



# Evidence Summary: Art and music therapy

**Version:** 4

**Date:** 26 November 2024

**Author:** Evidence and Practice Leadership Branch

**Division:** Policy, Evidence and Practice Leadership Division

## Executive summary

This document summarises the current evidence on art and music therapy for people with disabilities. Evidence was generated through a rapid review focused on functional capacity outcomes (e.g. language and communication, personal care, mobility and movement, interpersonal interactions, functioning, and community living) following art and music therapy delivered by a therapist (i.e. allied health professional).

This rapid review was undertaken to inform practice considerations and guidance related to the implementation of the S10 transitional rule, Schedule 1, and may be used as evidence by the NDIS Evidence Advisory Committee to assist with making recommendations made about art and music therapy.

This rapid review shows that there is some evidence which supports the use of art and music therapy for certain disability groups (e.g. art therapy for children with autism, music therapy for people with multiple sclerosis and people who have had a stroke). Overall, the identified evidence was not conclusive in supporting art and music therapy as evidence-based, therapeutic supports for all disability groups.

Considering the low risk of art and music therapy to participants and the Scheme, the evidence generated through this rapid review is likely sufficient to understand the state of evidence and meet current needs. Any decision regarding the need for further evidence needs to consider the relative priority of art and music therapy against other supports.

## Evidence for art therapy

Art therapy includes the therapeutic use of art materials. The available evidence for art therapy showed:

- Some evidence for the benefit of art therapy for children with autism across a range of outcomes (mobility and movement, interpersonal interactions, and other outcomes such as hyperactivity and inattention).
- Limited but positive indications for the benefit of art therapy across some outcomes for adults with learning disabilities (on interpersonal interactions and psychosocial functioning outcomes), children with cerebral palsy (on language and communication outcomes), people with PTSD (on psychosocial functioning outcomes), and people with anxiety and depression (on psychosocial functioning outcomes).
- Limited evidence which indicated mixed and unclear benefit for people with eating disorders and people with non-psychotic mental disorders.

- Limited evidence which indicated that art therapy may not provide any benefit for children with learning disabilities and people with schizophrenia.

## Evidence for music therapy

Music therapy is a form of therapy that uses music within a therapeutic relationship between a client and trained professional. The available evidence for music therapy showed:

- Some evidence for the benefit of music therapy for people with multiple sclerosis and people who have had a stroke on mobility and movement outcomes.
- Limited but positive indications for the benefit of music therapy for people living with Parkinson's disease (on communication, mobility and movement and psychosocial functioning outcomes), and people with depression and anxiety (on interpersonal interactions and psychosocial functioning outcomes).
- Limited evidence which indicated mixed and unclear benefits for people with autism, people with schizophrenia, people with PTSD, children with epilepsy, and children with an intellectual disability and auditory processing disorder.

## Introduction

This document summarises the current evidence on art and music therapy for people with disabilities on functional capacity outcomes, based on a NDIA rapid review process. The evidence from this rapid review may inform practice considerations and guidance in the short term related to the implementation of S10 transitional rule, Schedule 1.

Schedule 1 of The National Disability Insurance Scheme (Getting the NDIS Back on Track No. 1) (NDIS Supports) Transitional Rules 2024, as well as the participant-facing translation document (“Supports that are NDIS supports”) lists therapeutic supports as NDIS supports. In both the legislation and the participant-facing translation, therapeutic supports are defined as:

- Supports that provide evidence-based therapy to help participants improve or maintain their functional capacity in areas such as language and communication, personal care, mobility and movement, interpersonal interactions, functioning (including psychosocial functioning) and community living.

Art and music are not specifically listed in the Section 10 NDIS Supports lists. However, we know that people enjoy art and music as part of community activities. Often, these activities don't need to be provided by a therapist. However, adding the word “therapy” suggests that these activities provide therapeutic benefits and should be delivered by a qualified health professional. This is in line with NDIS Pricing Arrangements, which state that therapy supports must be provided by a therapist or a supervised therapy assistant.

Evidence is needed to determine whether art and music therapy meet the legislative criteria for therapeutic supports. The Evidence and Practice Leadership Branch was asked to undertake a rapid review of the evidence to inform guidance. A rapid review can provide decision makers with insights into the state of evidence and whether there is an indication or not that these therapies may be beneficial.

## Definitions of art therapy and music therapy

**Art therapy** is a form of therapy that includes the therapeutic use of art materials. It uses the art-making process as its primary mode of communication and can therefore be particularly helpful to people who find it hard to express their thoughts and feelings verbally. Art therapy can sometimes be regarded as a three-way process between the client, the therapist and the image or artefact. Art therapy may include an individual or combination of modalities, including painting, drawing, sculpting and modeling clay.

