IMTAP Assessment

**Executive Summary**

IMTAP data were collected from 130 people who are currently receiving music therapy services at OPG. This document reports an analysis of IMTAP skills (specifically Cognitive, Emotional, Expressive Communication, Fine Motor, Gross Motor, Receptive Communication, Sensory, and Social Skills) data between 2012 and 2014. All eight of these skills increased overall between 2012 and 2014 even after accounting for age and the number of therapists that they had. People with older ages had lower cognitive, expressive communication, gross motor, receptive communication, and social skills skills than people with younger ages. People with more therapists between 2012 and 2014 had lower receptive communication and fine motor scores than people with fewer therapists. These lower scores, however, are not a decrease in skills over time. In fact, fine motor skills increased between 2012 and 2014 for older people but did much more so for younger people. Based on these results and a departmental survey, these results suggest that the music therapists work on more than just the three formal outcomes that are tracked. Also based on these results and the departmental survey, the Department of Music Therapy created a resource of assessment tools to supplement the IMTAP and created a form to standardize transitioning people from one therapist to another.

**Method**

**Individuals**

 IMTAP data from 130 people who are currently receiving music therapy services were included in these analyses. These data include 97 people from the Fishers site, 16 people from the Kokomo site, and 17 people from the Lafayette site. Between 2012 and 2014, the people changed therapists an average of 1.55 times (*SD* = .67). Fifty-five percent of these people had one therapist, 34% had two therapists, and 11% had three therapists. These people have had music therapy services for an average of 5.05 years (*SD* = 1.78) and had an average of 2.53 different therapists (*SD* = .12) since they started services. The modal number of changes was two changes overall (40% of people). Finally, these people participated in 65.05 min (*SD* = 24.27) of therapy weekly, based on their latest MUTH Treatment Plan.

There were 79 men included in this set of people and 51 women. The average age was 29.10 (*SD* = 13.61; Range = 12 - 82). These 130 people mostly had diagnoses of Intellectual Disability (77%) and Autism (56%). Other common diagnoses included Constipation (32%), Seizures (26%), Cerebral Palsy (22%), Down’s Syndrome (17%), Anxiety (10%), and Epilepsy (10%).

**Materials**

 The therapists used *The Individualized Music Therapy Assessment Profile* (IMTAP; Baxter, Berghofer, MacEwan, Nelson, Peters, & Roberts, 2007) to collect the data. The IMTAP is an assessment tool designed to measure a client’s functioning and was created for pediatric and adolescent settings. “The IMTAP assesses each client using therapist-planned structured and/or improvisation music therapy interventions which are evaluated to assess domains of functioning” (p. 13). During the assessment, the therapists determined how often the client correctly displays a skill, whether it is 0% of the time (*Never*), under 50% of the time (*Rarely*), between 50% and 79% of the time (*Inconsistent*), and between 80% and 100% of the time (*Consistent).* For each domain, the IMTAP calculates an overall percentage of functioning from 0% to 100% that is continuous. The IMTAP assesses 10 domains: Cognitive, Emotional, Expressive Communication, Fine Motor, Gross Motor, Musicality, Oral Motor, Receptive Communication, Sensory, and Social.

 **Cognitive**. The cognitive domain is based on mental processes and skills that could lead to academic success. This domain includes skills of “decision-making, direction-following, short-term recall/sequencing, long-term recall, and academics such as reading, counting, and writing” (Baxter et al., 2007, p. 23).

 **Emotional.** The emotional domain assesses how well the individual can differentiate and express emotions, can regulate emotions, and can state how self-aware he or she is about his or her emotions (Baxter et al., 2007).

 **Expressive communication.** The expressive communication domain assesses verbal and nonverbal communication skills. It assesses skills of communicating through gesturing, vocalizing, and verbalizing. It also assesses relational communication and vocal idiosyncrasies (Baxter et al., 2007).

 **Fine motor.** This domain assesses how well the client grasps, moves his or her fingers, and uses alternating hands (Baxter et al., 2007).

