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The Incredible 5-Point Scale Board Game

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THE INCREDIBLE 5-POINT SCALE BOARD GAME

BY

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THE INCREDIBLE 5-POINT SCALE BOARD GAME

BY

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you. We did it!

ABSTRACT

Game-based learning has become a staple of the educational community. However, it has not always reached the psychological community. Board games and game-based learning provide an opportunity to teach individuals about psychological concepts in a more engaging and entertaining way. Games are an ideal way to teach emotion related skills because they offer a safe and more accepting environment for mistakes. Further, board games encourage an active learning environment which can improve acquisition of knowledge. The current discussion focuses on taking a therapeutic tool (The Incredible 5-Point Scale) and developing it into a board game for use in session and at home to increase caregiver and client participation in therapy. The current research has revealed interest among the community that this board game is targeted towards. Further research will be completed in order to perfect the product through use of surveys in a clinical training setting. After the board game has been perfected, research will be conducted to explore effectiveness in education on The Incredible 5-Point Scale and general knowledge and use of emotional awareness, emotional regulation, emotional control, and coping skills.

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I. Introduction

Scarfe (1962) stated that "the highest form of research is essentially play." Many people can recall the game The Oregon Trail (Rawitsch, Heinemann, & Dillengerger, 1974) and even reminisce on it fondly. The very simplistic choice-based game made a lasting impact on our culture. The Oregon Trail was one of the first games designed for learning. The idea was that engaging students in play while learning historical information would increase not only their interest, but their retention of the information. The evidence for this idea can be seen in the references among modern culture that include not only playing the game, but the historical aspects it was meant to teach.

Gillin and Huizinga (1949) defines the playing human as the human who uses play and gaming as a creative power. Further, the most important and difficult to define element is fun. In order for something to count as play, the player must be participating voluntarily and accept the rules. Gillin and Huizinga defines play as:

> "a free activity standing quite consciously outside 'ordinary' life as being 'not serious', but at the same time absorbing the player intensely and utterly. It is an activity connected with no material interests, and no profit can be gained by it. It proceeds within its own proper boundaries of time and space according to fixed rules and in an orderly manner" (Gillan & Huizinga, 1949, p. 13).

Turner and Schechner (1988) offers the idea that games give the player the chance to step out of the ordinary and allows them to have hypothetical "what ifs" played out. He further notes that games offer the opportunity to view a future that is idealistic which may be based in reality.

Purpose

There has been a resurgence in the interest among the psychological community in play as a form of learning as evidenced by the plethora of recent research on the topic. The objective of this doctoral project is to design a board game for individuals to

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use in therapeutic situations in order to learn an emotional regulation tool called The Incredible 5-Point Scale (Buron & Curtis, 2012). The board game is designed to strengthen the understanding of the concepts underlying the scale and to encourage use across family members. Once created, this tool can be studied to determine therapeutic impacts, the acquisition of the needed knowledge base among participants, and dissemination throughout family units.

Statement of Significance

Emotional education (or psychoeducation) is the first step in almost all empirically based interventions. This often includes teaching coping skills and emotional regulation (ER) (including awareness and control). Additionally, it is a skill with which most individuals struggle. Children are especially prone to being unaware of these concepts due to developmental levels. Therefore, teaching these skills early and teaching them to each individual is incredibly important. The incorporation of fun into the learning process can be appealing, as well.

Including an aspect of fun with the challenge of learning these skills is important in keeping individuals interested and helping them to remember the information. This can encourage individuals to participate in the treatment and can encourage family involvement as well.

Distribution and Permissions

The author plans to distribute the product at conferences and through The Incredible 5-Point Scale website. I have gained permission from the creators of The Incredible 5-Point Scale (Buron & Curtis, 2012) to make this prototype as long as their work is also cited (see Appendix A).

II. Literature Review

Methods of Literature Search

Articles were accessed by searching databases including Academic Search Complete, Academic Search Ultimate, APA PsycTests, APA PsycINFO, APA PsycARTICLES, Child Development & Adolescent Studies, Education Source, and Psychology and Behavioral Sciences Collection using the terms games, game-based learning, learning, education, emotional awareness, emotional control, coping skills, emotional regulation, therapeutic, psychology, play, family involvement, and caregiver involvement. Further articles were accessed for information on game design, board game history, board game development, and scale development. Print sources including books written as a companion to different treatments mentioned in the body of this work were also used.

Emotional Awareness, Emotional Regulation, Emotional Control, & Coping Skills

Children and their caretakers must understand emotions and the related aspects involved in order to be able to communicate with one another effectively. Emotional Awareness (EA) is defined as the way that individuals differentiate, express, analyze, and attend to their own emotions and the emotions of others (Avramova-Todorova, 2018). The aspect being attuned to one's own emotional experience is of the utmost importance in the process of communication. The need for awareness is required in order to communicate effectively the inner emotional experience.