**Music therapy** is a form of therapy that uses music within a therapeutic relationship between a client and qualified therapist to address physical, emotional, cognitive, and social needs. Music therapy may involve a variety of different activities, including music improvisation, music listening, song writing, music performance, learning through music, and others.

## Review questions

This rapid review aimed to answer the following questions:

1. What is the state of evidence for the impact of art therapy on functional capacity outcomes for people with disabilities?
2. What is the state of evidence for the impact of music therapy on functional capacity outcomes for people with disabilities?

## Method

We applied our responsive rapid review methodology to answer the review questions and provide the Agency with an overview of the state of evidence taking into consideration the immediate need for evidence. This may inform practice considerations and guidance in the short term related to the implementation of S10 transitional rule, Schedule 1.

## Inclusion criteria for studies

We included systematic reviews or primary studies (in cases where we were unable to locate systematic reviews) which met the following criteria:

- The population was people with disabilities. Any disability group relevant to the NDIS was eligible.
- Investigated art therapy and/or music therapy (not dance therapy) which met the following criteria:
  - Delivered by a therapist
  - Art or music were the focus of the intervention, not a component of a larger intervention
  - Goal was to achieve a functional outcome (e.g. language and communication, personal care, mobility and movement, interpersonal interactions, functioning, and community living)

## Search strategy

To identify relevant studies, we used a range of methods:

1. Key words and subject headings were searched through a research database (PubMed). This included the subject headings, “Art Therapy” and “Music Therapy” in combination with the subject heading for systematic reviews. It also included targeted searches for primary research in different disability groups, with key words and subject headings for disability searched.
2. We searched for the term “Disability” in the archives of the International Journal of Art Therapy (the official journal of the British Association of Art Therapists)
3. We also undertook a snowballing method which involves checking identified studies for other relevant studies.

Searches were limited to the last 10 years.

## Evidence for art therapy

A range of systematic reviews and primary studies reporting evidence for art therapy were identified. The overall quality of the evidence was variable and was not formally assessed. Studies included people with autism, learning disabilities, cerebral palsy, PTSD, schizophrenia, anxiety, depression, eating disorders, and non-psychotic mental disorders. **Table 1** includes a summary of the available evidence for art therapy by disability group and functional capacity outcomes (grouped into areas described in the legislation). No studies reported personal care or community living outcomes.

Overall, there is mixed and limited evidence for art therapy for people with disabilities. Therefore, there is not enough evidence to indicate a benefit for art therapy across all disability groups.

It is also important to note that art therapy approaches within included studies varied across several factors, including:

- Modality (e.g. painting, sculpting, molding clay, or a combination of modalities)
- Length (duration and intensity of intervention)
- Group or individual delivery
- Setting, including country (each country has their own understanding of art that is relevant to their local context)

The potential impact of these factors on outcomes was unable to be investigated due to limited evidence and time constraints.

## Reasonable evidence for benefit

For some disability groups, there is reasonable evidence for the benefit of art therapy on functional outcomes.

- For **children with autism**, benefits of art therapy have been demonstrated across a range of outcomes (mobility and movement, interpersonal interactions, and other outcomes such as hyperactivity and inattention). There are also some indications of benefit for language and communication.

## Limited evidence with some positive indications

For some disability groups, there was very limited evidence for the impact of art therapy on functional outcomes, but the available evidence provided some initial positive indications.

- For **adults with learning disabilities**, a small pilot study showed some benefit to social anxiety, wellbeing, quality of life and resilience. Evidence for other functional capacity outcomes were not reported. This is a positive indication, but more evidence is needed to demonstrate the effectiveness of art therapy for this group.
- For **children with cerebral palsy**, one study showed improvement in language and communication outcomes. Evidence for other functional outcomes were not reported. This is a positive indication, but more evidence is needed to demonstrate the effectiveness of art therapy for this group.
- For people with **post-traumatic stress disorder (PTSD)**, there was some evidence for benefit above a control group on positive non-PTSD-specific outcomes (e.g. quality of life), but inconclusive evidence for other outcomes (e.g. depression and intrusions). Evidence for other functional capacity outcomes were not reported. More evidence is needed to demonstrate the effectiveness of art therapy for this group.
- For people with **anxiety** and **depression**, there was some evidence for the benefit of art therapy above a control group on general functioning and wellbeing, and mental health outcomes. Evidence for other functional capacity outcomes were not reported. More evidence is needed to demonstrate the effectiveness of art therapy for this group.

## Limited and mixed evidence

For some disability groups, there was limited and mixed evidence for the impact of art therapy on functional outcomes.

- For people with **eating disorders**, there was evidence for benefit on some psychopathological and emotional outcomes, but no difference in others. Evidence for other functional capacity outcomes were not reported. More evidence is needed to determine the effectiveness of art therapy for this group.
- For people with **non-psychotic mental disorders**, there was evidence for some mental health outcomes, but not all. One study also showed no difference between art therapy and a control group. Evidence for other functional capacity outcomes were not reported. More evidence is needed to determine the effectiveness of art therapy for this group.