 **Gross motor.** The gross motor domain assesses how well the individual uses his or her large muscle groups. It includes skills of “right/left dominance, overall muscle tone, and how an individual moves his or her body within the music therapy experience” (p. 22). It also assesses how well the client changes movement while responding to musical stimuli (Baxter et al., 2007).

 **Musicality.** The musicality domain assesses how much the individual is interested in music, how the individual reacts to music, and how enthusiastic the individual is regarding music. It assesses how well the individual responds to musical stimuli of accompaniment, creativity and development of musical ideas, dynamics, music reading, perfect and relative pitch, rhythm, tempo, and singing (Baxter et al., 2007).

 **Oral motor.** The oral motor domain assesses how well the individual using the muscles in his or her mouth. These skills include “muscular strength, air production, and coordinated movements involved in vocalization and speech” (Baxter et al., 2007, p. 22).

 **Receptive communication.** The receptive communication domain has subdomains of musical changes, singing, rhythm, and verbal direction. It assesses “awareness, perception, discrimination, and response to various aspects of auditory stimuli and language in the environment (Baxter et al., 2007, p. 23).

 **Sensory.** The sensory domain assesses how well the individual tolerates, integrates, and responds to musical input. Subdomains include tactile information, proprioceptive information, vestibular information, and visual and auditory information (Baxter et al., 2007).

 **Social.** The social domain assesses how well the individual interacts with others. The subdomains are how often the individual participates in a social setting, how often the individual participates in turn-taking, how often the individual pays attentions, how often the individual follows directions, and how well the individual utilizes relationship skills (Baxter et al., 2007).

**Procedure**

Once every year, each music therapist (MT) assesses each client using the IMTAP. The individuals were assessed prior to the end of their Care/Cost Comparison Budget year. Therefore, across the entire music therapy department, MTs constantly assessed individuals throughout the calendar year, but each individual was typically only assessed once during the calendar year. In cases where the individual was assessed twice in a year, the second of the assessments was utilized in the dataset. This assessment helped inform the therapists about each individual’s need areas to write outcomes.

Each MT used his or her own unique procedures and client-based idiosyncrasies to assess these skills. Examples of methods might be singing a song, taking turns while drumming, discussing friends and home life, and playing various instruments, such as piano, Qchord, guitar, and rhythm instruments. Even though each MT used his or her own method to assess the individuals, the MTs looked for the same skills and record using the IMTAP.

**Results**

 The MTs typically did not asses the oral motor and musicality domains. Therefore, analyses did not include oral motor and musicality domains. Means for each domain between 2012 and 2014 are shown in Figure 1 in Appendix A.

**Correlations**

Correlations among the age of the individuals, the number of minutes the individual received in 2014, the number of therapists between 2012 and 2014, the number of therapists since the individuals started therapy, the number of years the individuals received therapy, and gender are shown in Table 1 in the Appendix B. These variables were also correlated among the different domains for each year data were collected.

 One notable pattern existed amongst these variables. Age was significantly negatively correlated with every domain for every year, except for Sensory in 2012. This pattern suggests that older individuals had lower percentages of skills assessed through the IMTAP than younger individuals did. Another notable correlational pattern showed that the longer their therapy sessions were, the higher their skills were, or that the lower their skills were, the shorter their sessions were.

**Primary Results**

To determine if each skill changed over time, separate hierarchical, linear regressions were for each skill. Age and the number of MTs within the time period were used as covariates for every skill except fine motor. Because they were outliers across multiple tests, five people’s data were removed from the dataset. In using age and the number of MTs within the time period as covariates, the skills were entered into Step 1 in that order. In Step 2, the skill from 2012 was entered. All variables predicted the skill in 2014. Because multiple regressions were run, a Bonferroni’s adjustment was applied to the critical *p*-value. The alpha was set at .00625 to determine significance.

 **Cognitive.** For people with older ages, cognitive skills in 2014 were significantly lower,  = -.34, *t*(118) = -4.02, *p* < .001. The number of MTs in the time period did not significantly predict cognitive skills in 2014,  = -.16, *t*(118) = -1.83, *p* = .07. These variables explained a significant portion of the variance, *R*2 = .16, *F*(2, 118) = 11.10, *p* < .001. Controlling for age and the number of MTs in the time period, cognitive skills significantly increased from 2012 to 2014,  = .92, *t*(117) = 29.75, *p* < .001. Cognitive skills in 2012 explained a significant increase in the variance, *R*2 = .74, *F*(1, 117) = 885.19, *p* < .001.

