AN EDUCATIONAL INTERVENTION ON THE BENEFITS OF PLAY IN THE CHILD PSYCHIATRIC POPULATION

by

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As members of the DNP Project Committee, we certify that we have read the DNP project prepared by *Jeremy Creekmore*, titled *An Educational Intervention on the Benefits of Play in the Child Psychiatric Population* and recommend that it be accepted as fulfilling the DNP project requirement for the Degree of Doctor of Nursing Practice.

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Final approval and acceptance of this DNP project is contingent upon the candidate's submission of the final copies of the DNP project to the Graduate College.

I hereby certify that I have read this DNP project prepared under my direction and recommend that it be accepted as fulfilling the DNP project requirement.

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DEDICATION

This project is dedicated to Melba and Ethan Creekmore for their unconditional love and support throughout this journey.

TABLE OF CONTENTS

TABLE OF CONTENTS – *Continued*

LIST OF TABLES

ABSTRACT

The purpose of this DNP project is to assess staff knowledge pre- and post-education on the benefits of play to enhance self-soothing in the inpatient child psychiatric population. A one-group, pre-test/post-test designed was utilized to assess knowledge before and after evidence-based education on the benefits of play. A convenience sample was obtained from the Hawaii Chapter of the American Psychiatric Nurses Association (n=5). Participants indicated deficits concerning the benefits of play (*f*=40%, n=2) as well as economic impact of childhood mental health care (*f*=40%, n=2), indicating the need for further education on current evidence on the benefits of play.

INTRODUCTION

Children are admitted to inpatient psychiatric units with a plethora of mental health issues across the diagnostic spectrum (Torio, Encinosa, Berdahl, McCormic, & Simpson, 2015). The economic impact of treating children with mental health conditions is estimated at nearly $250 billion annually, and double the cost of healthcare in children without mental health issues (Torio et al., 2015). In 2013, treatment of Attention Deficit Hyperactivity Disorder (ADHD), depressive, and anxiety disorders totaled a combined $29 billion (Bui et al., 2017). Total inpatient spending was calculated per disorder for 2013 was calculated as follows: a) depressive disorders was $5 billion; b) ADHD was $20.6 billion; and, c) anxiety disorders was $3.4 billion.

Background and Significance

Research suggests that the psychiatric milieu can be a frightening experience for children, and tests the patience of staff (Hallman, O'Connor, Hasenau, & Brady, 2014). Emotional dysregulation is a key factor in the negative behaviors such as aggression and tantrums observed in the child population (Masi, Muratori, Manfredi, Pisano, & Milone, 2015). Unfortunately, the frustration of staff can lead to overuse of extreme intervention measures such as seclusion and restraint (Hallman et al., 2014). A study by Timbo et al. (2016) suggests the child population may have a higher risk for use of seclusion and restraint as an intervention, and if the child has a history of trauma the risk for this modality can increase. Additionally, extreme interventions such as seclusion and restraint can lead to traumatization or triggers related to previous trauma, both of which can jeopardize effective treatment (Timbo et al., 2016).

Play is an important developmental task assisting children in self-regulation, expression, and processing a difficult situation (Delvecchio, Li, Pazzagli, Lis, & Mazzeschi, 2016). Play is

shown to improve a child's ability to positively express feelings, leading to increases in the child's ability to develop flexibility of thinking (Russ, 2016). Additionally, the rewarding nature of play can provide an avenue of positive reinforcement as the desire increases to have fun (Russ, 2016). Play presents an opportunity for nurses to be present in the child's environment. This is an important concept as presence increases the ability of staff to recognize changes in behavior which may lead to early intervention, decreasing the chance of an adverse event (Hallman et al., 2014).

Concepts and Terms

Definitions of terms and concepts will be discussed further in order to provide a clear picture of the population and concepts addressed in this project. The term *seclusion* refers to an "... involuntary solitary confinement ..." of the child (Substance Abuse and Mental Health Services Administration, 2015). The term *restraint* refers to "... any method, physical or mechanical device, or material or equipment that immobilizes or reduces an individual's ability to freely move his or her arms, legs, body, or head ..." (Substance Abuse and Mental Health Services Administration, 2015) The terms *child* and *children* refer to the age group between 3-12 years in locked, acute and residential, inpatient, child psychiatric settings. In terms of age, lower limits of the child age group are based on data provided by the Child and Adolescent Mental Health Division (CAMHD) (2016b) for the State of Hawaii. The term *play* is defined according to Russ (2004) as "... pretending, the use of fantasy and make-believe, and the use of symbolism." This can be further described according to Russ (2016) as "... use [of] objects to represent other objects (a stick is a sword), make up stories, use fantasy, role-play, and express affect and affect themes (i.e., war, eating, monsters, illness, fun games)."

Significance of Need for Hawaii

The Child and Adolescent Mental Health Division (CAMHD) operates through branches across the state known as Family Guidance Centers (FGC) (CAMHD, 2012). Children and adolescents are eligible for enrollment once identified as in needing intensive services for mental health treatment (CAMHD, 2018). CAMHD eligibility is established if the child current has an individualized education program (IEP) thought the Hawaii State Department of Education, or has a severe or serious and persistent mental illness lasting six months or expected to persist for six months or more (CAMHD, 2012; State of Hawaii Department of Human Services, 2002). Qualified diagnosis are *Schizophrenia* and *Schizoaffective Disorders*, *Delusional Disorders*, *Mood Disorders*, *Post-Traumatic Stress Disorder*, and *Substance Induced Psychosis* (State of Hawaii Department of Human Services, 2002). Once enrolled, the child or adolescent is assigned a care coordinator who seeks and establishes mental health services for the child or adolescent (CAMHD, 2012). An evaluation summary from 2012 to 2016 by CAMHD (2016a) found that over a third of enrollments were for children under the age of 12 years in 2016. This is an increase of 9% since 2012 (CAMHD, 2016a). Additionally, the mean age for enrollments has decreased from 14.6 years to 13.5 over the summary period, suggesting a younger population (CAMHD, 2016a). Additionally, there was an increase during the same time period in use of hospital residential programs by 13% (CAMHD, 2016a). Community-based residential program use reached as high as 155 youth in 2013, and did not drop significantly for the period of 2012 to 2016. (CAMHD, 2016a). Additionally, intensive in-home services have increased 50%, while outpatient therapy has declined dramatically. For APRNs, such a dramatic decrease signals a need for more therapy services in the outpatient setting, and the possibility of a shift from

traditional private practice to home-based care. As a result, a focus on play to enhance self-soothing could be taught in the comfort of home, a more realistic setting.

CAMHD (2016a) reported an increase in adjustment and anxiety-related diagnoses. CAMHD defines *Adaptive Behavior or Living Skills* as 'the development of skills in promotion of self-sufficiency' (CAMHD, 2016b). Treatment targets according to CAMHD (2016b) patients for the state of Hawaii reflect only 14.8% in the Adaptive Behavior *or* Living Skills category. This signals a need for services supporting the development of skills aimed at adaptive behavior such as self-soothing. While survey domains such as connectedness, cultural sensitivity, and care coordination remain high, statistics for outcomes and functioning are below 60% (CAMHD, 2016a). CAMHD (2016a) attributes some of the decline to lack of evidence-based practices. As a result, the need exists to implement evidence-based, self-soothing strategies such as play to enhance adaptive behavior, and improve outcomes and functioning.