### Limited evidence indicating no added benefit

For some disability groups, there was limited evidence, but some indication that art therapy may not provide added benefit for functional outcomes.

- For **children with learning disabilities**, no difference in interpersonal interactions and other outcomes (self-concept, coherence) were seen compared to a control group. However, there was very limited information available. No studies reported language and communication, mobility and movement, or functioning outcomes. This means we do not have information on the impact of art therapy on these outcomes.
- For people with **schizophrenia**, little or no benefit of art therapy compared to standard care was demonstrated for interpersonal interactions, mental health, and global functioning. There were mixed results for negative symptoms, with one study reporting a significant reduction and one reporting no benefit above standard care. There was limited evidence, with only a few primary studies investigating the impact on schizophrenia.

### No available evidence

In other disability groups, we were unable to identify any evidence to understand how art therapy impacts functional capacity. This includes all disability groups not already mentioned. This means there might be benefits or they may not be, but we do not have any evidence to understand this.



**Table 1. Evidence for art therapy by disability group and outcome.**

Note: Wellbeing and quality of life outcomes alone are not considered functional outcomes.

Disability group	Language and communication	Mobility and movement	Interpersonal interactions	Functioning (incl. psychosocial)	Other outcomes
<b>Autism (children)</b>	Positive increases (not significant) in verbal communication (Vogel, Mullins et al. 2024)	Significant improvement in motor skills (fine motor skills, balance, flexibility) (Vogel, Mullins et al. 2024)  Change in gross motor skills not determined (Vogel, Mullins et al. 2024)	Significant improvement in social skills (communication, interpersonal relationships, social behaviour) (Vogel, Mullins et al. 2024)  Positive increases (not significant) in eye contact (Vogel, Mullins et al. 2024)	No available evidence	Significant reduction in hyperactivity and inattention (Vogel, Mullins et al. 2024)  Significant improvement in assertion (Vogel, Mullins et al. 2024)
<b>Learning disabilities (children)</b>	No available evidence	No available evidence	No better results in art therapy group compared to different intervention or no intervention on loneliness or feelings of social inadequacy	No available evidence	No better results in art therapy group compared to different intervention or no intervention for self-concept, coherence

Disability group	Language and communication	Mobility and movement	Interpersonal interactions	Functioning (incl. psychosocial)	Other outcomes
			(Cohen-Yatziv and Regev 2019)		(Cohen-Yatziv and Regev 2019)  Better adjustment outcomes following art therapy compared to academic assistance only (Cohen-Yatziv and Regev 2019)  No difference between art therapy and academic assistance on academic achievement (Cohen-Yatziv and Regev 2019)
<b>Learning disabilities (adults)</b>	No available evidence	No available evidence	Some reduction in social anxiety after mindfulness-based art therapy (Newland and Bettencourt 2020)	Some improvement in positive wellbeing and reduced negative symptoms such as low mood after mindfulness-based art therapy	Some improvements in quality of life and resilience after mindfulness-based art therapy

Disability group	Language and communication	Mobility and movement	Interpersonal interactions	Functioning (incl. psychosocial)	Other outcomes
				(Newland and Bettencourt 2020)	(Newland and Bettencourt 2020)
<b>Cerebral palsy (children)</b>	Significant improvement in intelligibility, volume, tempo, control of pauses, pronunciation, and fluency of speech (Cohen-Yatziv and Regev 2019)	No available evidence	No available evidence	No available evidence	No available evidence
<b>Schizophrenia</b>	No available evidence	No available evidence	Little or no effect on social functioning (Regev and Cohen-Yatziv 2018)	Not associated with improvements above control group for mental health or global functioning (Regev and Cohen-Yatziv 2018)	Mixed results:  No benefit above treatment as usual for treating negative symptoms (Lutgens, Garipey et al. 2017)  Significant positive effect on negative symptoms in one study (Regev and Cohen-Yatziv 2018)  Fewer positive symptoms in activity

Disability group	Language and communication	Mobility and movement	Interpersonal interactions	Functioning (incl. psychosocial)	Other outcomes
					<p>group than art therapy group (Regev and Cohen-Yatziv 2018)</p> <p>Use of services (e.g. inpatient care, home treatment, drop-in centres) comparable across art therapy and control group (Crawford and Patterson 2007)</p>
<b>PTSD</b>	No available evidence	No available evidence	No available evidence	<p>Favourable results for visual arts therapy group above control group for positive non-PTSD-specific outcomes (e.g. quality of life) (Maddox, Bodner et al. 2024).</p> <p>Inconclusive evidence for negative non-PTSD specific outcomes (e.g. depression) (Maddox, Bodner et al. 2024).</p>	Inconclusive evidence for PTSD-specific outcomes (e.g. intrusions) (Maddox, Bodner et al. 2024)