 **Emotional.** Age did not significantly predict emotional skills in 2014,  = -.23, *t*(103) = -2.43, *p* = .02. The number of MTs in the time period did not significantly predict emotional skills in 2014,  = -.20, *t*(103) = -2.12, *p* = .04. These variables explained a significant portion of the variance, *R*2 = .09, *F*(2, 103) = 6.03, *p* = .003. Controlling for age and the number of MTs in the time period, emotional skills significantly increased from 2012 to 2014,  = .76, *t*(102) = 12.03, *p* < .001. Emotional skills in 2012 explained a significant increase in the variance, *R*2 = .62, *F*(1, 102) = 144.66, *p* < .001.

 **Expressive communication.** People with older ages had lower expressive communication skills in 2014 than people with younger ages,  = -.26, *t*(115) = -2.91, *p* = .004. The number of MTs in the time period did not significantly predict expressive communication skills in 2014,  = -.10, *t*(115) = -1.09, *p* = .28 . These variables explained a significant portion of the variance, *R*2 = .09, *F*(2, 115) = 5.40, *p* = .006. Controlling for age and the number of MTs in the time period, expressive communication skills significantly increased from 2012 to 2014,  = .91, *t*(117) = 22.21, *p* < .001. Expressive communication skills in 2012 explained a significant increase in the variance, *R*2 = .74, *F*(1, 114) = 494.81, *p* < .001.

 **Fine motor.** In Step 1, age, the number of MTs in the time period, and fine motor skills from 2012 were entered and in that order. Age did not significantly predict fine motor skills in 2014,  = -.19, *t*(95) = -.26, *p* = .80. The more MTs in the time period the individual had, the lower the individuals’ fine motor skills were,  = -.19, *t*(95) = -3.56, *p* = .001. Fine motor skills increased from 2012 to 2014,  = .80, *t*(95) = 14.24, *p* < .001. These variables explained a significant portion of the variance, *R*2 = .75, *F*(3, 95) = 89.61, *p* < .001.

In Step 2, the interactions between age and fine motor skills in 2012 and the interaction between, between fine motor skills in 2012 and the number of MTs in the time period, and between age and the number of MTs in the time period. These variables were entered in that order. The interaction between fine motor skills in 2012 and the number of MTs in the time period (b = .31, *t*[92] = 1.78, *p* = .08) and between age and the number of MTs in the time period (b = -.17, *t*[92] = -.64, *p* = .52) did not significantly predict fine motor skills in 2014. The interaction between fine motor skills in 2012 and age significantly predicted fine motor skills in 2014, b = -.41, *t*(92) = -2.83, *p* = .006. Regardless of how many MTs the individuals had, the younger individuals increased their fine motor skills more than the average and older individuals. See Table 2 in Appendix C for the simple slopes and Figure 2 in Appendix D for a graphical depiction. The three interactions did not explain a significant increase in the variance, *R*2 = .75, *F*(3, 92) = 3.60, *p* = .02. The three-way interaction in Step 3 did not predict fine motor skills in 2014, *R*2 = .77, b = -.51, *t*(91) = -1.11, *p* = .27.

**Gross motor.** Older individuals had lower gross motor skills than younger individuals,  = -.41, *t*(95) = -4.40, *p* = < .001. The number of MTs in the time period did not significantly predict gross motor skills in 2014,  = -.14, *t*(95) = -1.50, *p* = .14. These variables explained a significant portion of the variance, *R*2 = .09, *F*(2, 95) = 12.31, *p* < .001. Controlling for age and the number of MTs in the time period, gross motor skills significantly increased from 2012 to 2014,  = .88, *t*(94) = 21.01, *p* < .001. Gross motor skills in 2012 explained a significant increase in the variance, *R*2 = .62, *F*(1, 102) = 144.66, *p* < .001.

