<https://www.musictherapy.org/about/therapists/>

Annesi, J. & Johnson, P. (2013). Relative effects of reduced weight and increased physical activity on hemoglobin A1c: Suggestions for behavioral treatments. *International Journal of Clinical and Health Psychology*, 13, 167-170.

Baker, F. (2015). *Therapeutic songwriting: Developments in theory, methods and practice*.

Palgrave Macmillan.

Beidel, D., Bulik, C., & Stanley, M. (2014). *Abnormal psychology* (3<sup>rd</sup> ed.). Pearson Education.

Bruscia, K. E. (1998). *The dynamics of music psychotherapy*. Barcelona Publishers.

Bruscia, K. E. (2014). *Defining music therapy* (3<sup>rd</sup> ed.). Barcelona Publishers.

Bugental, J. (1964). The third force in psychology. *Journal of Humanistic Psychology*, 4(1), 19-

26.

Centers for Disease Control and Prevention. (2021). *All About Your A1C*.

<https://www.cdc.gov/diabetes/managing/managing-blood-sugar/a1c.html>

Champaneri, S., Wand, G., Malhotra, S., Casagrande, S., & Golden, S. (2010). Biological basis of depression in adults with diabetes. *Current Diabetes Reports*, 10, 396-405.

Cleveland Clinic. (2021, December 10). *Cortisol*.

<https://my.clevelandclinic.org/health/articles/22187-cortisol>

Cioca, E. (2013). Type 2 diabetes—Psychosomatic disease approachable through music therapy. *Proceedings of the Roman Academy, Series B*, 15(1), 38-46.

Columbia University Irving Medical Center (2022). *About us*.

<https://www.cuimc.columbia.edu/about-us>

Elliott, D., Polman, R., & McGregor, R. (2011). Relaxing music for anxiety control. *Journal of Music Therapy*, 48(3), 264-288. <https://doi.org/10.1093/jmt/48.3.264>

Erkkilä, J., Punkanen, M., Fachner, J., Ala-Ruona, E., Pöntiö, I., Tervaniemi, M., Vanhala, M., & Gold, C. (2011). Individual music therapy for depression: Randomized controlled trial. *British Journal of Psychiatry*, 199, 132–139. <http://dx.doi.org/10.1192/bjp.bp.110.085431>

Dileo, C. (2015). *Advanced practice in medical music therapy: Case reports*. Jeffrey Books.

Gold, C., Rolvsjord, R., Aaro, L. E., Aarre, T., Tjemsland, L. & Stige, B. (2005). Resource-oriented music therapy for psychiatric patients with low therapy motivation: Protocol for a randomised controlled trial. *BMC Psychiatry*, 5(1), <https://bmcp psychiatry.biomedcentral.com/articles/10.1186/1471-244X-5-39#citeas>

Jackson, N. (2012). Adults with depression and/or anxiety. In L. Eyre (Ed.), *Guidelines for music therapy practice in mental health* (pp. 339-377). Barcelona Publishers.

- Ji, L., Bai, J.J., Sun, J., Ming, Y., & Chen, L.R. (2015). Effect of combining music media therapy with lower extremity exercise on elderly patients with diabetes mellitus. *International Journal of Nursing Sciences*, 2(3), 243-247. <https://doi.org/10.1016/j.ijnss.2015.07.008>
- Lukens, E. P., & McFarlane, W. R. (2004). Psychoeducation as evidence-based practice: Considerations for practice, research, and policy. *Brief Treatment and Crisis Intervention*, 4(3), 205–225.
- Mandel, S. E., Davis, B. A., & Secic, M. (2013). Effects of music therapy and music-assisted relaxation and imagery on health-related outcomes in diabetes education: A feasibility study. *The Diabetes Educator*, 39(4), 568–581.  
<https://doi.org/10.1177/0145721713492216>
- Mayo Clinic. (2020, March 13). *Hypoglycemia*. <https://www.mayoclinic.org/diseases-conditions/hypoglycemia/symptoms-causes/syc-20373685#:~:text=Hypoglycemia%20is%20a%20condition%20in,who%20don't%20have%20diabetes>
- Mayo Clinic. (2022, August 9). *Diabetes*. <https://www.mayoclinic.org/diseases-conditions/diabetes/symptoms-causes/syc-20371444>
- Myers, A., Grannemann, B., Lingvay, I., & Trivedi, M. (2013). Brief report: Depression and history of suicide attempts in adults with new-onset Type 2 diabetes. *Psychoneuroendocrinology*, 38, 2810-2814.  
<https://doi.org/10.1016/j.psyneuen.2013.06.013>
- The Naomi Berrie Diabetes Center: Columbia University Medical Center. (2021). *Our history*. <https://www.nbdiabetes.org/our-history>

The Naomi Berrie Diabetes Center: Columbia University Medical Center. (2021). *About us*.