Disability group	Language and communication	Mobility and movement	Interpersonal interactions	Functioning (incl. psychosocial)	Other outcomes
<b>Anxiety and depression</b>	No available evidence	No available evidence	No available evidence	<p>Some evidence in favour of art therapy over control group on general functioning and wellbeing (Barnish and Nelson-Horne 2023)</p> <p>Statistically significant benefit on anxiety and/or depression outcomes above the control arm (Barnish and Nelson-Horne 2023)</p>	No available evidence
<b>Eating disorders</b>	No available evidence	No available evidence	No available evidence	<p>Mixed evidence:</p> <p>Significant positive reduction in global psychopathology and negative emotion levels, but no difference in other outcomes (e.g. body dissatisfaction, self-esteem, quality of life) (Pedra Cruz Bettin, Urquiza Nogueira et al. 2024)</p>	No available evidence

Disability group	Language and communication	Mobility and movement	Interpersonal interactions	Functioning (incl. psychosocial)	Other outcomes
<b>Non-psychotic mental disorders</b>	No available evidence	No available evidence	No available evidence	Mixed results:  Benefit for some but not all mental health outcomes. No difference between art therapy and control group (Uttley, Stevenson et al. 2015)	No available evidence

## Evidence for music therapy

Systematic reviews and primary studies reporting evidence for music therapy were identified. The overall quality of the evidence was variable and was not formally assessed. Studies included people with neurodevelopmental disorders (autism spectrum disorder and intellectual disability), neurological disabilities (Parkinson's disease, multiple sclerosis and stroke), neurodevelopmental disease (cerebral palsy) and mental health (PTSD, schizophrenia, anxiety and depression). **Table 2** includes a summary of the available evidence for music therapy by disability group and functional capacity outcomes (grouped into areas described in the legislation). No studies reported personal care or community living outcomes.

There is mixed and limited evidence for music therapy for people with disabilities. The evidence for music and art therapy differs by disability group. Therefore, it is important to look at the evidence for each disability group individually.

It is also important to note that music therapy approaches within included studies varied across several factors, including:

- Modality (e.g. educational music therapy, improvisational music therapy, family-centered music therapy, rhythmic auditory stimulation, music-based movement therapy, listening to music, playing an instrument, singing, writing songs, music imagery, Chinese '5-elements music' therapy, Orff therapy, etc.)
- Intensity (length, frequency and duration of the intervention)
- Group or individual delivery
- Setting, including country

The potential impact of these factors on outcomes was unable to be investigated due to limited evidence and time constraints.

## Reasonable evidence for benefit

For some disability groups, there is reasonable evidence for the benefit of music therapy on functional outcomes.

- For people with **multiple sclerosis (MS)** there is evidence from several studies that music therapy may be a safe and effective complementary approach for rehabilitation of MS patients. Music therapy can improve some aspects of gait and walking, fatigue level, fatigability, coordination, dexterity, balance, walking endurance, lower extremity functional strength, emotional status and pain. There is some evidence that music therapy may improve depression, self-acceptance and quality of life in people living with MS. The

evidence for cognitive improvement, mental fatigability and memory is unclear.

- For people who have had a **stroke** there is evidence that music therapy may assist in rehabilitation. There is evidence for improvements in physical status (upper-limb activity, various aspects of walking - such as stride length, gait velocity and balance), cognition (paying attention, communication), and mood in people who have had a stroke. There is evidence for the beneficial effects of rhythmic auditory cueing on walking velocity, cadence and stride length. Receptive music therapy may assist mood and some aspects of cognitive function (i.e. verbal memory, focused attention). There is some evidence 'Five-Element music' therapy may have moderate benefit in language rehabilitation for people with post-stroke aphasia (such as improvements in functional communication, repetition and naming, but not comprehension).

### Limited evidence with some positive indications

For some disability groups, there was very limited evidence for the impact of music therapy on functional outcomes, but the available evidence provided some initial positive indications.

- For people with **Parkinson's Disease (PD)** there is some limited evidence that rhythmic auditory stimulation may significantly improve gait speed and stride length. However, the quality of evidence was low, and the number of studies and participants was small. There is some evidence that music-based movement therapy may improve motor function, balance, freezing of gait, walking speed and mental health, but not gait cadence, stride length, or quality of life in people with PD. There is some evidence that singing may have a beneficial effect on speech in people with PD.
- For people with **depression** and/or **anxiety** there is some evidence that music therapy in addition to usual treatment may improve depressive symptoms when compared with usual treatment alone. There is evidence that music therapy in adults, adolescents and children with depression improved symptoms of depression and improved functioning compared with usual treatment alone. Music therapy also decreased anxiety symptoms and cognitive ability, although showed no improvement in quality of life.