**Receptive communication.** Older participants had lower receptive communication skills in 2014 than younger participants,  = -.30, *t*(110) = -3.37, *p* = .001. The more MTs the individual had in the time period, the lower the individual’s receptive communication skills in 2014 were  = -.26, *t*(110) = -2.95, *p* = .004. These variables explained a significant portion of the variance, *R*2 = .16, *F*(2, 103) = 11.76, *p* < .001. Controlling for age and the number of MTs in the time period, receptive communication skills significantly increased from 2012 to 2014,  = .82, *t*(112) = 17.30, *p* < .001. Receptive communication skills in 2012 explained a significant increase in the variance, *R*2 = .78, *F*(1, 109) = 299.44, *p* < .001.

**Sensory.** Age did not significantly predict sensory skills in 2014,  = -.12, *t*(44) = -.77, *p* = .44. The number of MTs in the time period did not significantly predict sensory skills in 2014,  = .11, *t*(43) = .75, *p* = .46. These variables did not explain a significant portion of the variance, *R*2 = .02, *F*(2, 44) = .57, *p* = .56. Controlling for age and the number of MTs in the time period, sensory skills significantly increased from 2012 to 2014,  = .69, *t*(43) = 6.29, *p* < .001. Sensory skills in 2012 explained a significant increase in the variance, *R*2 = .47, *F*(1, 43) = 39.55, *p* < .001.

**Social.** People with an older age had lower social skills in 2014 than people with a younger age,  = -.32, *t*(114) = -3.64, *p* < .001. The number of MTs in the time period did not significantly predict social skills in 2014,  = -.11, *t*(114) = -1.26, *p* = .21. These variables explained a significant portion of the variance, *R*2 = .13, *F*(2, 114) = 8.35, *p* < .001. Controlling for age and the number of MTs in the time period, social skills significantly increased from 2012 to 2014,  = .81, *t*(113) = 15.77, *p* < .001. Social skills in 2012 explained a significant increase in the variance, *R*2 = .72, *F*(1, 113) = 248.56, *p* < .001.

**Discussion**

**Age**

Age affected cognitive, expressive communication, gross motor, receptive communication, and social skills. For each of these domains, older individuals were weaker in their skills than younger individuals. Age did not significantly affect emotional or sensory skills. The number of MTs in the time period did not affect any of the skills except fine motor and receptive communication. For both of these skills, the people who had more therapists had weaker skills than the people who had fewer therapists.

Age did not have an overall effect on fine motor but it did interact with the fine motor skills from 2012. Compared to 2012, everyone increased their fine motor skills, but younger people increased their skills more than older people. With the expressive communication, gross motor, receptive communication, and social skills, younger people had stronger skills than older people. These results are probably due to the natural aging process. The results, however, did not suggest that skills declined over the years. In fact, when controlling for age, these skills increased overall. Because of the increases overall, these findings suggest that the MTs met the needs of the older individuals just as well as they did the younger individuals.

**Number of MTs**

Fine motor and receptive communication skills in 2014 decreased as the number of MTs the individual had between 2012 and 2014 increased. These findings could suggest that MTs focused on other skills as they adopted and then transferred the individual. These findings could also suggest that the individuals who needed to be transferred more already had lower fine motor skills and receptive communication skills than individuals who did not need be transferred. In addition, they could also suggest that the rapport decreases with each transition, and that the newer MTs did not have enough time to build rapport and obtain a true estimation of these skills.

Because of these findings, a more thorough look at the reasons for transferring individuals to other MTs could help explain what happened. For example, what are some reasons the therapists transfer the individuals? Also, is transferring meeting the needs of the individuals?

**Domain Skills**

Overall, skills in every domain tested increased a significant amount from 2012 to 2014. These increases were not due to age or the number of MTs the individual had between 2012 and 2014. Past research has shown that an increase in one specific skill in one domain does not transfer to an increase in that skills outside of that domain (for examples, see Muller, McLaren, Appleby, & Rosalie, 2015; Moore & Muller, 2014; Tanka, Heptonstall, & Hagen, 2013). The past research combined with the findings that all skill domains increased suggested that the MTs informally addressed skills beyond the formal skills tracked in the outcomes. Bhati, Ali, Isa, and Battour (2014), however, found that trained employees only transfer a small amount of their skills to different situations but transferring skills could be maximized when the individual had social support, high performance self-efficacy, and motivation. The data from the current study’s analyses could not attest to the individuals transferring their skills outside the session. Therefore, the following questions could be considered: 1) How often do the MTs informally address the non-outcome related skills; and 2) How often do the MTs address or encourage transferring of skills outside session?