Emotional Awareness

EA is key for human beings' social functioning (Baslet, Termini, & Herbener, 2009). Bailen, Wu, and Thompson (2019) found that, on average, a person experiences

a need for EA (either though needing to identify one's own emotions or to identify the emotions of others) at least once a week. Further, they found that one of the most common occurrences was a negative reaction to one's own negative emotion (Balien, et al., 2019). This could be important in teaching EA because it could play a key factor in preventing negative or disruptive behaviors. Higher levels of EA have been correlated with more efficient brain functioning through shorter average path lengths and increasing the number of functional connections during a resting state (Smith, Sanova, Alkozei, Lane, & Killgore, 2018). In the previously mentioned study, IQ and age were controlled for which more specifically shows a change based on EA ability. This could indicate that increasing one's EA could also improve overall brain efficiency (Smith et al., 2018). EA also influences our ability to understand others' emotions without allowing our own emotional lens to change how we see it and a higher ability in relation to EA can tamper this fallacy (Wright, Riedel, Sechrest, Lane, & Smith, 2018). Beyond simply how one communicates and relationships with others, EA can also impact psychological well-being. Sendzik, Schafer, Samson, Naumann, and Tuschen-Caffier (2017) found that lower EA is correlated with increases in anxiety and depression in youth (below the age of 12). This indicates that teaching EA could buffer children from negative psychological outcomes.

Emotional Regulation

In addition to EA, it is important that children and caregivers understand and master ER. ER is defined as an individual's ability to effectively respond to and manage emotional experiences (Gross, 1999). This aspect of human emotionality is key in many daily life functions. ER has been shown to reduce or slow burn out among those

with an emotionally taxing job (Zaho, Li, & Shields, 2019). This indicates that there is a protective factor involved in an elevated ability to use ER. It could also be argued that parenting could be considered an emotionally taxing job. The need for caregivers to be skilled in ER is twofold, as well. Children often learn through modeling and caretakers are often a significant source of this learning and their own regulation strategies could have an impact on a child's ER abilities(Chen, Wu, & Wang, 2018). It has been noted that parents that express more positive emotions (likely through the use of ER) tend to have children with better ER skills (Tan & Smith, 2019). Lasa-Aristu, Delgado-Egido, Holgando-Tello, Amor, and Dominguez-Sanches (2019) found that there are two profiles of regulation and one employs "positive" regulation strategies such as positive reappraisal and positive refocusing. The authors also found that the use of these more adaptive and positive regulation strategies are related to a decrease in psychological symptomology (including depressive symptoms; Lasa-Aristu et al., 2019). This indicates that teaching positive ER strategies could prevent negative psychological symptoms. It also indicates that more positive regulation profiles could be created for individuals. ER has been implicated in externalizing behaviors, as well (Cavanagh, Quinn, Duncan, Graham, & Balbuena, 2017). Due to this, teaching ER skills can impact negative behaviors (Prout, et al., 2020). Parental ER can have impacts on the family as a whole (Low, Overall, Cross, & Henderson, 2019). In fact, parental ER impacts how they interact with their children and ultimately how their children learn to behave (Low et al., 2019).

Emotional Control

Within ER is the facet of Emotional Control (EC). EC is defined as the attempts by an individual to manage the generation, experience, and expression of emotion and/or their emotional responses (Gross, 1999). EC has been linked as a mediating variable for preventing worry in those that are perfectionistic (Affrunti & Woodruff-Borden, 2017). This indicates that this control of one's emotions can be especially helpful in regulating anxious emotions and responses. It has also been implicated in regulating externalizing behaviors. It is thought that this is through the level of fear reactivity (lower fear is correlated with more externalizing behaviors), modulating frustration, and enhancing the ability for the person to control their behavior through control of emotional reactions (Moran, Lengua, & Zalewski, 2013). Further, Biernacka, Jakubowska-Winecka, and Biernacki (2014) found that when in stressful situations, it is often better to suppress negative emotions of anxiety and can improve the mood state of the person during the stressful situation, which requires EC. Additionally, the same study found that EC has been linked with a more positive mood despite stressful situations among adults. In fact, EC often serves as a protective factor in general (Janowski, Kurpas, Kusz, Mroczek, & Jedynak, 2014). EC also serves a function within communication (Kachel, Svetlova, & Tomasello, 2018). It can make individuals more willing to work with others and allows for teamwork and understanding, even among young children (Kachel et al., 2018). EC also is considered highly important in positive and constructive friendships. Conversely, a low level of EC can influence a person to have more negative and deconstructive friendships (Rieffe, et al., 2018) which can influence the mental health of the individual. This becomes increasingly true for

children as they age into adolescents because during the adolescent years,, children begin relying more on their friends rather than their family to provide support (Traylor, Williams, Kenney, & Hopson, 2016). EC can be taught, as well. It has been found that while it is often a secondary reaction to impulsive emotions, it can be taught through implemented intentional behavior to a person to be an inherent and immediate reaction instead (Eder, 2011). Further, each of these aspects are inherently incorporated into coping and the use of coping skills.

