

Population Paper

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Description of Population and Client Characteristics

Physical rehabilitation. Physiatrics is a type of medicine that treats disorders that create temporary and permanent impairments (GSPG, 2014). Physiatrics commonly treats problems from carpal tunnel, neck pain, back pain, sports injuries, work injuries, herniated discs, pinched nerves, arthritis, stroke, brain injuries, and concussions (AAPMR, 2014), and it focuses on physical mobility and cognitive impairments (GSPG, 2014). Physical therapy, therefore, works on improving range of motion, strength, endurance, posture, balance (ABMC, 2014 a), movement, pain reduction, function restoration, and disability prevention (APTA, 2014).

Pediatrics. Advocate BroMenn's (2014 b) pediatrics center treats children who need specialized and special care. They help children in the emergency department, lab, X-ray department, and surgery. Pediatrics, specifically, deals with children from birth to young adulthood and is concerned with their physical, emotional, and social health (APB, 2009). Wilson, Busse, Gilchrist, Vohra, Boon, and Mills (2005) determined the characteristics of pediatric patients at a naturopathic clinic. The average age of the patients was 6.5 years with roughly equal proportions of boys to girls. Skin disorders, gastrointestinal problems, psychiatric/behavioral disorders were the most common conditions.

Cardiovascular care. According to the American Heart Association (AHA, 2014), cardiac rehabilitation is the treatment of people recovering from heart attacks, heart surgery, and percutaneous coronary intervention procedures. These patients need to increase physical fitness, decrease cardiac symptoms, improve health, and reduce the

possibility of future heart problems. The people who undergo cardiac rehabilitation are people who have had a heart attack, a heart condition (i. e., coronary artery disease), and a heart procedure or surgery (i.e., coronary artery bypass graft).

Current Effective Treatment Strategies

Physical rehabilitation. Using music is good as a motivational tool for repetitive movements, and using singing and wind instruments is good for improving respiration (Staum, 2000). In a meta-analysis of music therapy incorporated into physical therapy, Weller and Baker (2011), auditory stimulation using a metronome was used in gait therapy and fine and gross motors interventions. Using music, though, increased rhythmic entrainment. In the studies that used a music therapist, the music therapist's role was to provide physical support, accompany the patient with music, provide verbal instruction, provide musical interventions, assess behavior, show how to perform an action, and improvise. Weller and Baker noted that rhythmic auditory stimulation was used for gait therapy, music and rhythm were used to provide motivation, timing, attention, engagement, and help accessing long-term memories. When the participants played music, the music integrated tactile, auditory, and visual senses.

Pediatrics. Jacquet (2011) interviewed music therapists about interventions used in the pediatric setting. Before discussing these interventions, she states that the music therapist should find out what role music plays in the child's home, should know the child's physical and emotional needs, should familiarize the child and family with the instruments, and should use parent-approved music that interests the child. She uncovered three musical interventions that music therapists use. The first intervention is the song's composition, which should allow the child and parents to express their

emotions. Essentially, interventions should allow the family to bond through creative means. The second intervention involved improvisation. She argues that improvisation allows the parents and child to communicate and explore emotions that would be difficult to approach. The third intervention involves using songs that make the child feel secure and that are part of the family's routine.

Cardiovascular care. Mandel, Hanser, Secic, and Davis (2007) compared cardiovascular therapy against cardiovascular therapy that includes music therapy. They used a hello song, song-discussions designed to allow for discussions about pain and stress management, and live music making. The live instrument playing, which included hand drums and lyric writing. The session also included music-assisted relaxation. They found that the participants who only received the cardiovascular rehabilitation increased their systolic blood pressure, but the people who had the music therapy decreased their systolic blood pressure. Four months after the treatment, the music therapy participants had improvements in general health and social functioning. The participants in the music therapy condition also reduced their stress and anxiety. In another study, relaxation interventions in music therapy lowered heart rates, raised peripheral temperatures, and lowered cardiac complications compared to a control group (Guzzetta, 1989).

Five Possible Goal Areas

Physical rehabilitation.