## Limited and mixed evidence

For some disability groups, there was limited and mixed evidence for the impact of music therapy on functional outcomes.

- For **children and adolescents with autism** it is uncertain whether music therapy has any benefit. Music therapy has been attributed to likely or probable improvements across a range of autism outcomes (including global improvement, symptom severity, quality of life, speech production, social engagement, joint attention and social functioning). There is conflicting evidence for verbal and non-verbal communication and no evidence for social interaction. No reduction in a measure of autism symptom severity was observed in children from short-term (6 months) exposure to improvisational music therapy. Mothers with children on the autism spectrum who were followed up four years after completing a 16-week home-based family-centred music therapy program reported long-term program benefits leading to improved social relationships in the family and quality of life. For (predominantly younger) **adults with autism** without intellectual impairment, music therapy may have a positive impact on mental health and wellbeing.
- For people with **schizophrenia** there is moderate to low quality evidence for the short- to long-term effects of music therapy on global mental state (including general and negative symptoms), general and social functioning, and quality of life. Positive results may be mediated by the intensity (frequency) of the intervention. There are mixed results for cognitive functioning and inconclusive data on behavioural outcomes.
- For people with **post-traumatic stress disorder (PTSD)** there is low certainty of the evidence for music therapy in reducing moderate to severe PTSD and depressive symptoms.
- For **children with epilepsy** there is inconclusive evidence to determine the effectiveness of listening to Mozart's music (the 'Mozart effect') to reduce seizures in children (and EEG abnormalities associated with increased seizure risk) either as an adjunct to medical management or in children with epilepsy refractory to medications.
- For **children with intellectual disability and auditory processing disorder**, Orff music therapy (a developmental approach to music therapy) was found to significantly improve auditory processing skills.

## No available evidence

In other disability groups, we were unable to identify any evidence to understand how music therapy impacts functional capacity. This includes all disability groups not

mentioned. This means there might be benefits or they may not be, but we do not have any evidence to understand this.

**Table 2. Evidence for music therapy by disability group and outcome.**

Note: Wellbeing and quality of life outcomes alone are not considered functional outcomes

Disability group	Language and communication	Mobility and movement	Interpersonal interactions	Functioning (incl. psychosocial)	Other outcomes
<b>Autism</b>	<p>Mixed evidence:</p> <p>Significant positive effect on verbal and non-verbal communication, limited evidence (Weitlauf, Sathe et al. 2017)</p> <p>No improvement in verbal and non-verbal communication (Geretsegger, Fusar-Poli et al. 2022)</p>	No available evidence	<p>Mixed evidence:</p> <p>Some significant positive effect on social engagement and joint attention, limited evidence (Weitlauf, Sathe et al. 2017)</p> <p>No improvement in social interaction (Geretsegger, Fusar-Poli et al. 2022)</p>	Some improvement in mental health and wellbeing, limited evidence (Lorenc, Rodgers et al. 2018)	Reduction in autism symptoms, slight increase in QoL (Geretsegger, Fusar-Poli et al. 2022)
<b>Intellectual disability</b>	No available evidence	No available evidence	No available evidence	No available evidence	Significant improvement in auditory processing skills (Senkal and Muhtar 2021)

Disability group	Language and communication	Mobility and movement	Interpersonal interactions	Functioning (incl. psychosocial)	Other outcomes
<b>Neurological disabilities (Parkinsons, multiple sclerosis, and stroke)</b>	No available evidence	Improvements in upper limb function, mobility (Moumdjian, Sarkamo et al. 2017)	No available evidence	No available evidence	Improvements in cognition (Moumdjian, Sarkamo et al. 2017)
<b>Multiple Sclerosis</b>	No available evidence	Positive effect on motor function (e.g. gait) (Lopes and Keppers 2021, Kong, Zhang et al. 2023)	No available evidence	No available evidence	No available evidence
<b>Parkinsons Disease</b>	Partial evidence of benefit on singing intervention on speech (Barnish, Atkinson et al. 2016)	Significant improvements in walking velocity, stride length, and mobility. No effect on gait cadence (Lee and Ko 2023)  Significant improvement in motor function,	No available evidence	Significant improvement in mental health (Zhou, Zhou et al. 2021)	Mixed evidence:  No effect found on cognitive flexibility, executive inhibition, or quality of life (Lee and Ko 2023)  Some improvement in quality of life, cognitive outcomes (Barnish and Barran 2020)