**Therapist Explanations**

To help explain these results, a department survey was sent to the MTs. Eleven MTs in the department responded to the survey. Responses ranged from 0 (*Never*) to 3 (*Once per week*) with a few open-ended questions, and a copy of the survey is in Appendix E.

Frequencies of responses are in Table 3 in Appendix F. Most therapists consulted with the previous therapist during a transfer at least once a month. Most therapists also addressed transferring the skills outside of the session at least once a month. Equal amounts of therapists intentionally addressed IMTAP skills beyond the formal outcomes once a month or once a week. These results suggested that the overall increases in skills could be due to the MTs going above and beyond the minimum requirements by addressing informal goals and by working to increase total life skills with formal and informal objectives.

**Why do you think people who had more therapists had lower fine motor and receptive communications skills than people who had fewer therapists?** For receptive communication specifically, four MTs wrote that it takes time to learn a person’s communication style. Therefore, receptive communication would be difficult for a person when he or she has a new therapist. For fine motor skills specifically, two therapists stated that fine motor skills were lower the more therapists the person had because therapists structure the activities differently, which lead to variations in data collection.

 Most MTs responded to this question generally. Two MTs stated that this situation existed because the new MTs would not agree with the IMTAP results from the former MT. Two other MTs stated that the new therapist had to build rapport to achieve an accurate measurement of the person’s skills. Other statements included wanting more data analyzed, measuring the IMTAP differently among MTs, and having a lack of consultation during the transfer process. One MTs mentioned that changing therapists introduces inconsistency, which is important when working with the people.

**Future Directions**

 In the same survey, the MTs were asked questions designed to determine what actions the department should take. Along with some open-ended questions, responses ranged from 1 (*Strongly Disagree*) to 5 (*Agree).* Responsefrequencies, means, and standard deviations are Table 4 in Appendix G.

The majority of therapists did not think that the IMTAP was an accurate measure of the individuals’ skills. These MTs either thought that another assessment tool should be implemented or were neutral on the issue. Overwhelmingly, these therapists thought that they should supplement the IMTAP with other assessment tools. The majority of people thought that putting the IMTAP data in one database would be helpful. These MTs, however, were pretty equally divided on whether or not training in the IMTAP would be helpful.

**How can we improve the process of transferring individuals from one therapist to another?**

Three of the 11 MTs stated that they wanted an increase in the amount of consultation time, and two MTs suggested that the MUTH budget should be increased (for about 90 days) to allow for sufficient consultation between both MTs. Three MTs also stated that they wanted a standardized form with pertinent information on it to help the process become smoother. Two MTs stated that they wanted more co-lead sessions, and one MT wanted the co-lead sessions structured to where the new MT slowing lead more and more of the interventions. One MT simply claimed that transitions are always going to be difficult.

**What do you need to make therapy easier and more effective for people who had older ages?**

Two MTs stated that goals should be changed for older people to maintain their skills instead of increasing their skills. Other responses included needing more support from IST members, more involvement in waiver services, more communication and support outside of music therapy, different assessment tools designed for older adults, and more research on music therapy with older adults in the habilitation setting. One therapist mentioned taking a slower pace, knowing the individuals’ preferred music well, building good rapport, having a sense of humor, and being respectful. Another MT mentioned that the older individuals’ education and early intervention needs to be equivalent to those who these MT see who are younger.

**Actions Taken**

The MTs stated that they wanted a department-wide, standardized form to help transfer an individual from one MT to another. This form has been created and can be seen in Appendix F.