Intended Improvement

The application of play to treatment of children is extensive, and studies exists from medical and psychiatric care in support of play to enhance emotional regulation. Stewart (2016) reported a decrease in negative emotions as well as postoperative pain with children who participated in play related to the procedure preoperatively. Additionally, a study by Aydin et al. (2017) found the use of play dough to be effective in reducing premedication anxiety in children receiving oral midazolam. Han, Lee, and Suh (2017) found a significant difference in aggression rates of children participating in sand play therapy. Swan and Ray (2014) concluded that play therapy is an effective intervention to intellectually disabled children suffering with hyperactivity and mood lability. As a result, the addition of play to the inpatient, child psychiatric milieu could

assist in addressing bouts of mood lability, lowering the possibility of escalation, and lowering the chance of an adverse event.

Purpose

The purpose of this DNP project was to assess staff knowledge pre- and post-education on the benefits of play to enhance self-soothing in the inpatient child psychiatric population. Little research exists on the use of play within the inpatient setting aimed at enhancing self-soothing within this population. As a result, a pre-test and post-test analysis was needed with key stakeholders such as charge nurses, floor nurses, assistants, therapists, and APRNs to determine provider and staff attitudes toward the use of play as a therapeutic intervention. Stakeholders were given a pre-test based on the constructs of the Health Belief Model (HBM). Then, stakeholders attended a presentation summarizing the benefits of play, enhancing evidence-based knowledge on the use of play.

Study Question

An explicit Population, Intervention, Comparison, Outcome (PICO) question was created to assist in a literature search and study design. The PICO question for this DNP project was: "Does evidence-based education on the use of play to enhance self-soothing improve knowledge of healthcare workers regarding play therapy in Hawaii?"

THEORETICAL FRAMEWORK

The Health Belief Model (HBM) was developed by Irwin Rosenstock (1966) as a method to explain behaviors related to health. The theory is based on the need of three interrelated concepts to induce change:

- Motivation exists to address the relevance of the problem.

- A belief of susceptibility or perceived threat of harm by the relevant problem.
- A particular intervention will reduce the perceived threat (Rosenstock, Strecher, & Becker, 1988).

The interrelatedness of the concepts is shown through the individual's perception of the problem in question. In other words, dangers surrounding the problem, such as harm or death, trigger motivation to implement a particular intervention to reduce the threat to patient-centered care (Carpenter, 2010). Interrelated concepts and motivation to for action are explained through the five constructs of the HBM known as perceived susceptibility and severity, cues to action, perceived benefits, and perceived barriers, and self-efficacy (Sharafkhani, Khorsandi, Shamsi, & Ranjabaran, 2016; Skinner, Tiro, & Champion, 2015). Modifiable factors to include demographics and knowledge provide variability in individual belief response to the problem (Skinner et al., 2015).

Constructs

Perceived Susceptibility and Severity

The construct of *perceived susceptibility* lies with the individual's ability to recognize the ability for a problem to create harm for the patient (Skinner et al., 2015). It is within this construct that vulnerability is considered, and is directly proportional to the level of susceptibility. Motivation for action increases with belief of susceptibility to a poor outcome (Skinner et al., 2015). For example, individuals who live in the southern United States have a perceived susceptibility to tornadoes as a result of current and historical data. Likewise, experience and data concerning the relationship of behaviors and adverse events raise beliefs concerning susceptibility to adverse outcomes relate to current practices.

Perceived severity is degree of harm associated with the current problem to include severity of consequences associated with inaction (Jones, Smith, & Llewellyn, 2014). Using the weather analogy, perceived severity is related to personal experience and objective data concerning damage and deaths associated with tornadoes. In the child psychiatric environment, a range of severity could span from time-outs to seclusion and restraint.

Perceived threat is a product of both perceived susceptibility and severity (Skinner et al., 2015). In other words, high susceptibility with low severity would indicate a lower perceived threat. For example, behavioral challenges are susceptible to seclusion and restraint; however, are not of the severity to warrant such an adverse intervention. Perceived threat is highest when susceptibility and severity are simultaneously increased (Skinner et al., 2015).

Perceived Benefits and Barriers

The motivation for action is further influenced by *perceived benefits and barriers* to implementation of an intervention. Obvious benefits include reduction of adverse events with subsequent reduction of adverse interventions such as seclusion and restraint. Additionally, benefits may be fiscal such as reduction in stay, increased reimbursement, and less damage to the milieu. On the other hand, barriers can hinder motivation for action (Skinner et al., 2015). For example, inconsistent implementation may lead to an increase in negative behaviors, leading to an increase in adverse events. As a result, perceived benefit must outweigh perceived barriers in order to increase motivation for action.

Cues to Action

Cues to action include both internal and external circumstances capable of influencing action related to the problem. Internal influences include symptomatic changes (Jones et al.,

2014). For example, a nurse may feel increased anxiety related to risk of harm associated with an intervention such as seclusion and restraint. Oppositely, this includes satisfaction and happiness associated with effective alternative interventions. Examples of external influences include facility goals relate to reduction of adverse events, or facility campaigns aimed at improvement of healthcare through performance improvement projects. Lastly, the cues to action construct provides a pathway for refinement as influences generate a review of the other four.

Self-Efficacy

The *self-efficacy* construct deals with the perceived ability of the individual to implement an intervention (Skinner et al., 2015). This construct was suggested as an addition by Rosenstock, Strecher, and Becker (1988); however, little data is available on its use quantitatively (Carpenter, 2010). Despite this information, self-efficacy is directly influenced by modifiable factors, and directly influences the likelihood of action (Sharafkhani et al., 2016).

Applicability to DNP Project

The purpose of this project was to assess staff knowledge pre- and post-education on the benefits of play to enhance self-soothing in the inpatient child psychiatric population. The HBM provided a framework to determine motivation for action concerning the perceived consequences related to non-action such as continued risk of aggressive behaviors that increase risk of adverse intervention such as seclusion and restraint. The HBM has the capability of generating quantifiable data through rating scale questionnaires targeted at the five constructs of the framework. For this project, the HBM provided the ability to quantify pre- and post-intervention data obtained from staff nurses, and determination of efficacy via increase or reduction of scores.

Additionally, the internal and external influences found within the cues to action construct trigger further refinement of the intervention.

REVIEW OF EVIDENCE

The purpose of this project was to assess staff attitudes pre- and post-education on the benefits of play to enhance self-soothing in the child psychiatric population. Many articles support the effectiveness of play therapy on reduction of psychiatric symptoms. Russ (2016) presents that play has an effect on both cognitive and affective process well into adulthood. Difficulties interacting with the environment, to include people, are the result of the development of maladaptive behaviors (Han, Lee, & Suh, 2017).

Play therapy is often utilized to help children recover from these behaviors (Han, Lee, & Suh, 2017). Play is also seen as a tool for children to practice skills important in the development of divergent thinking, flexibility of thought, and expression of emotion (Russ, 2016). Additionally, development of creative processes though play allow children to develop methods of problem-solving (Russ, 2016). One example might involve boredom at home or on the psychiatric unit. A child who lacks the ability to problem-solve could become emotionally dysregulated without constant guidance of the parent. Likewise, inability to express emotions could result in aggression or withdrawal. Little evidence exists to support the use of pretend play as a method of self-soothing. As a result, a thorough review of current evidence in support of symptom reduction though play is necessary.