Disability group	Language and communication	Mobility and movement	Interpersonal interactions	Functioning (incl. psychosocial)	Other outcomes
		freezing of gait, walking velocity, balance (Zhou, Zhou et al. 2021)  Positive effect on motor outcomes, including balance and probability of falls (Zhang, Liu et al. 2017)			No observed effect on cognitive function or quality of life (Zhang, Liu et al. 2017)
<b>Post stroke aphasia</b>	Significant effect of 'five elements music' (Chinese music therapy) on repetition, spontaneous speech, and naming. Limited evidence (Yang, Fang et al. 2019)	No available evidence	No available evidence	No available evidence	No available evidence
<b>Stroke – motor dysfunction</b>	No available evidence	Significant positive effect on upper limb function, stride length, and gait velocity (Zhang, Cai et al. 2016)	No available evidence	No available evidence	Significant improvement in executive function (Zhang, Cai et al. 2016)

Disability group	Language and communication	Mobility and movement	Interpersonal interactions	Functioning (incl. psychosocial)	Other outcomes
Children with epilepsy	No available evidence	No available evidence	No available evidence	No available evidence	Inconclusive evidence for efficacy of the Mozart Effect on seizure activity (Brackney and Brooks 2018)
Depression	No available evidence	No available evidence	Improvement in social participation (Barnish and Nelson-Horne 2023)	<p>Improvement in functioning (Aalbers, Fusar-Poli et al. 2017)</p> <p>Improvement in depression symptoms (Barnish and Nelson-Horne 2023)</p> <p>Improvements in clinician and patient-rated depressive symptoms (Aalbers, Fusar-Poli et al. 2017)</p> <p>Improvements in anxiety symptoms (Aalbers, Fusar-Poli et al. 2017)</p> <p>Improvement in depression and</p>	No observed improvement in quality of life (Aalbers, Fusar-Poli et al. 2017)

Disability group	Language and communication	Mobility and movement	Interpersonal interactions	Functioning (incl. psychosocial)	Other outcomes
				anxiety symptoms, and cognitive ability, in older adults, when music therapy is combined with treatment as usual (e.g. drug therapy, psychological care) (Wang, Wu et al. 2023)	
<b>Anxiety</b>	No available evidence	No available evidence	Improvement in social participation (Barnish and Nelson-Horne 2023)	No available evidence	Improvement in anxiety symptoms (Barnish and Nelson-Horne 2023)  Improved symptom severity in children and adolescents – limited evidence (Belski, Abdul-Rahman et al. 2022)
<b>Eating disorders</b>	No available evidence	No available evidence	No available evidence	No available evidence	Significant effect to reduce negative emotional states (Pedra Cruz Bettin, Urquiza Nogueira et al. 2024)

Disability group	Language and communication	Mobility and movement	Interpersonal interactions	Functioning (incl. psychosocial)	Other outcomes
<b>Post Traumatic Stress Disorder</b>	No available evidence	No available evidence	No available evidence	No available evidence	PTSD symptoms were lower after intervention when compared to passive controls, but no change when compared to active controls. Low certainty due to high risk of bias across all included studies (Ma, Yuan et al. 2024)
<b>Schizophrenia</b>	No available evidence	No available evidence	Improvements in social functioning in the short, medium and long term (Geretsegger, Mössler et al. 2017)	Improvements in general functioning for high-dose music therapy (more than 20 sessions) (Geretsegger, Mössler et al. 2017)	Large improvements in general mental state, improving further over time. Medium-sized positive effects on negative symptoms. Mixed results for cognitive functioning. Inconclusive data on behavioural outcomes. Some evidence for improvements on quality of life after high dose music therapy (Geretsegger, Mössler et al. 2017)



Disability group	Language and communication	Mobility and movement	Interpersonal interactions	Functioning (incl. psychosocial)	Other outcomes
					Improvements in negative symptoms however long-term benefit not observed (Lutgens, Garipey et al. 2017)

## Summary

We applied a rapid review process to investigate the impact of art and music therapy delivered by an allied health professional on functional outcomes for people with disabilities. There is evidence for the benefit of art and music therapy for some disability groups. However, there is not enough evidence to indicate whether there is a benefit across all disability groups. Additionally, for some disability groups, there is evidence which indicates no added benefit of art and music therapy above a control group.

The available evidence for art therapy showed:

- Some evidence for the benefit of art therapy for children with autism.
- Limited evidence but positive indications for the benefit of art therapy across some outcomes for adults with learning disabilities, children with cerebral palsy, people with PTSD, and people with anxiety and depression.
- Limited evidence with mixed indications for the benefit of art therapy for people with eating disorders and people with non-psychotic mental disorders.
- Limited evidence with some indication that art therapy may not provide added benefit for children with learning disabilities and people with schizophrenia.