These responses clearly indicated that the MTs did not think the IMTAP by itself is a good assessment tool for the people that they serve. Therefore, a resource book of reliable and valid assessment tools from published, peer-reviewed journals has been created. This resource has been made available to the MTs in hardcopy and electronically. This resource includes the following tools:

1. **Autism Social Skills Profile (ASSP):** This profile measures social functioning in children and adolescents with Autism.
2. **Behavior Problems Inventory – Short Form:** This inventory measures the person’s behaviors. It was designed specifically for people with intellectual disabilities.
3. **Communication Skills Questionnaire:** This questionnaire measures communication skills that are necessary for conversation, negotiation, and social skills.
4. **Difficulties in Emotion Regulation:** This assessment measures the individual’s difficulties in emotion regulation, such as lack of awareness of emotional responses, lack of clarity of emotional responses, nonacceptance of emotional responses, limited access to emotion regulation strategies perceived as effective, difficulties controlling impulses when experiencing negative emotions, and difficulties engaging in goal-directed behaviors when experiencing negative emotions.
5. **Everyday Cognition:** This scale measures daily function in older adults. It was created using an explicit rational model. It measures six factors of cognition (Everyday Memory, Language, Visuospatial Abilities, Planning, Organization, and Divided attention).
6. **Empathy Quotient:** The measurement is intended to be used for adults who have normal intelligence. It measures empathy in people with autism who are high functioning.
7. **The Glasgow Social Self-Efficacy Scale:** It measures the person’s belief in their ability to communicate. It has 17 questions, and it was designed specifically for people with an intellectual disability.
8. **Pragmatic and Semantic Profile:** This profile measures the spontaneous use of expressive language skills. It was developed with a sample of typically-developed 3- to 5-year olds, but the idea was to use it with people with Autism.
9. **Social Skills Scale:** This scale measures social competence through 24 questions. The evaluator completes the checklist based on the person’s behavior in the session.

References

Bhatti, M. A., Ali, S., Isa, M. F. M., & Battour, M. M. (2014). Training transfer and transfer motivation: The influence of individual environmental, situational, training design, and affective reaction factors. *Performance Improvement Quarterly, 27*, 51 – 82. doi:10.1002/piq.21165

Baxter, H. T., Berghofer, J. A., MacEwan, L., Nelson, J., Peters, K., & Roberts, P. (2007). *The Individualized music therapy assessment profile.* Philadelphia, PA: Jessica Kingsley Publishers.

Moore, C. G., & Muller, S. (2014). Transfer of expert visual anticipation to a similar domain. *The Quarterly Journal of Experimental Psychology: Human Experimental Psychology, 67*, 186 – 196. doi:10.1080/17470218.2013.798003

Muller, S., McLaren, M., Appleby, B., & Rosalie, S. M. (2015). Does expert perceptual anticipation transfer to a dissimilar domain? *Journal of Experimental Psychology: Human Perception and Performance*, *10*, 631 – 638. doi:10.1037/xhp0000021

Tanaka, J. W., Heptonstall, B., & Hagen, S. (2013). Perceptual expertise and the plasticity of other-race face recognition. *Visual Cognition, 21*, 1183 – 1201. doi:10.1080/13506285.2013.826315

Appendix A

Figure 1. Means for each domain between 2012 and 2014. All domain skills increased between 2012 and 2014.

