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The Role of Music Therapy for Children undergoing Cancer Treatment in Singapore

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1 Introduction 2 Aim

- Music Therapy (MT) has been involved in cancer care since 1973 (O'Callaghan et. al., 2016).
- MT is a low-risk intervention that addresses psychophysiological issues such as anxiety, low mood, and pain (Tuinmann et al., 2017).
- This study was part of the Psychosocial and Supportive Care Programme (PSCP) which involved Rehabilitation (Physiotherapy, Occupational Therapy, Speech & Language Therapy, Music Therapy), Dietetics and Psychology Services working in a multidisciplinary team to support children undergoing cancer. treatment.

- Examine the profile of patients who were referred for MT
- Describe the goals & objectives of MT services for children undergoing cancer treatment
- Explore the frequency of MT services over a child's cancer treatment
- Evaluate the efficacy of MT based on goals achieved

3 Methodology

- STUDY DESIGN**
- Prospective cohort study from March 2017 to January 2020.
- PARTICIPANTS**
- Children aged 2-17 years diagnosed with cancer and assessed to be suited for MT services were recruited.
- DATA COLLECTION**
- Age, cancer diagnosis, gender, and therapeutic objectives & outcomes of MT were collected quarterly.
 - The Goal Attainment Scale (GAS) is an approach to measuring the process of achieving established unique individualized goals following therapeutic intervention as demonstrated in table 1 (Carpente, 2018).
 - Based on the participants needs, individualized SMART (specific, measurable, attainable, relevant, and time-bound) goals were written by the music therapist within the GAS framework.
- DATA ANALYSIS**
- Frequency analysis including cross tabulation, and Spearman's rank-order correlation were used to test correlations between age, goals, and number of MT sessions.



Figure 1. International Classification of Functioning by the World Health Organization incorporated into GAS goals (WHO-ICF) (2002)

Score	Description
+2	Goal achieved most favorably
+1	Goal achieved more than expected
0	Goal achieved
-1	Baseline
-2	Regression of baseline

Table 1. GAS scoring system (Carpente, 2018)

4 Results

30% of participants required MT Intervention (N=25)

- Participants received a total number of **180 sessions**.
- **37 GAS goals** were written.

Cancer Type	No. of Participants	Mean (SD)
Overall	25	7.20 (6.45)
Solid Tumor	7	3.28 (2.60)
Blood Cancer	9	8.33 (5.73)
Brain Tumor	9	9.11 (7.79)

Table 3. Frequency of music therapy sessions

RATE OF GOALS ACHIEVEMENT

- Not Achieved: 10.8% (n=4)
- Achieved: 89.2% (n=33)

Demographic	Subcategory	Frequency	%
Diagnosis	Solid Tumor	7	28
	Blood Cancer	9	36
	Brain Tumor	9	36
Gender	Male	18	72
	Female	7	28
Age	2-6 years old (preschool age)	11	44
	7-12 years old (primary school age)	8	32
	13-17 years old (secondary school age)	6	24

Table 2. Demographics of participants seen for music therapy from March 2017 to January 2020

- Observed that 15 participants had a single goal, followed by 9 participants who had 2 goals, and 1 participant who received 4 goals.
- Positive correlation found between goals and MT sessions, $r_s = .56, p = .004$.
- No correlation between the age of participants and the number of sessions received by the participants, $r_s = -.19, p = .365$.
- No correlation between participant's age and the number of goals, $r_s = -.19, p = .354$.
- No environmental goals were set in this study.

5 Conclusions

- MT has demonstrated therapeutic versatility and effectiveness in addressing psychophysiological goals for children across the ages.
- Most goals were achieved within the set time frame with the most common need addressed by MT found to be the regulation of patients' mood and morale through music.
- Extra attention for patients with a diagnosis of brain tumor was found to be required of MT services.
- Age was not a factor regarding the need and suitability of MT.
- MT has promising results in addressing functional and psychosocial challenges for a large portion of children undergoing cancer treatment.
- MT should be included as a key intervention in paediatric cancer care.

References

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