The available evidence for music therapy showed:

- Some evidence for the benefit of music therapy for people with multiple sclerosis and people who have had a stroke.
- Limited evidence but positive indications for the benefit of music therapy across some outcomes for people living with Parkinson's disease, and people with depression and/or anxiety.
- Limited evidence with mixed indications for the benefit of music therapy for people with autism, people with schizophrenia, people with PTSD, children with epilepsy, and children with an intellectual disability and auditory processing disorder.

It is likely that the evidence generated through this rapid review meets the level of evidence required for art and music therapy as low risk and relatively low value supports. A more rigorous and time-intensive review may be excessive considering these factors and may reach the same conclusions as this rapid review. As such, this rapid review could be used as evidence tabled at the NDIS Evidence Advisory Committee to assist with making recommendations made about art and music therapy.

Any need for further evidence would need to be determined with an assessment of the relative priority and opportunity cost of investigating art and music therapy in the short term compared to other higher risk therapies and high-cost assistive technology. If a need for further evidence is identified, a systematic review could be undertaken. A standard systematic review can take 4-8 months.

## Limitations

Research spanning the broad range of disability groups relevant to the NDIS was greatly limited, with studies only available for certain disability groups. Some studies may have been missed, considering limited timeframes, or more primary research may be needed to fill these evidence gaps. Where studies on relevant populations were identified, the breadth of functional capacity outcomes relevant to the NDIS were also rarely measured. While functional outcomes were not often measured, it is important to note the link between improved mental health and wellbeing and increased functional capacity, especially for people with psychosocial disability.

It is also important to note that while rapid reviews are useful when evidence is needed quickly, a rapid review cannot:

- Definitively answer questions of efficacy or effectiveness
- Identify all the literature associated with a review question
- Include all the relevant studies or all the information contained in the studies
- Appraise the quality of the studies.

This means that a rapid review cannot assess how reliable the evidence is, and how confident we can be in any observed effects. A rapid review can only show some of the evidence that is available, and what that evidence says in broad terms. This method is useful when evidence is needed quickly to inform interim guidance, in cases where the risk to the participant and the Scheme is likely to be low.

However, it is important to note that this type of research is not robust enough to be considered adequate for high level decision-making, and in cases where supports have a high associated cost or a risk of harm to participants. In these instances, a more robust approach to evidence is needed. This could look like a systematic review.

## References

1. Aalbers, S., L. Fusar-Poli, R. E. Freeman, M. Spreen, J. C. Ket, A. C. Vink, A. Maratos, M. Crawford, X. J. Chen and C. Gold (2017). "Music therapy for depression." Cochrane Database Syst Rev **11**(11): Cd004517.
2. Barnish, J., R. A. Atkinson, S. M. Barran and M. S. Barnish (2016). "Potential Benefit of Singing for People with Parkinson's Disease: A Systematic Review." J Parkinsons Dis **6**(3): 473-484.
3. Barnish, M. S. and S. M. Barran (2020). "A systematic review of active group-based dance, singing, music therapy and theatrical interventions for quality of life, functional communication, speech, motor function and cognitive status in people with Parkinson's disease." BMC Neurol **20**(1): 371.
4. Barnish, M. S. and R. V. Nelson-Horne (2023). "Group-based active artistic interventions for adults with primary anxiety and depression: a systematic review." BMJ Open **13**(6): e069310.
5. Belski, N., Z. Abdul-Rahman, E. Youn, V. Balasundaram and D. Diep (2022). "Review: The effectiveness of musical therapy in improving depression and anxiety symptoms among children and adolescents - a systematic review." Child Adolesc Ment Health **27**(4): 369-377.
6. Brackney, D. E. and J. L. Brooks (2018). "Complementary and Alternative Medicine: The Mozart Effect on Childhood Epilepsy—A Systematic Review." The Journal of school nursing **34**(1): 28-37.
7. Cohen-Yatziv, L. and D. Regev (2019). "The effectiveness and contribution of art therapy work with children in 2018 -what progress has been made so far? A systematic review." International Journal of Art Therapy **24**(3): 100-112.
8. Crawford, M. J. and S. Patterson (2007). "Arts therapies for people with schizophrenia: an emerging evidence base." **10**: 69-70.
9. Geretsegger, M., L. Fusar-Poli, C. Elefant, K. A. Mössler, G. Vitale and C. Gold (2022). "Music therapy for autistic people." Cochrane Database Syst Rev **5**(5): Cd004381.
10. Geretsegger, M., K. A. Mössler, Ł. Bieleninik, X. J. Chen, T. O. Heldal and C. Gold (2017). "Music therapy for people with schizophrenia and schizophrenia-like disorders." Cochrane Database Syst Rev **5**(5): Cd004025.
11. Kong, L., X. Zhang, L. Meng, H. Xue, W. Zhou, X. Meng, Q. Zhang and J. Shen (2023). "Effects of music therapy intervention on gait disorders in persons with multiple sclerosis: A systematic review of clinical trials." Mult Scler Relat Disord **73**: 104629.
12. Lee, H. and B. Ko (2023). "Effects of Music-Based Interventions on Motor and Non-Motor Symptoms in Patients with Parkinson's Disease: A Systematic Review and Meta-Analysis." Int J Environ Res Public Health **20**(2).
13. Lopes, J. and Keppers, II (2021). "Music-based therapy in rehabilitation of people with multiple sclerosis: a systematic review of clinical trials." Arg Neuropsiquiatr **79**(6): 527-535.
14. Lorenc, T., M. Rodgers, D. Marshall, H. Melton, R. Rees, K. Wright and A. Sowden (2018). "Support for adults with autism spectrum disorder without intellectual impairment: Systematic review." Autism **22**(6): 654-668.