Coping Skills

Coping skills are imperative for both children and adults. Caregiver coping has a significant impact on the coping skills of the child and the relationship between the caregiver and the child. In fact, Gulliford, Deans, Frydenberg, and Liang (2015) found that positive coping skills in parents improved their views of themselves and their relationships with their children. Further, as a result of this, their children had reduced use of negative coping skills (Gulliford et al., 2015). Coping skills are a predictor of later life success (Greenberg, Fick, & Schnider, 2012) and better regulation of depressive symptoms (Adler, Conklin, & Strunk, 2013). Coping skills are a necessity of life and a lack of positive coping skills could impact development. Lee, Shellman, Osmer, Day, and Dempsy (2016) found that positive and adaptive coping strategies guard against later problems with psychosocial development. This could possibly be related to the ability of one to move past emotionally charged situations due to further research that has noted that coping skills are necessary to do this (Greenberg et al., 2012).

The Incredible 5-Point Scale

The Incredible 5-Point Scale was developed and created by Kari Dunn Buron and Mitzi Curtis in 2003 as a tool for teachers to help teach social understanding to students with ASD and similar challenges. However, they have recently found that the scale can be applied to many other behavioral problems and disorders. Buron and Curtis (2012) state that the objective of the scale is to teach social and emotional information in a concrete, systematic, and non-judgmental way. They suggest this outline for the use of the scale: (a) determine the problem or identify the behavior, (b) identify the skill or social concept the person needs to be taught, (c) break the concept into five parts with one being the smallest and five being the biggest while avoiding positive or negative labels, (d) use a story to help the person understand what the scale is all about and how to use it, (e) review the scale with the person, (f) use the scale in real situations through prompting, and (g) create a portable version of the scale. Bruon and Curtis (2012) further suggest that for some individuals smaller scales (with three points) might be useful. Also, they have found that incorporating the interests of the person encourages their attention to the scale.

The person who needs the scale may be unable to truly understand their own behavior. Therefore, it is often up to caregivers to gather information about the behaviors in order to create the scale (Buron & Curtis, 2012).

The importance of this scale is obvious in its several uses. It can be used to debrief after an unexpected problem or it can be used in the moment to clarify information from the person in a nonverbal and functional way (Buron & Curtis, 2012).

Further, it can be used to teach other difficult topics. Once a scale is understood, the format can be applied to virtually any behavior or problem.

Buron and Curtis (2012) have found it to be successful with children as young as 3 years old. They suggest a slightly different outline for younger children which includes more emphasis on modeling and teaching the desired behavior, reducing the size (three points rather than five), emphasizing the numbers, and emphasizing the interests of the child.

Buron and Curtis (2012) note that one of the most important skills in creating friendships and relationships with others is ER. It is likely that those that cannot regulate their emotions may have challenging responses to others, which may cause isolation.

The Incredible 5-Point Scale has been modified for many different behaviors. There are several books that were created by the original creators of The Incredible 5-Point Scale. These include one book based on anxiety (Buron & Myles, 2006) and one for problems behaviors for teens and young adults (Buron, 2007). The latter mentioned book creates Incredible 5-Point Scales for problem behaviors for teens and young adults. This book is focused around behaviors that could be illegal and tend to focus on problem sexual behaviors especially. This book outlines the social cues and expectations around flirting and when flirting becomes harassment. It further includes how to deal with the anger or anxiety regarding these things (Buron, 2007).

The Caregiver Curve

The Caregiver Curve is a construct that is taught in conjunction with the Incredible 5 Point Scale. The most often used version is for anxiety and is often labeled

"The Anxiety Curve." However, this, like the Incredible 5-Point Scale itself, can be applied to any feeling. The curve is an explanation of how to use The Incredible 5-Point Scale and a reminder of the caregiver's own emotional arousal during a difficult time with a child. The curve outlines that one should be teaching the scale at a level one with the child. All learning occurs at level 1. At a level 2 it is noted that early signs of emotional distress are apparent. At level 3, it is important to then leave the situation if possible. At level 4 the caregiver should be modeling for the child. At level 5, negative behaviors occur. Flowing back down the curve, redirection, support, and discussion are used. The caregiver is meant to discuss the event with the child when they have returned to a level 1. This also notes that a caregiver should never reach further than a two at most. This is so that the caregiver can maintain control and be a support during the person's difficult time (Buron & Curtis, 2012).

Figure 1. The Caregiver Curve

Anxiety Curve

Text boxes within figure:

This could include Hitting, throwing, Biting, swearing and crying

This is peak anxiety. It is not a time to talk, Direct or problem solve

This is not a Time to ask the Person to Make choices. Model Calming strategies

Redirection here can Result in a ripped Assignment. The Person should be Encouraged to relax Rather than make any decisions

This is where signs of early stress need to be recognized. This is the best time to refocus the person's attention away from the stress

Use calm Redirection here

Now is the time to leave the anxiety producing event if possible

Use encouraging, Supportive words here. If possible don't discuss the incident

This is the staff or parent curve. You need to control your own anxiety during a crisis in order to help diffuse the person's anxiety. Your instincts tell you to engage in fight or flight, you can do either. Use silence and your own calming sequence.