Literature Search

A thorough search of the literature was conducted to identify research supporting the use of play as a therapeutic intervention (Appendix A). Searches were conducted using the databases

PubMed, PsychINFO, and Google Scholar. PubMed was searched utilizing the terms “pretend AND play” to produce a yield of 232 articles. The search was further narrowed with the limitations of “5 years, age; birth -18 years, full text, randomized, controlled trial.” This produced a yield of two articles. The articles did not fit criteria for inclusion as neither discussed behavioral symptom reduction. As a result, a new search was initiated with the terms “play therapy” utilizing the same criteria as the previous search. The search yielded 12 articles. Many articles included the use of video games, computers, and medical/surgical interventions. Therefore, modifiers of “NOT computer NOT video game NOT surgical” were added manually to the search criteria resulting in yield of seven articles. Of these, two articles, Sezici, Ocakci, and Kadioglu (2016) and Hyland et al. (2015), were selected. The Hyland et al. (2015) study was excluded due to a median age of 2.3.

The PsychINFO database was searched through the EBSCOhost engine utilizing the terms “play therapy AND trial.” The search also included the limitations of “Full Text, Publication Year: 2014-2018, Age Groups: School Age (6-12 years), and Document Type: Journal Article.” This yielded five articles of which one was utilized, Stulmaker and Ray (2015). An article by He (2015) was considered as it targeted play therapy on reduction of anxiety; however, the interventions used a manual describing medical objects used in surgery. As a result, it would be difficult to determine if any reduction in anxiety was a result of play therapy or the medical manual.

Finally, Google Scholar was utilized using the terms “trial and ‘pretend play.’” The search was extensive with 3,010 articles found despite the year limitation of 2014-2018. Unfortunately, it is difficult limiting search results utilizing this database as selections for

limitations are minimal with this resource. The search resulted in two articles, Carlson, White, and Davis-Unger (2014) and Thibodeau, Gilpin, Brown, and Meyer (2016).

Background and Findings

Sezici, Ocakci, and Kadioglu (2016) conducted a study to determine the benefits of play therapy on the emotional, social, and behavioral wellbeing of children. The authors recognize that children are more comfortable expressing emotion during play (Sezici, Ocakci, & Kadioglu, 2016). Although the study utilized games as an intervention, toy types such as cars, soldiers, play dough, and toy dishes were referenced from a study by Baggerly and Parker (2005) as effective for improving self-esteem and confidence. Additionally, the authors recognize the need for interventions aimed at prevention for children at risk for mental and emotional issues (Sezici et al., 2016). Sezici et al. (2016) hypothesized that therapy utilizing play would improve emotions related to fear, anxiety, and self-esteem as well as improve social interactions and coping.

A single-blind, prospective, randomized controlled study was conducted to test the hypothesis (Sezici et al., 2016). Participants were age 4 to 5 years from low to high income families were selected from the largest kindergarten in Kutahya, Turkey (Sezici et al., 2016). Children who had oral or aural disabilities were excluded from the study, and parents had to give consent for participation (Sezici et al., 2016). Some 95 participants were selected for the study; the authors note the disqualification of 16 participants due to leaving the school (Sezici et al., 2016). The experimental group received 39 games per child over a four-week period while the control received no intervention (Sezici et al., 2016). Outcomes were assessed utilizing the Pre-School Child and Family Identification Form and the Social Competence and Behavior Evaluation Scale (SCBE-30) (Sezici et al., 2016).

Participants in both groups received a pre-test, the post-test was administered two weeks into the study, and a retest administered at three months (Sezici et al., 2016). Data was collected based on subscales: 'AW' (depressive moods and shyness); 'SC' (problem solving and cooperation); and, 'AA' (adult resistance, aggression, and maladaptive behaviors) (Sezici et al., 2016). AA and SC scores were found to be statistically significant in the experimental group between post-test. Additionally, AW scores for re-test were also statistically significant (Sezici et al., 2016). As a result, play therapy was effective in improving behaviors associated with depression, aggression, and anxiety in addition to improvement of social skills (Sezici et al., 2016).

A quasi-experimental study by Carlson, White, and Davis-Unger (2014) set out to determine the effects of play on executive function (EF). The selection process involved phone calls to parents and fliers posted in a major metropolitan area. Phone numbers were obtained through a university database. Participants were children of typical development aged 3.25 – 5 years. Ten participants did not complete the study. Participants were given eight tasks aimed at measuring conflict and delay of gratification, and tasks based on *pretend-reality* and *pretend-actions* to measure pretense (Appendix A). The authors reference a study by Vygotsky (1967) and Nicolopoulou (1991) suggesting that pretend play enhances the child's ability to suppress impulses which results in the ability to follow rules. The ability for children to manage conflict through pretend play leads to improved management in reality, and integrated harmoniously with executive functioning (Carlson, White, & Davis-Unger, 2014). In interventions involving *pretend-reality*, participants were given objects such as a string, pencil, block, and sunglasses, and asked to describe both real and pretend meanings to the objects. The study gave an example

of pretending a pencil is a hammer (Carlson et al., 2014). For pretend action interventions, the children were instructed to pretend as if they were accomplishing a task such as brushing teeth or combing their hair. Measures in verbal ability, memory, and appearance-reality were implemented as a control measure to mitigate confounding variables.

The authors found significant correlation between *pretend-reality* and EF conflict measures as well as delay of gratification. Pretend actions were significantly correlated with EF delay of gratification; however, no correlation was found with EF conflict. The full composite score for EF was significantly correlated with both *pretend-reality* and *pretend-actions*.

Likewise, Thibodeau, Gilpin, Brown, and Meyer (2016) utilized toys such as stuffed animals, cars, and board games to determine the effect of fantastical play on executive functioning. The randomized controlled trial included 110 children aged 3-5 years (Thibodeau, Gilpin, Brown, & Meyer, 2016). The study found that children who engaged in fantastical pretend play performed better in the category of working memory and attention shift (Thibodeau et al., 2016).

Stulmaker and Ray (2015) state that anxiety leads to an inability to self-regulate even after a triggering event has subsided. The authors set to determine the effectiveness of Child Centered Play Therapy (CCPT) on the reduction of anxiety in children (Appendix A). Some 55 children were selected and randomized to the experimental group. The authors found significant reductions in total anxiety for the experimental group. Additionally, children in the experimental group had statistically decreased worry.

Strengths

The Sezici et al. (2016) article described the benefits of play from the emotional, behavioral, and social standpoint. The Stulmaker and Ray (2015) study utilized a wide range of toys during the intervention. This provides a guide to the types of toys presented to staff for use within the milieu. The Carlson, White, and Davis-Unger (2014) study contributes to the strength of evidence by demonstrating the effectiveness of pretend play on conflict resolution, emphasizing the importance of play on executive functioning. Overall, current evidence supports the use of play in both social and personal contexts.

Weaknesses

The Sezici et al. (2016) article age range was limited to pre-school aged children. Consequently, this study may be inapplicable to older populations. Additionally, the study was conducted in Turkey, giving rise to bias concerning representativeness should culture play a role in the improvement. The same age limitations are evident in the Carlson et al. (2014) and Thibodeau et al. (2016) studies. The Stulmaker and Ray (2015) study contained a smaller population, and age, gender, and ethnic distribution between experimental and control groups were quite uneven. The use of multiple toys presents a wide range of interventions, but the study lacks information on specific toys utilized in the experimental group. Lastly, the study failed to mention any co-morbid conditions which may have been a factor in the effectiveness of the intervention.