15. Lutgens, D., G. Garipey and A. Malla (2017). "Psychological and psychosocial interventions for negative symptoms in psychosis: systematic review and meta-analysis." Br J Psychiatry **210**(5): 324-332.
16. Ma, Y. M., M. D. Yuan and B. L. Zhong (2024). "Efficacy and acceptability of music therapy for post-traumatic stress disorder: a systematic review and meta-analysis of randomized controlled trials." Eur J Psychotraumatol **15**(1): 2342739.
17. Maddox, G. A., G. E. Bodner, M. W. Christian and P. Williamson (2024). "On the Effectiveness of Visual Arts Therapy for Traumatic Experiences: A Systematic Review and Meta-Analysis." Clin Psychol Psychother **31**(4): e3041.
18. Moudjian, L., T. Sarkamo, C. Leone, M. Leman and P. Feys (2017). "Effectiveness of music-based interventions on motoricity or cognitive functioning in neurological populations: a systematic review." Eur J Phys Rehabil Med **53**(3): 466-482.
19. Newland, P. and B. A. Bettencourt (2020). "Effectiveness of mindfulness-based art therapy for symptoms of anxiety, depression, and fatigue: A systematic review and meta-analysis." Complement Ther Clin Pract **41**: 101246.
20. Pedra Cruz Bettin, B., L. Urquiza Nogueira, P. A. Bertasso de Araujo and L. C. Antunes (2024). "Visual art- and music-based interventions as adjuvants in the treatment of eating disorders: a systematic review and a theoretical model." Arts Health **16**(2): 167-188.
21. Regev, D. and L. Cohen-Yatziv (2018). "Effectiveness of Art Therapy With Adult Clients in 2018-What Progress Has Been Made?" Front Psychol **9**: 1531.
22. Senkal, O. and Z. Muhtar (2021). "Role of orff music therapy in improving auditory processing skills in children with intellectual disability." Nigerian journal of clinical practice **24**(7): 1005-1014.
23. Uttley, L., M. Stevenson, A. Scope, A. Rawdin and A. Sutton (2015). "The clinical and cost effectiveness of group art therapy for people with non-psychotic mental health disorders: a systematic review and cost-effectiveness analysis." BMC Psychiatry **15**: 151.
24. Vogel, S. W., K. L. Mullins and S. Kumar (2024). "Art therapy for children and adolescents with autism: a systematic review." International Journal of Art Therapy: 1-10.
25. Wang, M., J. Wu and H. Yan (2023). "Effect of music therapy on older adults with depression: A systematic review and meta-analysis." Complement Ther Clin Pract **53**: 101809.
26. Weitlauf, A. S., N. Sathe, M. L. McPheeters and Z. E. Warren (2017). "Interventions Targeting Sensory Challenges in Autism Spectrum Disorder: A Systematic Review." Pediatrics **139**(6): 1.
27. Yang, Y., Y. Y. Fang, J. Gao and G. L. Geng (2019). "Effects of Five-Element Music on Language Recovery in Patients with Poststroke Aphasia: A Systematic Review and Meta-Analysis." J Altern Complement Med **25**(10): 993-1004.
28. Zhang, S., D. Liu, D. Ye, H. Li and F. Chen (2017). "Can music-based movement therapy improve motor dysfunction in patients with Parkinson's disease? Systematic review and meta-analysis." Neurol Sci **38**(9): 1629-1636.

29. Zhang, Y., J. Cai, Y. Zhang, T. Ren, M. Zhao and Q. Zhao (2016). "Improvement in Stroke-induced Motor Dysfunction by Music-supported Therapy: A Systematic Review and Meta-analysis." Sci Rep **6**: 38521.
30. Zhou, Z., R. Zhou, W. Wei, R. Luan and K. Li (2021). "Effects of music-based movement therapy on motor function, balance, gait, mental health, and quality of life for patients with Parkinson's disease: A systematic review and meta-analysis." Clin Rehabil **35**(7): 937-951.