This is the foundation of your plan. This is where positive and valuing relationships are built and where You teach skills needed to function successfully in challenging situations. Examples might include The 5 Point scale, Social Stories, Power Cards, a calming sequence, yoga, or social skills.

The Importance of Familial/Child Involvement & Engagement

Karver, Handelsman, Fields, and Bickman (2005) note that treatment outcomes for children tend to be reliant on the engagement and involvement of the child and the family. In fact, they note that a child's willingness to participate and actual participation along with parent willingness to participate can influence positive therapy outcomes. As noted previously, board games can foster communication within families (Wiener, Battles, Mamilian, & Zadeh, 2011). Communication is a key aspect to engagement and involvement. Incorporating the family into therapy is important to making progress in the child's mental health (Tolan & Dodge, 2005). Some researchers have found that one of the more important barriers to treatment was a lack of family-centered services (Quinn, Epstein, & Cumblad, 1995). Family involvement and engagement improves (up

to a moderate degree) and can amplify (Hoagwood, 2005) therapeutic outcomes for children (Clarke, et al., 2015; Dowell & Ogles, 2010) including symptom improvement, functioning, reduced impairment, and positive parenting practices (Haine-Schlagel & Walsh, 2015). Symptom improvement ranges from anxious symptoms (Podell & Kendall, 2011) to deviant behaviors (Patterson, Chamberlain, & Reid, 2016). The engagement of a board game could positively influence each of these factors through the fun of the game along with the active learning and participatory teaching environments that board games offer. Further, this interaction between caregiver and child can impact their relationship. Positive parent-child relationships can influence copings styles and can improve and influence relationships with peers (Conteras, Kerns, Weimer, Gentzler, & Tomich, 2000).

History of Board Games

It is important to understand the development of the modern-day board game in order to understand the usefulness and reach it can have. Donovan (2018) postulates that there have been four board game eras: Folk Game, Mass Produced, Plastic, and Connected.

The Folk Era

Donovan (2018) notes that previously in the history of the board game, there were no set rules and no owners of board games. In fact, it was much more like the folk stories and songs that are known throughout cultures. Many cultures have similar folk lore with different players. This era of board games was similar.

Board games at this time were spread not through advertisement or marketing, but from person to person. Therefore, each new person may have added something to

the game. Games such as chess, backgammon, go and the mancala family of games were the ones that were passed down in this way. In fact, in the Spanish kingdom of Castile many people would play chess with dice and rely on chance to dictate which piece they could move. The boards could be different, as well. In some areas, the board was the common-place checkerboard, but in others it was comprised of 64 same colored squares. Due to the lack of ownership of the games, everyone had a right to make changes to the games. The more popular changes were spread through word of mouth and game play, but other less popular options faded out of use. For example, the powerful queen in the game of chess originated in central Europe and holds true today, but the use of dice has fallen out of favor. The decline of this era came with the rise of intellectual property rights and the technology to begin mass printing (Donovan, 2018).

The Mass-Produced Era

Donovan (2018) noted that this era ushered in the use of intellectual property rights in relation to board games. It became completely opposite from the previous view of board games. Now, the individuals playing the game do not have say over the rules, but the manufacturer or creator does. Many of the favorite board games of today were originally created in this era such as Scrabble and Risk. We are still in the era of mass production, but things have changed slightly in how board games have been created.

The Plastic Era

This era of board game development involved the revolution of plastic. Donovan (2018) notes that plastic was used to increase the visual appeal of board games and to make accessory pieces. Further, the use of plastic began to blur the line between games and toys. It involved more advance electronics and lights to make it more visually

entertaining. Lastly, the introduction of plastic was partially a response to the growing interest in video games.

The Connected Era

This is the current era of the life of the board game. This era has been greatly changed by the internet. It has caused a rise in Eurogame style board games which are slightly different and often more complex than typical American style games (Donovan, 2018). However, the style is not the focus of this era. Instead, the use of the internet to spread awareness and interest in different types of board games has been a monumental influence. Donovan (2018) further states that the internet allows for more funding for board games and for players to sometimes have influence on the design (such as with crowd funding). It is easier than ever to create, design, and market a board game. This era is the best possible era to launch a new board game in.

Active Learning

Several aspects of games make them especially conducive to learning. For example, Whitton (2012) found that games create an active learning environment for participants and use participative teaching approaches. An active learning environment is when a student or participant can engage with the material and participative teaching is when a "teacher" incorporates the interests of the participants into a learning situation. It has been found that these two approaches can enhance learning (Treher, 2011; Whitton, 2012). In fact, those that learn through active learning rather than a more traditional approach tend to perform better on assessments of their knowledge (Yenen & Dursun, 2019). Further, even the belief that one is actively engaged with the material to be learned increases performance outcomes (Ting, Lam, & Shroff, 2019).

The belief that the material is engaging can induce active learning environments, as well. (Ting, et al., 2019). This strategy has been implemented in classrooms with a high level of success that leads to students being responsible for their learning and, ultimately, learning more efficiently and thoroughly (Green, McCormick, McDaniel, Rowell, & Strayer, 2018; Reich & Wang, 2019). Games are ideal situations for the active learning environment and participatory approach (Treher, 2011; Whitton, 2012).