Implications for this Project

Reduction of symptoms such as aggressive behavior and anxiety are factors in improvement of self-regulation in children (Han, Lee, & Suh, 2016; Stulmaker & Ray, 2015).

This is important in the child's ability to self-soothe in situations that may increase the risk of aggression and anxiety such as admission to an inpatient psychiatric unit, or coping with boredom and lack of attention when a parent must devote attention to other tasks. Despite limitations, both studies show promising results in the use of play to reduce both aggression and anxiety in the child population, suggesting the potential for enhance self-soothing via emotional regulation through use of play.

Research Gaps

The Sezici et al. (2016), and Stulmaker and Ray (2015) studies identified the importance of play on the emotional wellbeing of children. Both studies identified correlation between play and reduction of symptoms associated with depression, aggression, anxiety, and self-regulation. Additionally, both studies were of populations consistent with inpatient admission in both inpatient units located in Hawaii, Kahi Mohala and Queen's Medical Center Family Treatment Center.

The Carlon et al. (2014) and Thibodeau et al. (2016) studies addressed play in terms of effect on executive functioning (EF). Significant correlations were found between the use of play and working memory, attention, and delay of gratification. As a result, play is shown to effectively improve areas of executive functioning.

The benefits of play on emotions and executive functioning are evident with current research identified in this literature review; however, gaps exist in the current research. First, the studies identified do not address the use of play within the inpatient psychiatric milieu. As a result, data is lacking on the effectiveness of play in scenarios where emotional dysregulation

pose a safety risk dangerous enough to necessitate an inpatient admission. Additionally, none of the studies identify stakeholder attitudes related to the benefits of play.

Research Gap Implications

Gaps in the literature exist regarding stakeholder attitudes concerning the need for implementation of new interventions such as play to improve behaviors on the inpatient, child psychiatric milieu. As a result, this project will fill a research gap through identification of stakeholder attitudes regarding interventions targeted at factors in improving self-regulation in children, such as reduction of aggression and anxiety (Han, Lee, & Suh, 2016; Stulmaker & Ray, 2015). This is important in the child's ability to self-soothe in situations that may increase the risk of aggression and anxiety such as admission to an inpatient psychiatric unit, or coping with boredom and lack of attention when staff must devote attention to other tasks.

METHODS

Design

This DNP project utilized a quasi-experimental, one group, pre-test/post-test design to assess knowledge of healthcare workers on play therapy on self-soothing in the child psychiatric population. Convenience sampling was used to select participants as it provides a cost effective method of sampling (Polit & Beck, 2010). The quasi-experimental design is appropriate because randomization is not desired for this project (Plichta & Kelvin, 2013). The purpose of this project is to measure attitudes of the same group of participants in two different points in time. As a result, a one group pre-test/post-test design is appropriate (Polit & Beck, 2010). This project was submitted to the University of Arizona Institutional Review Board (IRB) (Appendix B), and approval was obtained prior to selection of participants and providing evidence-based education.

Setting

The study took place in the State of Hawaii, utilizing the Hawaii Chapter of the American Psychiatric Nurses Association. The APNA Hawaii Chapter covers all islands within Hawaii, and has approximately 140 members. This setting was chosen due to care being provided within population-specific characteristics falling within the range of psychiatric care, and *child* as outlined by this project based on the Hawaii Department of Health. Hawaii Chapter APNA members cover a broad range of care environments to include both inpatient and outpatient settings.

Participants

Convenience sampling was used to recruit participants through email, facilitated by the president of the Hawaii chapter. This method is appropriate for nonrandomized studies, and allows for voluntary identification for potential participation (Plichta & Kelvin, 2013; Polit & Beck, 2010). Stakeholders within the Hawaii Chapter of APNA include nurse management, staff nurses, LPNs, and APRNs. The inclusion criteria for participants for this DNP project are: a) experience working with the child psychiatric population, and b) current Hawaii licensure in designated role. Those who do not work with the child psychiatric population were excluded from this study.

Intervention

The intervention of this study was 30-minute, narrated PowerPoint educational session of current evidence in support of the use of play to enhance self-soothing. This was delivered by email to Hawaii Chapter APNA members. Members were given a link to a pre-test within the email, and asked to complete the educational session after completion of the pre-test. A post-test

link was placed on the last slide of the educational session. The post-test utilized the same questions as in the pre-test.

Data Collection

Approval was obtained through the University of Arizona Institutional Review Board (IRB) (Appendix B) prior to recruitment and data collection. The study took place over a one-week period to allow participants sufficient opportunity to complete the intervention. As previously mentioned, data was collected with use of a pre-test (Appendix C) / post-test (Appendix D). The pre-test and post-test were created by principle investigator and reviewed by two content experts. Pre-test and post-test data collection is a common experimental design used to collect data on either a control or experimental population (Zientek, Nimon, & Hammack-Brown, 2016). Pre-test/post-test self-report measurement design is commonly implemented to determine how an intervention influenced a population and analyze data (Gorrall, Curtis, Little, & Panko, 2016). Typically, a population is given a pre-test before undergoing an intervention and the same test is completed following an intervention (Gorrall et al., 2016). Additionally, demographic data was collected to include current role, years or months of experience, education level, and previous use of play as an intervention. No identifying data were included on the pre-test and post-test. Informed consent was provided as disclosure form attachment within the email (Appendix E), and acknowledgement of consent as a pre-test question (Appendix C). Informed consents, pre-tests, and post-tests were administered and collected by the principle investigator.

The online pre-test and post-test were hosted and managed on SurveyPlanet, a survey hosting service providing a convenient, anonymous platform for participants. No paper data was collected. The principle investigator was the only person with access to the username and

password for the digital survey data. No compensation was provided for participation in this study.

Data Analysis

Analysis of data was conducted through the use of descriptive statistics (Nieswiadomy, Stankus, & Mancuso, 2018). Descriptive statistics can be used to describe demographics of a sample as well as characteristics of variables (Plichta & Kelvin, 2013). Additionally, descriptive statistics can be used to explain data while avoiding loss or distortion (Plichta & Kelvin, 2013). Frequency is one of the most common methods for describing characteristics of a sample (Plichta & Kelvin, 2013). Frequency was calculated for demographic questions as well correctly answered pre-test and post-test questions. Data was compiled, and frequency calculated with the use of Microsoft Excel.

Ethical Considerations

This project targeted adult stakeholders to include APRNs, nurses, and nurse managers. This population is not considered to be part of a vulnerable category of population such as mentally incompetent, prisoners, or children (Office for Human Research Protections, 2018).

Respect for Persons

The principle *Respect for Persons* ensures autonomy, and recognizes the right to self-determination. Adult stakeholders were provided information necessary to make a complete, informed decision on participation, and afforded the right to withdraw from participation from activities at any time (Office for Human Research Protections, 2018).

Beneficence

The principle of *beneficence* involves maximization of benefits while reduction of harms (Office for Human Research Protections, 2018). Participants were notified of benefits and potential harms associated with this project. This project provided a presentation based intervention, minimizing risk of physical harm. On the other hand, this project assessed feelings related to the use of play on the milieu, and may have triggered negative feelings associated with previous interventions. As a result, participants were offered the ability to email any questions or concerns.