Appendix B

Table 1

*Correlations*

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Age | Current Session Minutes | No. of MTs 2012 - 2014 | No. of MTs Overall | Total Years of Therapy | Gendera |
| Age | 1.00 |  |  |  |  |  |
| Minutes of Current Session | -0.10 | 1.00 |  |  |  |  |
| No. of MTs 2012 - 2014 | 0.12 | -0.05 | 1.00 |  |  |  |
| No. of MTs Overall | 0.13 | 0.14 | **.59\*\*** | 1.00 |  |  |
| Total Years of Therapy | 0.00 | **0.25\*** | 0.11 | **.51\*\*** | 1.00 |  |
| Gender | -0.10 | -0.11 | 0.09 | 0.09 | -0.05 | 1.00 |
| Cognitive 2012 | **-0.36\*\*** | **.28\*\*** | -0.15 | -0.08 | **.23\*** | 0.07 |
| Cognitive 2013 | **-0.38\*\*** | **.24\*** | **-0.21\*** | -0.15 | 0.10 | 0.04 |
| Cognitive 2014 | **-0.36\*\*** | **.24\*** | **-0.2** | -0.16 | 0.08 | 0.05 |
| Emotional 2012 | **-0.34\*\*** | 0.20 | -0.16 | -0.06 | 0.14 | -0.04 |
| Emotional 2013 | **-0.32\*\*** | 0.17 | -0.13 | -0.14 | 0.03 | 0.00 |
| Emotional 2014 | **-0.27\*\*** | **.24\*** | -0.17 | -0.11 | 0.06 | 0.00 |
| Expressive Communication 2012 | **-0.32\*\*** | **.29\*\*** | -0.18 | 0.09 | **.19\*** | -0.09 |
| Expressive Communication 2013 | **-0.33\*\*** | **.27\*\*** | -0.13 | -0.02 | **.20\*** | -0.08 |
| Expressive Communication 2014 | **-0.31\*\*** | **.25\*** | -0.11 | -0.02 | 0.17 | -0.08 |
| Fine Motor 2012 | **-0.42\*\*** | **.30\*\*** | -0.14 | -0.06 | 0.16 | 0.04 |
| Fine Motor 2013 | **-0.35\*\*** | **.26\*** | **-0.29\*\*** | -0.17 | 0.06 | 0.12 |
| Fine Motor 2014 | **-0.34\*\*** | **.27\*** | **-0.31\*\*** | -0.19 | 0.04 | 0.11 |
| Gross Motor 2012 | **-0.41\*\*** | **.30\*\*** | -0.13 | -0.02 | 0.14 | 0.08 |
| Gross Motor 2013 | **-0.41\*\*** | **.24\*** | **-0.20\*** | -0.09 | 0.10 | 0.14 |
| Gross Motor 2014 | **-0.42\*\*** | **.29\*\*** | **-0.20\*** | -0.12 | 0.00 | 0.13 |
| Receptive Communication 2012 | **-0.34\*\*** | **.24\*** | -0.15 | -0.1 | 0.16 | -0.06 |
| Receptive Communication 2013 | **-0.38\*\*** | **.26\*** | **-0.26\*\*** | **-0.22\*** | 0.06 | -0.04 |
| Receptive Communication 2014 | **-0.33\*\*** | **.27\*\*** | **-0.28\*\*** | -0.16 | 0.08 | -0.07 |
| Sensory 2012 | -0.17 | **.30\*** | -0.05 | 0.19 | **.44\*\*** | -0.15 |
| Sensory 2013 | **-0.28\*** | 0.18 | 0.18 | 0.03 | **.35\*\*** | -0.12 |
| Sensory 2014 | **-0.31\*\*** | **.25\*** | 0.02 | 0.11 | 0.21 | -0.07 |
| Social 2012 | **-0.29\*\*** | **.28\*\*** | **-0.19\*** | -0.05 | 0.16 | 0.04 |
| Social 2013 | **-0.31\*\*** | **.21\*** | -0.13 | -0.09 | 0.06 | 0.00 |
| Social 2014 | **-0.32\*\*** | 0.17 | -0.15 | -0.12 | -0.03 | 0.05 |

Note: a Women = 0, Men = 1; \*p < .05; \*\*p < .01

Appendix C

Table 2

*Fine Motor Simple Slopes*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| No. of MTs 2012-2014 | Age | Simple Slope | *t*-value | *p-value* |
| 1 | Younger | 0.80 | 10.00 | < .001 |
|  | Average | 0.68 | 10.61 | < .001 |
|  | Older | 0.57 | 7.74 | < .001 |
| 1.57 | Younger | 0.88 | 12.13 | < .001 |
|  | Average | 0.77 | 15.00 | < .001 |
|  | Older | 0.65 | 11.52 | < .001 |
| 2.24 | Younger | 0.98 | 10.78 | < .001 |
|  | Average | 0.87 | 12.47 | < .001 |
|  | Older | 0.76 | 11.06 | < .001 |

Appendix D



Figure 2. Fine motor and age between 2012 and 2014. Fine motor skills increased in all age ranges but increased more so in younger individuals.