Game Based Learning

Game-based learning can be defined as an instructional method that incorporates educational content into games with the goal of engaging participants. Education that is mixed with entertainment has become a centerpiece of today's learning environment. However, it has often failed to reach the rooms of therapists. Psychologists have an understanding that a person will learn better if they are interested, but we continue to attempt to teach children and adults alike in the same lecture, response, and practice format as we always have. Recently, there has been a growing interest in the educational community in making learning more active and involving entertainment. This often requires the use of technology and games. Pant (2013, May 17) revealed that educational entertainment seems to be the new learning model that promotes active social learning. This is, as has been mentioned before, a key aspect to development for children and especially needed in order to develop healthy ER, awareness, and control and coping skills.

Learning through play and games is especially important for younger children (White, et al., 2007). Pant (2013, May 17) noted that during this time, the "play-way" method for learning is used almost universally. Maheshwari (2013, March 26) noted

that "play-way" activities stimulate creative skill and self-expression while being life oriented. Further, it was noted that this method can fulfill the need of play and social interaction for the children and that this method can improve memory. Skills acquired in a fun and effortless environment in the early stages of learning can enhance children's potential in exploring the world (Copley, 2010). Further, interaction with information can enhance learning.

Game based learning allows for more engagement from participants. They also often find it more enjoyable than a traditional lecture (Pinhatti, et al., 2019). While most games considered in the current literature tend to be technology-based, board games offer some specific advantages. To begin, board games are easier and cheaper to make and use. Boardgames have specifically been found to enhance learning (Bonk, Simons, Scepanksy, Blank, & Berman, 2009) about a variety of topics from diagnostic imaging (Pinhatti, et al., 2019) to teaching number literacy (Ramani, Siegler, & Hitti, 2012). Further, it has been found that board games can enhance cognitive development in children along with improvement in linguistic abilities, reasoning, and discrimination and numerical abilities (Türkoğlu, 2019). The use of adapted board games has become popular, as well. Ericksen (2019) found that altering the game Apples to Apples to be used to create an understanding of diversity engaged the participants while also teaching them as evidenced by the achieved learning goals.

Board Games

Enhancement of Learning

Board games encourage learning (Noda, Shirotsuki, & Nakao, 2019). Games can enhance in engagement in several ways. At the very basic level, it enhances the

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motivation of a person to participate in learning (Noda, et al., 2019). This can include

structure, clear and meaningful goals, and suitability difficult challenges (Whitton,

2012). Games can enhance learning especially because of their unique ability to be low

risk. Games provide a safe and playful environment where mistakes are expected and

tolerated without real-world consequences (Whitton, 2012). Board games, in particular,

have the ability to take abstract concepts and make them more concrete (Treher, 2011).

This ability allows individuals with a range of abilities to participate. Board games can

foster learning that can translate to behavior change, as well (Treher, 2011)

Use in Therapy

As board games are ideal for many learning abilities and across individuals to

enhance learning, they are also ideal therapeutic tools for teaching therapeutic concepts.

There are several therapeutic board games currently on the market. They cover topics

including anger control (Berg, 2001; Franklin Learning Systems, 2006), calming

techniques (Bridges, 1990), boundaries (Johnson, 2009), healthy mourning (Bisenius

& Norris, 1998), and anti-bullying education (Searle & Searle, 1996). Additionally,

board games that are not specifically therapeutic in their design have been used in

therapies and noted positive outcomes.

Improvement in cognition/cognitive function

Board games have been shown to improve some aspects of cognitive

functioning for several populations. However, these games are not specifically designed

to be therapeutic, but have improved cognitive function anyway (Noda, et al., 2019). In

particular, the board game "Go" has shown to improve attention and working memory

in elderly individuals (Iizuka, et al., 2018). Relatedly, the game "Ska" has improved

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memory, attention, and executive functioning for elderly individuals (Panphunpho, Thavichachart, & Kritpet, 2013). Chess has shown to improve the cognitive ability of planning in individuals with schizophrenia (Demily, et al., 2009) and in mathematical ability in children (Sala, Gorini, & Pravettoni, 2015).

Board games in therapeutic contexts allow children to learn (Oren, 2008) and can increase motivation to participate in therapy (Noda, et al., 2019). Due to this increase in motivation to participate, it is possible that board games could also increase the benefit of treatment (Noda, et al., 2019). Therapeutic board games have been noted to build rapport for the clinician and client and build communications within families (Wiener, et al., 2011). The collaborative approach that is inherent in board games fosters and enhances interpersonal interaction (Noda, et al., 2019) and communication and social skills such as reading social cues and adapting behavior (Collins, Griess, Carithers, & Castillo, 2011).