Justice

The principle of *justice* ensures the equality of all participants (Office for Human Research Protections, 2018). This project provided the opportunity for all members of each discipline to participate, to include all genders, races, physical and mental capabilities, and work shifts. Additionally, each participant received the same intervention, ensuring equal distribution of risk and benefit (Office for Human Research Protections, 2018).

RESULTS

Sample Description

During the one-week collection period, a total of six participants answered the surveys. Five of the six answered the pre-test, with only one participant answering the post-test. The sixth participant who answered the post-test did not answer the pre-test. This sixth participant was excluded from the study as the acknowledgement of consent was only located on the pre-test. Therefore, this participant did not give proper informed consent. Additionally, lack of pre-test data for this participant did not provide a pre-education baseline. A total of five participants were

included (Table 1). The majority of participants held doctoral degrees (n=3), while the other two participants were Master's (n=1) and Associates (n=1) prepared. The years of experience included "1 to 5" (n=1), "5 to 10" (n=1), "15-20" (n=1), and "25 or more" (n=2). Doctoral prepared participants held the most experience (n=2).

TABLE 1. *Demographics*

Years of Experience (Degree)	**Frequency n=5 (%)**
1 to 5 (Associates)	1 (20)
5 to 10 (Doctoral)	1 (20)
15-20 (Master's)	1 (20)
25 or more (Doctoral)	2 (40)

Pre-test Results

Pre-test results were summarized according to frequency of correct answers to each question (Appendix F). Participants answered 100% of questions correctly regarding the use of toys and make-believe for play, indicating that participants differentiate play from delusions or hallucinations. Participants correctly answered the question regarding encouragement of play to occupy self (*f*=100%). The lowest scores on pre-test involved the effects of play on anxiety, social skills, impulse control, and emotional regulation (*f*=40%, n=2), and the economic impact of child mental health care (*f*=40%, n=2). No participants correctly answered the question regarding CAMHD allocation for *Adaptive Behavior* and *Living Skills,* indicating a knowledge deficit in allocated state-funded resources.

The remaining questions targeted reduction of adverse interventions, targeted times of play use, and engagement of staff in mutual play. Some 80% of participants correctly identified that play may reduce seclusion and restraint events. Likewise, the majority of participants were able to correctly identify the best times for use of play (*f*=80%, n=4), and correctly engage in

mutual play when the child approaches with the make-believe race car (*f*=80%, n=4). All participants felt that play was a useful intervention (*f*=100%, n=4).

Post-test Results

One participant completed both pre-test and post-test (Degree: Doctoral, Years of Experience: 5-10 years). Nearly all pre-test questions were answered correctly. This participant incorrectly answered questions relating to allocation by CAMHD of resources devoted to improving *Adaptive Behavior* and *Living Skills*, and the question related to economic impact of child mental health care. On post-test, this participant answered 100% of questions correctly; however, no assumptions can be made on effectiveness of the intervention with a single participant completion of the post-test. Additionally, the participant did not identify any barriers to implementation of play.

DISCUSSION

No conflict appears to exist among Hawaii-licensed nurses concerning the definition of play. The abstract definition of play as proposed by Russ (2004) and Russ (2016) could be mistaken for psychosis. Correct identification of the abstract nature of play by nurses lowers the risk of play being dismissed or reported as delusional or hallucinating, potentially avoiding unnecessary medications. Additionally, the child's attempt to engage in mutual play is less likely to be dismissed. This is also reflected by the majority of nurses engaging in play when the child uses a blackboard eraser as a race car (*f*=80%, n=4).

The greatest concern with participant knowledge exists with recognition of positive effects of play on behaviors and mood, appropriate times to use play, ability to reduce adverse events, and impact of the current resource allocation. Current evidence supports mood and

behavior improvement, and lack of allocation to modalities in support of developing appropriate skills to self-soothe. Unfortunately, the majority of participants (n=4) did not answer the post-test, and effects of education based on current evidence presented in this project could not be determined. Overall, pre-test answers indicate a knowledge deficit concerning the positive benefits of play.

Limitations

The online-nature of this project was a major limitation on sampling and completion. Instructions for accessing pre-test / post-test, and education were explained within the email as well as the PowerPoint; however, it was obvious that human error played a major role in the lack of response to post-test. This error could have included time, computer literacy, and willfulness to complete the project among many others. The implementation process also relied heavily on the assumption that all targeted participants checked their email during the one-week implementation period. All of the above factors may have played a role in the small sample size, and affecting the generalizability of the data.

Sampling procedures required Hawaii licensure; however, did not require current Hawaii residence. As a result, it is difficult to determine if participants were residents. This is important as someone could, technically, be licensed in Hawaii, and never have lived or worked within any of the islands. The representativeness of the sample population would be greatly affected if this assumption were true.

Implications for Further Research

Despite sample size, this project provided insight into knowledge deficits concerning the use of play. Participants indicated a lack of knowledge concerning allocation of resources as well

as potential benefits of using play in practice. A need exists to further explore the benefits of education on this deficit beyond the baseline pretest. The small sample size may be mitigated in future research through the use of in-person education and survey facilitation. The researcher can ensure the completion of both pre-test and post-test surveys. In the online setting, use of a verification system could ensure that the education was actually viewed. Additionally, continued support from the local chapter of a nationally-based professional nursing organization such as APNA can help to reach a broader nursing population, increasing the chance of generalizability.

Conclusion

In conclusion, current evidence supports the use of play within the pediatric psychiatric population. Benefits including improved mood, impulsivity, social interactions, and self-regulation are also factors in reducing likelihood of adverse events. This project found that participants agreed that play was a useful intervention, aligned with the Health Belief Model construct of *Perceived Benefits*; however, lacked knowledge concerning benefits as well as impact of childhood mental health.

The problem stretches beyond local hospitals and clinics as evidenced by lack of state-funded child psychiatric services targeted at improving adaptability and life skills. Play is one method of enhancing the child's ability to cope with adversity. Nurses and providers can embody The Health Belief Model construct of *Cues to Action* through application of current evidence in support of play, and through legislative advocacy for resources in support of play. Further research involving the education of providers will provide a broader view of the perceived benefits and barriers to use, and provide opportunities to enhance knowledge on current evidence.