<https://www.nbdiabetes.org/about-us>

National Institute of Diabetes and Digestive and Kidney Diseases. (2016, December). *Diabetes*

*diet, eating & physical activity*. [https://www.niddk.nih.gov/health-](https://www.niddk.nih.gov/health-information/diabetes/overview/diet-eating-physical-activity)

[information/diabetes/overview/diet-eating-physical-activity](https://www.niddk.nih.gov/health-information/diabetes/overview/diet-eating-physical-activity)

National Institute of Mental Health. (2021, April). *Caring for your mental health*.

<https://www.nimh.nih.gov/health/topics/caring-for-your-mental-health>

Osman, A., Gutierrez, P., Smith, K., Fang, Q., Lozano, G., & Devine, A. (2010). The anxiety sensitivity index–3: Analyses of dimensions, reliability estimates, and correlates in nonclinical samples. *Journal of Personality Assessment*, *92*(1), 45-52.

Pillai, A.M. & Dave, D.J. (2018). Evaluation of the effect of Indian classical music on the blood sugar levels of type-2 diabetes mellitus patients. *Music & Medicine*. *10*(4), 175-179.

Pridy, C., Watt, M. C., Romero-Sanchiz, C., & Stewart, S. H. (2021). Reasons for listening to music vary by listeners' anxiety sensitivity levels. *Journal of Music Therapy*. *58*(4), 463-492. <https://doi.org/10.1093/jmt/thab014>

Pun, S., Coates, V., & Benzie, I. F. (2009). Barriers to the self-care of type 2 diabetes from both patients' and providers' perspectives: Literature review. *Journal of Nursing and Healthcare of Chronic Illness*, *1*(1), 4–19. <https://doi.org/10.1111/j.1365-2702.2008.01000.x>

Rashid, T. (2015). Positive psychotherapy: A strength-based approach. *The Journal of Positive Psychology*, *10*(1), 25-40. <https://doi.org/10.1080/17439760.2014.920411>

Rolvjord, R. (2010). Towards a concept of resource-oriented music therapy. In *Resource-oriented music therapy* (pp. 73-88). Barcelona Publishers.

- Salehi, M., Mesgarani, A., Karimipour, S., Pasha, S. Z., Kashi, Z., Abedian, S., Mousazadeh, M., & Molania, T. (2019). Comparison of salivary cortisol level in type 2 diabetic patients and pre-diabetics with healthy people. *Open Access Macedonian Journal of Medical Sciences*, 7(14), 2321-2317. <https://doi.org/10.3889/oamjms.2019.340>
- Schwabe, C. (2005). Resource-oriented music therapy - the development of a concept. *Nordic Journal of Music Therapy*, 14(1), 49-56.
- Shahbeik, S., Taghavijurabchi, F., Rohani, N., Mohamadi, M., & Amani, O. (2019). The effectiveness of group psychotherapy based on acceptance and commitment on emotional expressiveness and self-care in patients with type 2 diabetes. *Journal of Health Literacy*, 3(4), 25-35.
- Shrivastava, S.R., Shrivastava, P.S., & Ramasamy, J. (2013). Role of self-care in management of diabetes mellitus. *Journal of Diabetes & Metabolic Disorders*, 12(14). <https://link.springer.com/article/10.1186/2251-6581-12-14>
- Sorbi, M. H., Sadeghi, K., Rahmanian, M., Ahmadi, S. M., & Paydarfar, H. (2018). Positive psychotherapy effect on life expectancy and general health of type 2 diabetic patients: A randomized controlled trial. *Iranian Journal of Diabetes & Obesity*, 10(1), 31–36.
- Svenningsson, I., Björkelund, C., Marklund, B., & Gedda, B. (2012). Anxiety and depression in obese and normal-weight individuals with diabetes type 2: A gender perspective. *Scandinavian Journal of Caring Sciences*, 26(2), 349–354.
- Thaut, M., & Davis, W. (1993). The influence of subject-selected versus experimenter-chosen music on affect, anxiety and relaxation. *Journal of Music Therapy*, 30(4), 210-223. <https://doi.org/10.1093/jmt/30.4.210>

Trivedi, G. & Saboo, B. (2019). The role of sleep disruption and negative emotions as risk factors in diabetes management. *Journal of Social Health and Diabetes*. 7(1). 39-40.