Appendix E

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree |
| The IMTAP is an accurate measure of the individuals' skills. | 1 | 2 | 3 | 4 | 5 |
| I would like to use something other than the IMTAP. | 1 | 2 | 3 | 4 | 5 |
| The IMTAP is fine but should be supplemented with other assessment tools. | 1 | 2 | 3 | 4 | 5 |
| One database to house all of the IMTAP data that I can access would help during assessments. | 1 | 2 | 3 | 4 | 5 |
| Training on how to do IMTAP assessments would be helpful. | 1 | 2 | 3 | 4 | 5 |
|  | Never | Once per 90 days | Once per month | Once per week |  |
| When you work with an individual who transferred to you from another therapist, how often do you consult with the previous therapist? | 1 | 2 | 3 | 4 |  |
| How often do you intentionally address IMTAP skills other than the formal outcomes | 1 | 2 | 3 | 4 |  |
| How often do you address transferring skills from the session to outside the session? | 1 | 2 | 3 | 4 |  |

How can we improve the process of transferring individuals from one therapist to another? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Why do you think people who had more therapists had lower fine motor and receptive communication skills than people who had fewer therapists? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

What do you need to make therapy easier and more effective for people who have older ages? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Appendix F

Table 2

*Frequency of Survey Responses*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Never | Once every 90 days | Once per month | Once per week |
| When you work with an individual who was transferred to you from another therapist, how often do you consult with the previous therapist? | 0% | 36% | 46% | 18% |
| How often do you intentionally address IMTAP skills other than the formal outcomes? | 9% | 18% | 36% | 36% |
| How often do you address transferring skills from the session to outside the session? | 0% | 18% | 54% | 27% |

Appendix G

Table 2

*Descriptive Statistics*

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | *M*(*SD*) | Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree |
| The IMTAP is an accurate measure of the individual's skills | 2.64(1.03) | 9% | 45% | 18% | 27% | 0% |
| I would like to use something other than the IMTAP. | 3.36(.67) | 0% | 9% | 46% | 46% | 0% |
| The IMTAP is fine but should be supplemented with other assessment tools | 4.18(.75) | 0% | 0% | 18% | 46% | 36% |
| One database to house all of the IMTAP data that I can access would help during assessments | 3.45(1.21) | 9% | 9% | 27% | 36% | 18% |
| Training on how to do IMTAP assessments would be helpful. | 3.09(1.04) | 0% | 36% | 27% | 27% | 9% |

Appendix H

Music Therapy Therapist Transition Form

**Encrypted Name: RID Number: Last Four of SSN:** **Date of Plan:**

**MUTH Outcome 1:**

**MUTH Outcome 2:**

**MUTH Outcome 3:**

**Informal Goals:** List any you are addressing but not tracking

**Treatment Team:**

1. First and Last Name (relationship to person): most reliable ways to contact this person
2. Repeat for all members

**Team Dynamics:** Describe how the team functions and what you do to keep it productive

**Contact Information for Other Important People:**

1. First and Last Name (relationship to person):most reliable ways to contact this person
2. Repeat for all necessary people

**Date of Next Meeting:**

**Dates of Quarterly Meetings:**

**Current Utilization:**

**Data for Current Quarter:**

 MUTH Outcome 1: Successful Trials / Total Trials

MUTH Outcome 2: Successful Trials / Total Trials

MUTH Outcome 3: Successful Trials / Total Trials

**Preferred Songs:** List the song title and band for each song that the person typically requests to hear.

**Instrument Preferences:** List the instruments that the person typically requests to use.

**Idiosyncratic Behaviors:**

Describewhat this person does when he or she is happy, sad, stressed, etc. Describe what triggers these behaviors. Describe what you do to help this person be successful. Also, describe what you have tried that appears to be counterproductive. Include any other information that might be helpful to know.

**Intervention Sequence:**

Include a session plan detailing which hello and goodbye songs are used (if any), typical interventions, and what you do in those interventions to help the person be successful.

**Send this completed form with everything in the person’s file.**