APPENDIX A:

REVIEW OF LITERATURE

Author / Article	Qual: Concepts or phenomena Quan: Key Variables Hypothesis Research Question	Theoretical Framework	Design	Sample (N)	Data Collection (Instruments/tools)	Findings
Carlson, S. M., White, R. E, & Davis-Unger, A. C. (2014). Evidence for a relation between executive function and pretense representation in preschool children.	Hypothesis: ". . . individual differences in EF would be significantly positively related to children's representational skills in the domain of pretense, over and able differences that might be attributable to age, verbal ability, memory capacity or understanding of the appearance-reality distinction." ". . . correlations would hold not only for cool EF, but also for relatively hot, affective measures of executive control."	None identified	Quasi-experimental	N=104 Mean age: 4 years SD=5.2 months Age range: 39-60 months Caucasian: 80% Asian, African American, Mixed race of two or more races = 20%	Control measures accounting for confounding variables: Verbal ability: Peabody Picutre Vocabulary Test 3rd edition using raw scores. Age in months also used as covariate Memory: Forward Digit Span Task. One practice trial. Termination after 3 consecutive failures. Appearance-Reality: Two ambiguously appearing objects. Children asked ". . . does it look like. . .?" and ". . . is this really and truly. . .?" Max score of 2 based on ability to answering appearance and reality questions correctly. Executive Function Measures: Standard Dimensional Change Card Sort (DCCS): Two cards (red rabbit and blue boat). Children instructed to put rabbits in	Significant correlations: • Pretend reality and DCCS (0.32, $p<0.01$), BDS (0.29, $p<0.01$), G/S (0.32, $p<0.01$), BD (0.51, $p<0.01$), LIM (0.38, $p<0.01$), DoG (0.34, $p<0.01$), Full EF composite (0.53, $p<0.01$), Conflict EF (0.60, $p<0.01$), and Delay EF (0.32, $p<0.05$). • Pretend Actions and Tow (0.18, $p<0.10$), DoG (0.19, $p<0.10$), GD (0.18, $p<0.10$), Full EF composite (0.21, $p<0.05$), and Delay EF (0.26, $p<0.05$)

Author / Article	Qual: Concepts or phenomena Quan: Key Variables Hypothesis Research Question	Theoretical Framework	Design	Sample (N)	Data Collection (Instruments/tools)	Findings
					to box with red rabbit card, and boats into box with blue boat card. Then, task switched to put red items in red rabbit box and blue items in blue boat box. Reverting to pre-switch rule resulted in incorrect response. Backward Digit Scan (BDS): One practice trial followed by test trials involving repeating of numbers in reverse order. Trial stopped after 3 failed attempts. Grass/Snow (G/S): Stroop-like task. Children asked to identify white card with grass and green card with snow. Percentage of correct trials utilized. Bear/Dragon (BD): Presented with "nice" bear puppet and "naughty" dragon puppet. Instructed to do what bear puppet says, but not dragon. Max of 4 practice trials. 10 test trials. Indexed as Self-	

Author / Article	Qual: Concepts or phenomena Quan: Key Variables Hypothesis Research Question	Theoretical Framework	Design	Sample (N)	Data Collection (Instruments/tools)	Findings
					control and coded 0 (full commanded movement) to 3 (no movement). Total dragon score used. Less is more (LIM): Reverse-reinforcement measure. Presented with choice of large or small quantity of treats. Selection would be given to naughty (dragon) puppet. Purpose was to inhibit pointing to tray desired for self. Percentage of smaller treat choices utilized. Tower building (Tow): Instructed to take turns building a tower of blocks. Examiner did not take turns unless instructed to do so by the child. Percentage of blocks placed by examiner recorded. 5 points deducted if child knocked down tower, 5 added if blocks removed with care. Delay of gratification (DoG): Reward of more treats if none touched	

Author / Article	Qual: Concepts or phenomena Quan: Key Variables Hypothesis Research Question	Theoretical Framework	Design	Sample (N)	Data Collection (Instruments/tools)	Findings
					within a period of time. Also, could ring bell to receive small portion immediately. Gift Delay (GD): Children asked not to peek as examiner opened a present. Pretense measures: Pretend-Reality: Children given objects and asked to identify real meaning of object and pretend meaning of object. Pretend actions: Child asked to physically demonstrate pretend actions to assess representation of pretend gestures.	
Sezici, E., Ocakci, A. F., & Kadioglu, H. (2016). Use of play therapy in nursing process: a	". . . play therapy eases fear, impaired social interactions, self-esteem disturbance, ineffective coping, and anxiety in children. . ."	Consolidated Standards of Reporting Trials (CONSORT) guidelines	Single-blind, prospective, randomized controlled study Experimental: Two 30-minute games played with 10 of 39	N=95 (Experimental: 39, Control: 40, Disqualified: 16, Randomized: 79) Children of low-high income from a single kindergarten in Kutahya, Turkey	• Pre-school child and Family Identification Form: 7 questions about child: name, surname, gender, age, living situation, full- or part-time; 8 questions about parents: age, education, occupation)	Significant differences in post-test and re-test scores by SCBE-30 Subscales: • AA (post-test: t=2.041, p=0.045; re-test: 4.538, p=0.000) • SC (post-test: t=2.692, p=0.009; re-test:

Author / Article	Qual: Concepts or phenomena Quan: Key Variables Hypothesis Research Question	Theoretical Framework	Design	Sample (N)	Data Collection (Instruments/tools)	Findings
prospective randomized controlled study.			children for a total of 8 games each over 4 weeks. Control: No intervention		• Social Competence and Behavior Evaluation Scale (SCBE-30): Measure of risk of emotional and behavioral disorders. 6-point Likert scale, always (6) to never (1) • Subscales: Social skills (SC), Emotional skills (AW), Behavioral skills (AA)	4.693, p=0.000) • AW (re-test: 5.839, p=0.000)
Stulmaker, H. L., & Ray, D. C. (2015). Child-centered play therapy with young children who are anxious: a controlled trial.	"What impact does CCPT have on young children with reported elevated levels of anxiety symptoms?"	Child-Centered Play Therapy (CCPT)	Randomized Controlled Trial Experimental: 16 CCPT sessions over 8 weeks. Active Control: 8 coloring-based activity sessions over 8 weeks to control for attention.	N=71 (Excluded: 18, Randomized 55) Experimental: n=27, age(n): 6(10), 7(10), 8(3), male(female)=16(7), Ethnicity(n): African American (4), Caucasian (12), Hispanic/Latino (8), Asian (0), Biracial (1) Control: n=28, age(n): 6(16), 7(12), 8(0), male(female)=18(10), Ethnicity(n): African American(7), Caucasian(12),	• Primary measure: Revised Children's Manifest Anxiety Scale (RCMAS-2): Self-report measure consisting of 49 items. Subscales of Total Anxiety, Physiological Anxiety, Worry, and Social Anxiety • Teacher Report Form: Teacher-based report form assessing level of functioning. Subscales of Anxious/Depressed measuring behaviors directed at anxiety and depression. Used to assess inclusionary critera.	Statistically significant difference between experimental and active control: • Total anxiety (F(1,51)=6.569, p=0.013) • Worry (F(1,51)=8.318, p=0.006) No significant differences found for Physiological anxiety (F(1,51)=3.276, p=0.076) and Social Anxiety (F(1,51)=2.018, p=0.162).

Author / Article	Qual: Concepts or phenomena Quan: Key Variables Hypothesis Research Question	Theoretical Framework	Design	Sample (N)	Data Collection (Instruments/tools)	Findings
				Hispanic/Latino(3), Asian(1) Biracial(5) Recruited from four elementary schools in Southwest United States		

Thibodeau, R. B., Gilpin, A. T., Brown, M. M., & Meyer, B. A. (2016).
 	
The effects of fantastical pretend-play on the development of executive functions: an intervention study.
	". . . it was hypothesized that engaging in fantastical pretend-play would facilitate the development of EFs . . . it was expected that there would be a significant difference among intervention conditions on post-test measures of EFs, such that children in the fantastical pretend-play condition would show an increase in EF abilities beyond that of children in the non-imaginative play and no-intervention conditions" (p. 122).	None stated	Randomized Controlled Trial
			
			Fantastical pretend-play condition: Children given fantastical script and encouraged to act it out.
			
			Non-imaginative play condition: Children engaged in non-imaginative action-based activities such as songs, coloring, and ball games.
			