As noted, before, targeted and specific board games can influence therapeutic outcomes, as well. One board game focused on targeting emotional disorders and found that after using the game, the individuals showed improvement in EC, ER, and EA (David, Cardos, & Matu, 2019). Board games can foster growth surrounding difficult topics, as well. For example, Misurell, Springer, and Tyron (2011) found that using a game-based cognitive behavioral therapy program improved the behaviors and pathology with individuals who had experienced sexual abuse. These improvements persisted over time, as well. Springer, Misurell, and Hiller (2012) found that at the three-month follow up, the individuals that participated in the original study continued to show improvements in internalizing symptoms, externalizing behavior problems, and

total behavior problems. Board games are effective with individuals outside of the child and adolescent age-range. Boghian, et al. (2019) found that adults using a board game improved their thinking process, their ability to understand whole situations, and understanding of different points of view. Additionally, these researchers found that the adults were better able to face daily situations and communicate thoughts and feelings. This is an aspect of board games that can be found across different types and age ranges. Collins, et al. (2011) found that board games encouraged interpersonal communication and, when targeted for building social skills, taught important vocabulary. It has been found that board games can reduce anxiety for children that are going to have a surgical operation (Fernandes, Arriaga, & Esteves, 2014), improve symptoms of depression and anxiety (Lin, Cao, & Gao, 2015), prevent panic attacks and contribute to the amelioration of the condition (Barzegar & Barzegar, 2017), and can reduce the severity of Attention-Deficit/Hyperactivity symptoms in some children (Kim, et al., 2014).

Game Design

Edwards and Schaller (2007) identified four aspects of great game design which include challenge, curiosity, control, and fantasy. The challenge aspect requires that players have a clear, fixed challenge that is personally relevant with frequent feedback that guides them toward success. It is important that the game clarify both successes and failures and promote feelings of competence for the player. The curiosity aspect requires that players' curiosity is triggered by events arising from the game and that sensory curiosity is aroused by the multimedia elements of the game. The control aspect requires that layers have meaningful control over their actions in the game and can

make important decisions that impact outcome. Further, contingency, choice and power

are key elements of the control within a game. Finally, the fantasy aspect requires that

the context of the game includes some level of fantasy which can engage the emotional

needs of learners (Edwards & Schaller, 2007).

III. Original Contributions to Practice

Proposed Program

It is proposed that a board game designed by the model described above meant to teach clients and their families about The Incredible 5-Point Scale could have several positive impacts. It is believed that this could increase EA, regulation, and control through teaching children to notice bodily and mental reactions to emotional arousal and the use of coping skills to reduce the impact. The inclusion of caregivers and other family members in participation may increase positive therapy outcomes along with familial engagement in treatment. The use of the board game could also impact the language and use for the entire family in order to fully integrate the 5-Point Scale system for the family units. Additionally, the use of a board game may encourage children and their families to learn more efficiently through the use of the active and participatory learning environment.

Further, Nicholson (2011) includes several other goals about educational board games, specifically. First, the author suggests that one should create original games in order to teach the content that is desired to the participants. Further, it is noted that one should begin with identifying learning outcomes that are participant centered. It can often be the case that individuals who begin creating educational board games can lose focus on the learning outcomes and focus more on the "fun" aspects. Learning outcomes should always guide the design of the game rather than "fun" or visual appeal. The next step in game design is to decide on the elements of the game. The elements of the game include the game itself, the interactions between players, and the setting of the game. One should consider the setting that the game is meant for and

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allow for changes as needed. Additionally, there should be a clear range of the number of players that can play the game at the same time. Board games are usually ideal for a smaller number of people to be playing at a single time. Next, one should decide on the types of interactions between the players. Finally, a design document should be created in order to finalize the decisions about the game and the thinking process behind the decisions.

Nicholson (2011) continues by noting the importance and steps to integrating educational content into the newly created game. First, one must link the game challenge and the content. This is where player engagement is crucial. If the challenge is not interesting enough, the players will not be willing to work for it and, therefore, will not learn the content as deeply. Game mechanics and the potential role of the players should be considered, too. The players should know whether this is a competition-based game or a teamwork-based game. The designer of the game should be aware of current trends in board games and be open to possibility. One should draw from as many sources as possible in order to make a unique game with positive aspects of each of the inspirational pieces. The last two steps are to test, adjust based on results, and then publish the game.

<div align="center">

Incredible 5-Point Scale Board Game Design

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Before beginning the game, an Incredible 5-Point Scale should be created for all of the participants. Additionally, the family should be encouraged to place a generic (meaning without customized awareness section and coping section) in an easily accessible place in the home for every individual.

Each game pack will include a board, a set of dice, an instruction manual, a spinner board with three card choices and an "Emotional Free Space" where the participant is encouraged to express themselves however they would like on it, and six meeples (small figures that represent players). The cards included are EA cards (i.e., I can tell that I am happy when…), ER and control through coping (i.e., I can ___ when I'm at a 4), identification of placement on the 5-Point Scale (i.e., I am screaming at another person. I am at a __), and flipped versions of the cards (i.e., I'm at a 3, I can…; I am angry, I feel…; When I'm at a three I…). Each of the cards will be written on a third-grade level so that it is easily accessible for individuals of many different abilities. The game board will feature a winding road with different stops along the way that require more advance participation. Examples include the Sadness Swamp. At this stop (marked by shoeprints and a color coordinated space), the participant will draw a card from the Sadness Swamp set (color coded, as well). These cards include several activities including emotional awareness activities (i.e., What does sadness look like? Show us! or How does sadness feel? How can you tell when you're sad?). coping skill activities (i.e., Talk about a time you were at a five of sadness and used a coping skill!), and identification on The Incredible 5-Point Scale (Talk about a time a friend was very sad. What number were they at? How could you tell? or Talk about a time you were very sad. What number were you at? How could you tell?) such as the Sadness Swamp which will require that the person that lands on it is expected to talk about a time they felt sad and how they made themselves feel better in order to escape. Images of the game and game pieces can be seen in Appendices F-H.