Wheeler, B. (1981). The relationship between music therapy and theories of psychotherapy. *Music Therapy*, 1(1), 9–16.

World Health Organization. (2021). *Diabetes* [Fact Sheet]. <https://www.who.int/news-room/factsheets/detail/type-2-diabetes>

World Health Organization. (2022). *Self-care interventions for health*.  
[https://www.who.int/health-topics/self-care#tab=tab\\_1](https://www.who.int/health-topics/self-care#tab=tab_1)

Zhu, N. A., Reichert, S., & Harris, S. B. (2020). Limitations of hemoglobin A1C in the management of type 2 diabetes mellitus. *Canadian Family Physician/Medecin de Famille Canadien*, 66(2), 112–114.

**Appendix A**

**Music Therapy Patient Questionnaire**

Client's Name: \_\_\_\_\_ Date: \_\_\_\_/\_\_\_\_/\_\_\_\_

	<b>Strongly disagree</b>	<b>Disagree</b>	<b>Neutral</b>	<b>Agree</b>	<b>Strongly agree</b>
The music therapist has been understanding of my needs and type 2 diabetes.	1	2	3	4	5
The music therapist has been helpful with meeting my needs.	1	2	3	4	5
The music therapist is on time and prepared with materials and information.	1	2	3	4	5
Because of music therapy interventions, I have been able to see a change in the way I see diabetes.	1	2	3	4	5
I feel as if my values and opinions were cared about.	1	2	3	4	5
I have been able to utilize different music interventions to support myself within my day-to-day life	1	2	3	4	5
I have been satisfied with the care I have been given so far.	1	2	3	4	5
<b>Additional Comments/Concerns</b>					

**Appendix B**

**Music Therapy Referral Form**

Client's Name: \_\_\_\_\_ DOB: \_\_\_\_/\_\_\_\_/\_\_\_\_

Reason for Referral:

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Additional Comments/Concerns:

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Referred by: \_\_\_\_\_

Contact Information: (email) \_\_\_\_\_

(phone number) \_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_

**Appendix C**

**Intake Music Assessment Tool**

Background Information:

Name: \_\_\_\_\_

Age: \_\_\_\_\_

Preferred Name: \_\_\_\_\_

Month/Year of Diagnosis: \_\_\_\_\_/\_\_\_\_\_

Preferred Pronouns:  she/her/hers

he/him/his

they/them/theirs

Other (please specify) \_\_\_\_\_

Part I: Client Assessment

1. Do you like to listen to music?      Yes      No

2. Do you play any instruments?      Yes      No

If yes, what do you play?

\_\_\_\_\_  
\_\_\_\_\_

3. When do you like to listen to music? (Check all that apply)

relaxation

stress reduction

during work

pure enjoyment

to pass time

during meals

with family and friends

for prayer

with exercise

Other:

4. What types of music do you enjoy? (Check all that apply)

- |  |  |  |
|--|--|--|
| <input type="checkbox"/> Pop Music           | <input type="checkbox"/> Religious         | <input type="checkbox"/> Rock            |
| <input type="checkbox"/> Rhythm & Blues(R&B) | <input type="checkbox"/> Country           | <input type="checkbox"/> Hip Hop         |
| <input type="checkbox"/> Reggae              | <input type="checkbox"/> Jazz              | <input type="checkbox"/> Rap             |
| <input type="checkbox"/> New Age             | <input type="checkbox"/> World Music       | <input type="checkbox"/> Classical       |
| <input type="checkbox"/> Alternative Rock    | <input type="checkbox"/> Electronic        | <input type="checkbox"/> Musical Theatre |
| <input type="checkbox"/> Heavy Metal         | <input type="checkbox"/> Singer-Songwriter | <input type="checkbox"/> Folk            |
| <input type="checkbox"/> Trance              | <input type="checkbox"/> Other _____       |  |

5. Are there any cultural considerations or is culture an important aspect to your music selection?

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General Information & Comments:

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**Appendix D**

**Music Therapy Progress Notes**

Attendance Sheet	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8
Patient 1								
Patient 2								
Patient 3								
Patient 4								
Patient 5								
Patient 6								
Patient 7								
Patient 8								

√ = present X = absent

Week # + Topic/MT Method	Group Notes
1	
2	
3	

4	
5	
6	
7	
8	

## Appendix E

## Music Therapy Survey

Please circle the number that rates your satisfaction of the music therapy experiences.