			Control condition:
				N=121 (Excluded: 11, Randomized: 110)
				
				Fantastical play condition: n=39, mean age in months=50.62, male(female)=19(20), Caucasian(n=37), African American(n=1), Other(n=1)
				
				Non-imaginative play condition: n=32, mean age in months=54.06, male(female)=16(16), Caucasian(n=28), African American(n=2), Other(n=2)
				
				Control condition:
					• Pre- and post-intervention:
					  • Fantasy Orientation Questionnaire(FO) (Teacher response)
					• Pretense measures:
					  • Imaginative Play Predisposition Interview (child response)
					  • Imaginary Companion Interview (child response)
					  • Impersonation Interview and Toy Phone task (child response)
					• Executive Function (EF) measures:
					  • Forward Digit Span (working memory)
					  • Day/Night task (inhibitory control): Stroop-like task involving matching of
						Significant findings:
						
						FO and Pretense:
						• Significant difference between pre- and post-test scores for FO and pretense scores (as covariate): F(2,100)=4.63, p=0.012
						• Significant difference between fantastical (mean=0.261, SD=0.656), non-imaginative (mean=-0.108, SD=0.663), and control (mean=-0.169, SD=0.659) at post-test.
						
						EF measures (post-test):
						• Forward Digit Span: Significant difference between fantastical play (mean=4.81, SD=1.34) and non-imaginative play (4.02,

Author / Article	Qual: Concepts or phenomena Quan: Key Variables Hypothesis Research Question	Theoretical Framework	Design	Sample (N)	Data Collection (Instruments/tools)	Findings
			Children participated in classroom activities as usual.	n=39, mean age in months=52.37, male(female)=16(23), Caucasian(n=33), African American(n=4), Other(n=2)	pictures with verbal response. • Dimentional Change Card Sort task (attention shift): Children asked to relate one card-type with one box, and the task is switch correlations of card and box. • Confounding Variables: • Peabody Picture Vocabulary Test-Fourth Edition was utilized to assess for differences in vocabulary prior to intervention.	SD=1.34). No statistical difference between fantastical play condition and control. Significant change between pre- and post-test for fantastical play condition (F(1,38)=10.41, p=0.003, n2=0.215). No significant difference between pre- and post-test for non-imaginative and control conditions. • Dimentional Change Card Sort • No significant changes in scores between the three conditions were found after post hoc analysis • Day/Night • No significant changes were observed between all three conditions.

APPENDIX B:

THE UNIVERSITY OF ARIZONA INSTITUTIONAL REVIEW BOARD (IRB) APPROVAL LETTER

THE UNIVERSITY OF ARIZONA
Research, Discovery & Innovation

Human Subjects Protection Program

1618 E. Helen St.
P.O.Box 245137
Tucson, AZ 85724-5137
Tel: (520) 626-6721
http://rgw.arizona.edu/compliance/home

Date:	November 20, 2018
Principal Investigator:	Jeremy Creekmore
Protocol Number:	1810046294
Protocol Title:	An Educational Intervention on the Benefits of Play in the Child Psychiatric Population
Determination:	Approved
Expiration Date:	November 19, 2023

Documents Reviewed Concurrently:

Data Collection Tools: *POSTTEST.DOCX*
Data Collection Tools: *PRETEST.DOCX*
HSPP Forms/Correspondence: *Confirmation for Scientific Review and Department Review.pdf*
HSPP Forms/Correspondence: *Creekmore_appendix_waiver_2-2_v2018.pdf*
HSPP Forms/Correspondence: *Creekmore_Application for Human Research.pdf*
HSPP Forms/Correspondence: *Creekmore_list_of_research_personnel_2-3_v2018.pdf*
Informed Consent/PHI Forms: *DISCLOSURE FORM.DOCX*
Informed Consent/PHI Forms: *DISCLOSURE FORM.pdf*
Other Approvals and Authorizations: *Advisor Confirmation Email.pdf*
Other Approvals and Authorizations: *APNA Chapter letter.docx*
Other Approvals and Authorizations: *RE COI Certification Complete for 1810046294.msg*
Participant Material: *Detailed PowerPoint Outline.docx*
Recruitment Material: *INVITE AND DISCLOSURE EMAIL.DOCX*

Regulatory Determinations/Comments:

- The project is not federally funded or supported and has been deemed to be no more than minimal risk.
- The project listed is required to update the HSPP on the status of the research in 5 years. A reminder notice will be sent 60 days prior to the expiration noted to submit a 'Project Update' form.

This project has been reviewed and approved by an IRB Chair or designee.

- The University of Arizona maintains a Federalwide Assurance with the Office for Human Research Protections (FWA #00004218).
- All research procedures should be conducted according to the approved protocol and the policies and guidance of the IRB.
- The Principal Investigator should notify the IRB immediately of any proposed changes that affect the protocol and report any unanticipated problems involving risks to participants or others. Please refer to Guidance Investigators Responsibility after IRB Approval, Reporting Local Information and Minimal Risk or Exempt Research.

APPENDIX C:

PRE-TEST

Pre-test

The Use of Play as an Intervention

PLEASE DO NOT WRITE YOUR NAME ANYWHERE ON THIS FORM

1. Please select your decision to participate or withdraw from the study (Circle one):
   a. I wish to participate in study and take both pretest and posttest.
   b. I would like to withdraw from this study.

Demographic Questionnaire

Please answer the following questions about yourself:

1. Highest level of degree: _____High School _____Associates _____
   Bachelors _____Masters _____Doctoral

2. Years of child psychiatric experience:
   _____1-5 _____5-10 _____10-15
   _____15-20 _____20-25 _____25 or more

Pre-test

1. Children utilize play to learn from and adapt to their environments.
   a. True
   b. False

2. Play has been shown as an effective intervention for which of the following:
   a. ADHD
   b. Depression
   c. Conduct Disorder
   d. All of the above

3. Play consists of only the use of toys, not drawing or make believe acting such as in a play.
   a. True
   b. False

4. It is not ok to encourage a child to find ways to keep occupied.
    a. True
    b. False
5. Children should only be allowed to play when they have done well in daily activities.
    a. True
    b. False
6. Make believe play means that a child is hallucinating or delusional.
    a. True
    b. False
7. Play has been shown to have the following effects (Select all that apply):
    a. Improved impulse control
    b. Increased isolation
    c. Decreased anxiety
    d. Improved social skills
    e. Improved regulation of emotions
8. Establishing a presence through use of play enhances the capability of early intervention though recognition of behaviors.
    a. True
    b. False
9. Children are less likely to be involved in incidences of seclusion and restraint:
    a. True
    b. False
10. It is free time on a child, inpatient psychiatric unit. A child picks up a whiteboard eraser and says, “This is a very fast car.” You should:
    a. Tell the child they are being disruptive and send them to their room for a time out.
    b. Redirect the child by stating, “No. That is an eraser for the board.”
    c. Pick up the spare eraser from the nurse’s station, and state “I have a fast car too. You want to race?”
    d. Ignore the statement because the child is only seeking attention.