This design promises to meet the design criteria set out by Collins, et al. in their 2011 The multimedia approach allows for curiosity on the tactile level while the relatively complex (but understandable) design provides mental curiosity. Further, the goals are clear, and the game requires personal investment from the players due to the need to use their own emotional experiences to complete the game. The game also allows for adequate control and meaningful cause and effect. The participation of family members allows for continual support and meaningful feedback during the game. This is also encouraged by the therapeutic aspect of the game.

Rules

The board game will require the participants to roll one die in order to see how far they should move their meeple. Once they move their meeple, they will spin the spinner to see which card to draw. They will then read the card and answer appropriately. If they cannot or do not answer the question correctly, they must go back the same number of spaces and try again at their next turn. The professional or caregiver should give an appropriate response for the card as an example for the participant. If the participant lands on a special section (such as the Sadness Swamp), they will be required to discuss a personal experience with the emotion on the space and how they or another person managed it in order to "escape." Examples of each of the card types can be found in the Incredible 5-Point Scale Game Design section above.

Expansion Packs

The Incredible 5-Point Scale has been expanded to work with a variety of different clinical issues. There will be an expansion pack for non-readers which does not require language acquisition. Additionally, there will be a pack for A 5 is Against

the Law, specific disorders (Anxiety and Depression), and behavior-based packs (can be used for being too loud or talking too much or whatever the clinician is attempting to target). These will also come with covers for the special locations that will change them slightly.

Estimated Cost and Materials

According to Cartamundi (2020) my total cost for 1,000 games would be approximately $7,168.77. This would make each game cost approximately $7.17. The typical recommendation is a 5 times markup on price for each game. Therefore, the game would cost approximately $36 each. This seems to be a reasonable price based on the pricing of other therapeutic games that range from $17 to $56 (Bridges, 1990; Franklin Learning Systems, 2006).

Current Research: Member Checking

The Incredible 5-Point Scale Board Game was presented at the ARC of Kentucky conference in February 2020 for the purposes of member checking. The ARC is an organization serving people with intellectual and developmental disabilities of all ages, founded in the 1950s by families of people with developmental disabilities. Member checking, also known as informant feedback or respondent validation, is traditionally used to check the trustworthiness and accuracy of qualitative research (Birt, Scott, Cavers et al, 2016), In this case feedback was sought from stakeholders to assess the appeal and reasonableness of this product idea and to seek feedback for improving the concepts addressed.   At this conference, the idea was discussed with individuals that will, ideally, be using this product. The audience consisted of mental health professionals, direct support professionals, teachers, and caregivers of individuals

with intellectual disabilities and autism spectrum disorders. The audience noted that the product would be especially useful for individuals that are nonverbal and they enjoyed the idea of having fun while teaching the topic.

Game Development Through Research

Scale Development Model

Clark and Watson (1995) created a six-step model for test construction that will be adapted for the development of this therapeutic game. The steps include conceptualization, literature review, creation, structural validity, initial data collection, and psychometric evaluation. Within the current paper, the author has completed the first three steps. Additionally, the structural validity of the game will not be studied. Rather, the outcomes of the use of the game (such as changes in EC, ER, EA, coping skills, behavior reduction, and family involvement) and the palatability for the caregivers, professionals, and children will be measured as a form of external validity and therapeutic efficacy.

Pilot Testing for Palpability and Therapeutic Usefulness

It is proposed that a pilot test period be implemented in order to adjust the board game based on the feedback from the target populations. This will be accomplished by allowing several psychologists and the Eastern Kentucky University Psychology Clinic access to the board game to use with clients as needed. The professional will be given an opinion form created by the author with additional forms that can be completed by the caregiver and client (see Appendices B-E) that is designed to gather both quantitative and qualitative data that can be monitored and measured. The board game,

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rules, or other aspects will be changed based on this feedback in order to have the best product for mass production.

Future Research: Outcomes and Efficacy

A future study to examine the efficacy of the board game will be implemented. The study will be a pre/post design along with a follow up to see if the changes brought about by the aspects of the game and treatment are long lasting. The treatment will consist of once weekly meetings with the researcher where the game and scale are taught to the client and the parent/caregiver. Further, a copy of the game will be sent home with the family in order for them to practice as a family once a week. This will continue for 6 weeks. The measures will take place before treatment, after treatment, and at the 3-month follow up point.