	<b>Strongly disagree</b>	<b>Disagree</b>	<b>Neither agree nor disagree</b>	<b>Agree</b>	<b>Strongly agree</b>
I enjoyed learning about music therapy and how it can be used in diabetes education.	1	2	3	4	5
I will be using music interventions in my daily life.	1	2	3	4	5
I feel my anxiety has decreased with the music therapy experiences.	1	2	3	4	5
My mood has improved while participating in music therapy.	1	2	3	4	5
My mental health has improved with the addition of music interventions	1	2	3	4	5
I felt supported while being a part of the music experiences.	1	2	3	4	5
I have been able to see a change in the way I see diabetes.	1	2	3	4	5
If need be, I would recommend music therapy to a friend.	1	2	3	4	5

Additional Comments

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## Appendix F

### Music Therapy Contract

#### **POLICIES & PROCEDURES: THERAPY SERVICE AND CLIENT'S RIGHTS**

##### Rights and Responsibilities:

As a client to Drop the Beat Music Therapy, I understand the rights and responsibilities to ensure that the therapeutic experience is successful.

##### *You have the right to the following:*

- Refuse and/or terminate treatment at any point.
- Receive treatment without discrimination to race, age, gender identity, sexual orientation, religion, disability, or socioeconomic background.
- Confidentiality. Unless:
  - If you or someone you know is actively wanting to harm themselves or another individual, I as the music therapist must bring outside authorities to intervene.
    - If there is a good reason to believe you are abusing, neglecting, or exploiting a child or a vulnerable adult, I must notify the appropriate authorities (Child Protective Services, Mandated Reporter, etc.).
  - If a court orders me to testify about you.
  - If there is a medical emergency that requires that I disclose information.

##### Scheduling:

Music therapy sessions are held once a week, each week pertaining to a different topic and music therapy session. Patients are responsible for attending their scheduled music therapy sessions.

Sessions will occur at the Naomi Berrie Diabetes Center, located at 1150 Saint Nicholas Avenue Columbia University Medical Center Russ Berrie Medical Science Pavilion in New York, NY.

Payment:

*Payment rates are as follows:*

- 8 sessions - \$100
- Payment is required before the beginning of the 8-week session.

Check or credit card number can be made out to the music therapist (Gabrielle Friedman, M.S., MT-BC, LCAT) directly. A portion of the fee will go towards space rental at the Naomi Berrie Diabetes Center.

Absences and Cancellations:

Sessions are non-refundable. If the therapist must cancel a session, the session will be added to the end of the scheduled weeks.

Acknowledgment and Consent Form:

I agree to the above terms and conditions. If for any reason these terms and conditions cannot be agreed by the client or the music therapist, and the client will be referred elsewhere.

Patient's Signature \_\_\_\_\_

Date: \_\_\_\_\_

Therapist's Signature \_\_\_\_\_

Date: \_\_\_\_\_

Filed on: \_\_\_\_\_

## Appendix G

### Resume

Gabrielle Davida Friedman

Cell: 914-610-9854  
**friedmag1@newpaltz.edu**

#### Work History

- July 2020 to present      Self-Employed - Ossining, NY  
*Music Teacher*  
 Providing individual music lessons for children and adults; lessons were taught in-person and virtually.
- July 2016 to present      Mike Risko Music School – Ossining, NY  
*Music Teacher*  
 Teaching music to students ages 2-60+ years in one on-one lessons, as well as group settings; lessons were taught both in-person and virtually.
- Summer 2018 & Summer 2019      Music Conservatory of Westchester - White Plains, NY  
*Music and Arts Camp Counselor*  
 Lead children in activities pertaining to music, art, and theatre (musical and non- musical).
- September 2018 to April 2019      Shames JCC on the Hudson - Tarrytown, NY  
*After School Program Counselor*  
 Supervised children aged 5-12 at an after-school program and planned various activities for the children to partake during the day.