11. When is the best time to use play? (Select all that apply)
    a. When the child is in crisis.
    b. During unstructured times of the day.
    c. As an addition to groups and activities.
    d. When a child is beginning to become restless.
12. In the State of Hawaii, *Adaptive Behavior* and *Living Skills* categories reflect what percentage of the treatment targets for CAMHD patients?
    a. 56%
    b. 88%
    c. 35%
    d. 15%
13. The economic impact of child mental health care:
    a. Is estimated at $250 billion annually.
    b. Is double the cost of treating children without mental health issues.
    c. Both a and c
    d. None of the above
14. Play can be used to process a difficult situation after when safety is not jeopardized.
    a. True
    b. False
15. I feel that:
    a. Play is a useful intervention.
    b. Children should not be allowed to play on the unit for safety reasons.

APPENDIX D:

POST-TEST

Post-test

1. Children utilize play to learn from and adapt to their environments.
   a. True
   b. False
2. Play has been shown as an effective intervention for which of the following:
   a. ADHD
   b. Depression
   c. Conduct Disorder
   d. All of the above
3. Play consists of only the use of toys, not drawing or make believe acting such as in a play.
   a. True
   b. False
4. It is not ok to encourage a child to find ways to keep occupied.
   a. True
   b. False
5. Children should only be allowed to play when they have done well in daily activities.
   a. True
   b. False
6. Make believe play means that a child is hallucinating or delusional.
   a. True
   b. False
7. Play has been shown to have the following effects (Select all that apply):
   a. Improved impulse control
   b. Increased isolation
   c. Decreased anxiety
   d. Improved social skills
   e. Improved regulation of emotions

8. Establishing a presence through use of play enhances the capability of early intervention though recognition of behaviors.
    a. True
    b. False

9. Children are less likely to be involved in incidences of seclusion and restraint:
    a. True
    b. False

10. It is free time on a child, inpatient psychiatric unit. A child picks up a whiteboard eraser and says, “This is a very fast car.” You should:
    a. Tell the child they are being disruptive and send them to their room for a time out.
    b. Redirect the child by stating, “No. That is an eraser for the board.”
    c. Pick up the spare eraser from the nurse’s station, and state “I have a fast car too. You want to race?”
    d. Ignore the statement because the child is only seeking attention.

11. When is the best time to use play? (Select all that apply)
    a. When the child is in crisis.
    b. During unstructured times of the day.
    c. As an addition to groups and activities.
    d. When a child is beginning to become restless.

12. In the State of Hawaii, *Adaptive Behavior* and *Living Skills* categories reflect what percentage of the treatment targets for CAMHD patients?
    a. 56%
    b. 88%
    c. 35%
    d. 15%

13. The economic impact of child mental health care:
    a. Is estimated at $250 billion annually.
    b. Is double the cost of treating children without mental health issues.
    c. Both a and c
    d. None of the above
14. Play can be used to process a difficult situation after when safety is not jeopardized.
    a True
    b False
15. I feel that:
    a Play is a useful intervention.
    b Children should not be allowed to play on the unit for safety reasons

Presentation Evaluation:

1. I will be able to apply the knowledge gained from this activity in my clinical practice
    a. Strongly agree
    b. Agree
    c. Neither/Undecided
    d. Disagree
    e. Strongly disagree
    f. Not applicable
2. Do you anticipate barriers to applying this knowledge?
    a. Yes
    b. No
3. If yes, please explain.

APPENDIX E:

DISCLOSURE FORM

DISCLOSURE FORM

Introduction

My name is Jeremy Creekmore from the University of Arizona College of Nursing. I am a doctor of nursing practice student in a psychiatric mental health nurse practitioner program. To meet the requirements of my doctorate of nursing practice degree, I am required to perform a DNP project.

Purpose of Project

The purpose of this project is threefold: (1) improve provider knowledge on the use of play to enhance self-soothing in the child psychiatric population, (2) increase provider intent and feasibility for using play within the psychiatric inpatient milieu, and (3) determine barriers to the use of play in the child psychiatric population. The goal is to increase application of evidence-based practice regarding play to enhance self-soothing within the child psychiatric population.

Why are you being asked to participate?

You are being invited to participate in this project since you are healthcare providers that provide care for child psychiatric patients. I would like to determine if a brief educational presentation on benefits of play can improve your knowledge and identify barriers related to this subject matter.

Description of the project:

This project entails a survey given just prior to a PowerPoint presentation. The presentation will be approximately 30 minutes, and will discuss the benefits of play on behaviors within the child population. A link to another survey will be included on the last slide of the PowerPoint presentation. Each survey will take approximately 10 minutes to complete for a total of 50-60 minutes. The surveys will contain minimal demographic questions, a few multiple-choice questions to assess knowledge, and a free-text area to assess perceived barriers to the use of play. Additionally, the survey given after the presentation will include a section to assess satisfaction with this project. No paper data will be collected during this project.

The results of this project will:

1. Help us better understand the knowledge gaps and barriers associated with the use of play in the child psychiatric population.
2. Help us determine if a brief educational intervention can improve provider knowledge.
3. Help refine the brief educational intervention so it can be more effective with future use.

Are there any risks?

Risk with internet use include tracking of IP addresses, storage of data, and interception of data. Survey Planet uses an SSL connection, which is encrypted. They collect IP addresses; however, they do not sell or distribute information. Instead, SurveyPlanet uses the info for site navigation purposes. Additionally, survey info is only kept until the survey is deleted, and surveys will be deleted immediately upon completion of the data collection period of one (1) month. The survey is completely anonymous and only a summary of the findings will be shared. An Institutional Review Board responsible for human subjects' research at The University of Arizona reviewed this research project and found it to be acceptable, according to applicable state and federal

regulations and University policies designed to protect the rights and welfare of participants in research. For questions about your rights as a participant in this study or to discuss other study-related concerns or complaints with someone who is not part of the research team, you may contact the Human Subjects Protection Program online at http://rgw.arizona.edu/compliance/human-subjects-protection-program.

What are the benefits?
The benefits of the study will be to improve provider knowledge of the use of play. Additionally, this project may also indirectly improve patient care and outcomes by improving the ability to self-sooth through the use of play.

The study is voluntary
By completing the surveys, you are agreeing to participate in this project. However, you may decide not to participate or stop participating at any time.

Questions
If you have any questions or concerns, please contact Jeremy Creekmore by email at jeremy.creekmore@email.arizona.edu

APPENDIX F:

RESULTS

	Pretest Frequency Correct % (n=5)	Posttest Frequency Correct % (n=1)
Children utilize play to learn from and adapt to their environments.	100	100
Play has been shown as an effective intervention for which of the following:	100	100
Play consists of only the use of toys, not drawing or make believe acting such as in a play.	100	100
It is not ok to encourage a child to find ways to keep occupied.	100	100
Children should only be allowed to play when they have done well in daily activities.	100	100
Make believe play means that a child is hallucinating or delusional.	100	100
Play has been shown to have the following effects (Select all that apply):	40	100
Establishing a presence through use of play enhances the capability of early intervention though recognition of behaviors.	100	100
Children are less likely to be involved in incidences of seclusion and restraint:	80	100
It is free time on a child, inpatient psychiatric unit. A child picks up a whiteboard eraser and says, “This is a very fast car.” You should:	80	100
When is the best time to use play? (Select all that apply)	80	100
In the State of Hawaii, *Adaptive Behavior* and *Living Skills* categories reflect what percentage of the treatment targets for CAMHD patients?	0	100
The economic impact of child mental health care:	40	100
Play can be used to process a difficult situation after when safety is not jeopardized.	100	100
I feel that: Play is a useful intervention.	100	100

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