1. Intended Therapeutic Outcome: Client will reduce his or her pain.
 - a. Treatment Objective: Using a pain scale of 1 (*No pain*) to 10 (*Extreme pain*), Client will self-report a reduction in pain level from beginning to end of the session.

- b. Rationale: Pain limits movement and inhibits recovery. Reduce pain will aid in recovery.
- 2. Intended Therapeutic Outcome: Client will improve range of motion.
 - a. Treatment Objective: From the beginning to the end of the session, Client will increase the range of motion in his arm from five degrees to ten degrees vertically upward.
 - b. Rationale: The arms' range of motion is crucial to independence, such as reaching for objects when alone. Increasing range of motion will help increase independence.
- 3. Intended Therapeutic Outcome: Client will improve balance.
 - a. Treatment Objective: Client will stand on two feet without falling for at least 30 seconds.
 - b. Rationale: Balancing is critical to walking and standing. Increasing balance will help with independent life activities.
- 4. Intended Therapeutic Outcome: Client will improve gait.
 - a. Treatment Objective: Client's stride length will regulate between steps close to four inches per step.
 - b. Rationale: Regulating stride length will improve gait by taking consistently sized steps. Walking consistently will help Client become more independent and mobile.
- 5. Intended Therapeutic Outcome: Client will improve endurance.
 - a. Treatment Objective: Client will increase time on task during physical therapy from ten seconds per intervention to 15 seconds per intervention.

- b. Rationale: Increasing the amount of time spent doing an intervention will lead to better results and a reduced need for future physical therapy.

Pediatrics.

1. Intended Therapeutic Outcome: Client will decrease anxiety.
 - a. Treatment Objective: Client will verbally state that he or she is worrying less about an issue.
 - b. Rationale: Patients who come into a hospital become anxious about treatment, and anxiety weakens the possibility of positive outcomes. Reducing anxiety will increase the likelihood of desired medical outcomes.
2. Rationale: Intended Therapeutic Outcome: Client will increase expression of emotions.
 - a. Treatment Objective: Client will verbally use at least three emotion words (i. e., happy, sad, scared, etc) during the session.
 - b. Rationale: Expressing emotions will help parents, staff, and therapist determine an effective course of action to aid in the child's treatment.
3. Intended Therapeutic Outcome: Client will increase physical movement.
 - a. Treatment Objective: Client will move as the therapist directs in three out of four trials during the session.
 - b. Rationale: Physical movement will help client reduce physical pain and will aid in treatment.
4. Intended Therapeutic Outcome: Client will increase bonding time with parents.

- a. Treatment Objective: Parent and child will increase the amount of time spent on spontaneous synchrony from no time to at least thirty minutes.
 - b. Rationale: Connecting with the parent will help the child feel safe and secure, which will help in treatment.
5. Intended Therapeutic Outcome: Client will increase social skills.
 - a. Treatment Objective: Client will interact as directed by the music therapist in 4 out of 5 trials.
 - b. Rationale: Increasing social skills will help the client form social bonds and networks, which will help reinforce and strengthen treatment.

Cardiovascular care.

1. Intended Therapeutic Outcome: Client will lower systolic blood pressure.
 - a. Treatment Objective: Systolic blood pressure will decrease from beginning of a song to the end of the song.
 - b. Rationale: High blood pressure can exacerbate issues. Keeping the blood pressure within an appropriate range will help prevent further complications.
2. Intended Therapeutic Outcome: Client will increase physical movement.
 - a. Treatment Objective: Client will move as the music therapist directs him.
 - b. Rationale: Physical movement will help strengthen the heart and prevent future complications.
3. Intended Therapeutic Outcome: Client will increase understanding of healthy behavior.

- a. Treatment Objective: Client will identify at least two heart healthy behaviors during a song.
 - b. Rationale: Understanding heart healthy behaviors will help the client make heart healthy decisions to prevent future complications.
4. Intended Therapeutic Outcome: Client will lower stress levels.
- a. Treatment Objective: Using a scale from 1 (*No stress*) to 5 (*Extremely stressed*), Client self-report lower stress levels from beginning to end of the session.
 - b. Rationale: Stress complicates issues and exacerbates problems. Reducing stress will help the client manage heart problems.

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