#### Education

- Master of Science, State University of New York at New Paltz - New Paltz, NY  
 Music Therapy | August 2019 – Expected December 2022  
 GPA: TBD
- Bachelor of Science, Herman H. Lehman College, City University of New York - Bronx, NY  
 Music | August 2017 – May 2019  
 GPA: 3.59  
 Cum Laude graduate, Music Department Honors  
 President Scholar's List (Fall 2017), Dean's List (Spring 2018 & 2019)
- Associate of Applied Science, Westchester Community College - Valhalla, NY  
 Performing Arts | September 2014 – May 2016  
 GPA: 3.26  
 President's List (Spring 2016), Dean's List (Spring 2015)

**Music Therapy Training Experience**

- Fall 2022            Institute of Music and Neurologic Function at Wartburg – Mount Vernon, NY  
*Music Therapy Intern*
- August 2021-        Health Alliance of the Hudson Valley- Kingston, NY  
January 2022        *Music Therapy Intern*  
                          Observed, facilitated, and documented individual and group music therapy sessions in an outpatient acute psychiatric facility, serving adults 18 years and older with mild to moderate diagnosed mental health disorders.
- Spring 2021         Brooklyn Conservatory of Music– Brooklyn, NY (via Zoom)  
*Fieldwork Student*  
                          Observed and facilitated individual and group music sessions aged 5-13, with varying disorders, such as Autism Spectrum Disorder, Cerebral Palsy, Down Syndrome, and other varying developmental disabilities.
- Fall 2020            “Harmony Hawks” – New Paltz, NY (via Zoom)  
*Fieldwork Student*  
                          Music therapy program development to aid older adults in under-served communities.
- Fall 2018-            Institute of Music and Neurologic Function at Wartburg – Mount Vernon, NY  
Spring 2019         *Practicum Student*  
                          Observed and facilitated group music therapy sessions for older adults with neurologic needs, as well as individuals with varying developmental disabilities.
- Winter 2018-        Music Conservatory of Westchester – White Plains, NY  
2019                   *Practicum Student*  
                          Observed group music therapy sessions for adults with Autism Spectrum Disorder and other varying developmental disabilities.
- Fall 2015            Music Conservatory of Westchester – White Plains, NY  
*Volunteer*  
                          Observed and assisted with music therapy group sessions.

**Awards and Scholarships**

May 2018 & - Heintz Riegelman Rose Scholarship Recipient

2019 *Herman H. Lehman College, City University of New York, Undergraduate*

Award was given for overall achievements in music studies.

June 2014 – Performing Arts Booster Outstanding Musician Award for Chorus Recipient

*Sleepy Hollow High School - Sleepy Hollow, NY*

Award was given to the most dedicated and talented graduating senior that has shown themselves and to others to be leaders in their respected ensemble.

**Instrumental Skills**

- Strings player
  - Violin (17 yrs)
  - Guitar (7 yrs)
  - Ukulele (6 yrs)
  - Viola (6 yrs)
- Classically trained vocalist (12 yrs)
- Piano player (8 yrs)

**Affiliations**

American Music Therapy Association Member

- January 2021-present: Grad student member
- May-December 2016: Student member

## **Appendix H**

### **Music Therapy Fact Sheet**

#### **What is music therapy?**

Music therapy is the evidence-based and clinical use of different music interventions that helps individuals with non-musical goals or to fulfill needs other than music itself. Music therapy can be utilized in individual or groups sessions. Prior experience is not required for someone to participate in music therapy.

#### **Who is a music therapist?**

A music therapist is an accredited professional that has completed their coursework and clinical training through an American Music Therapy Association (AMTA) approved school and has passed the National Board Certification for Music Therapists (CBMT) exam. A music therapist must have the credentials of music therapist-board certified (MT-BC) in order to practice music therapy. In specific states, there are licensures that music therapists can be eligible to obtain. For example, in the state of New York, MT-BC's can have the ability to practice under the Licensed Creative Arts Therapist (LCAT) licensure. Music therapists are passionate, empathetic, demonstrate care and concern, as well as offer emotional support for clients and families.

#### **Common Music Therapy Goals for Type 2 Diabetes Care**

- Reduce cortisol levels for healthier A1C levels
- Enhance overall mood
- Improving emotional expression, group interactions, developing different skills, and improving quality of life.

- Promote awareness of music therapy interventions that can be used within diabetes education.

References:

America Music Therapy Association. (2022). *About music therapy and AMTA*.

<https://www.musictherapy.org/about/musictherapy/>