Measures. The study will examine EA, EC, ER, use of coping strategies, family involvement, and general behavior. General behavioral ratings will be taken from parents/caregivers, teachers, and self (if the child is within the age range). The Behavior Assessment System for Children, Third Edition (BASC-3; Reynolds & Kamphaus, 2015) will be used to measure this variable. A caregiver report will be used to assess the use of coping skills at each time which includes a rating from 1-5 (1=never uses, 5=always uses). ER and Awareness will be measured by the Emotion Regulation Index for Children and Adolescents (MacDermott, Gullone, Allen, King, & Tonge, 2010). EC will be measured using the Good Emotional Self-Control Scale (Wills, et al., 2013). Family involvement will be measured by observation of attendance to sessions and fidelity of use of the game and scale at home based on caregiver self-report.

Intended Outcomes. It is believed that there will be a reduction in negative behaviors related to increases in EC, Regulation, and Awareness along with increases in coping strategy use. It is expected that family involvement in treatment will impact how the treatment outcomes by increasing positive change when involvement is high and decreasing the amount of positive change when involvement is low.

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    UMzTzVHOTNMWlU5NCZlbmNyeXB0ZWRBZElkPUEwODg4MTg2MlFC

    MElLTllRQkw3VSZ3aWRnZXROYW1lPXNwX2F0ZiZhY3Rpb249Y2xpY2t

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APPENDICES

Appendix A: Permissions from Original Creator

Appendix A: Permissions from Original Creator

Re: Potential Idea Inquiry

Kari Dunn Buron <kdunn434@aol.com>
Thu 12/6/2018 12:56 PM
To: Maupin, Brooke A. <brooke_maupin4@mymail.eku.edu>

Dear Brooke,

Thank you for appreciating my work. I think a game to teach someone how to use the scale is a wonderful idea. I would be happy to advise you as you develop such an instrument. I am terribly busy the next few months but I am able to answer questions or review content via e-mail. Other than being positive in tone, the game would simply need to reference the original book.

I look forward to hearing more about your idea.
Kari

Kari Dunn Buron
Autism Education Specialist
www.5pointscale.com

-----Original Message-----
From: Maupin, Brooke A. <brooke_maupin4@mymail.eku.edu>
To: contactkari@5pointscale.com <contactkari@5pointscale.com>
Sent: Wed, Dec 5, 2018 10:43 am
Subject: Potential Idea Inquiry

Hello,
My name is Brooke Maupin. I'm a doctoral graduate student in clinical psychology at Eastern Kentucky University. I was recently presenting on anxiety in Autism Spectrum Disorder for the Autism Society of the Bluegrass where a parent inspired an idea.

I learned about your incredible 5 Point Scale in a class and have found it immensely helpful with many of my psychotherapy clients (even adults!).

We are required to complete a doctoral specialty project as a capstone in our doctoral program. I have an idea for a game based on the scale to help children and parents learn about and practice using the scale.

Would you be willing to discuss this with me? I am emailing to seek your mentorship and to ask if you might be willing to grant permission for me to use the scale in this way for my project.

Thank you for your time,

Brooke Maupin, M.S.

Clinical Psychology Doctoral Student

Appendix B: Professional Questionnaire for Pilot Testing

Professional Questionnaire

For each question, rate how much you agree with the statement.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
The Incredible 5-Point Scale board game is fun.	☐	☐	☐	☐	☐
The Incredible 5-Point Scale board game is useful in session.	☐	☐	☐	☐	☐
My client understood rules of The Incredible 5-Point Scale board game.	☐	☐	☐	☐	☐
My client understood the topics in The Incredible 5-Point Scale board game	☐	☐	☐	☐	☐
The Incredible 5-Point Scale board game is easy to use.	☐	☐	☐	☐	☐
The Incredible 5-Point Scale board game's rules are easy to understand.	☐	☐	☐	☐	☐

What did you like about The Incredible 5-Point Scale board game?

What would you change about The Incredible 5-Point Scale board game?

Appendix C: Caregiver Questionnaire for Pilot Testing

Appendix C: Caregiver Questionnaire for Pilot Testing
Caregiver Questionnaire

For each question, rate how much you agree with the statement.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
The Incredible 5-Point Scale board game is fun.	□	□	□	□	□
The Incredible 5-Point Scale board game is useful at home.	□	□	□	□	□
My child understood rules of The Incredible 5-Point Scale board game.	□	□	□	□	□
My child understood the topics in The Incredible 5-Point Scale board game	□	□	□	□	□
The Incredible 5-Point Scale board game is easy to use.	□	□	□	□	□
The Incredible 5-Point Scale board game's rules are easy to understand.	□	□	□	□	□

What did you like about The Incredible 5-Point Scale board game?

What would you change about The Incredible 5-Point Scale board game?

Appendix D: Client (ages 10 and older) Questionnaire for Pilot Testing

Appendix D: Client (ages 10 and older) Questionnaire for Pilot Testing
Client Questionnaire (10 years of age and older)

For each question, rate how much you agree with the statement.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
The Incredible 5-Point Scale board game is fun.	□	□	□	□	□
The Incredible 5-Point Scale board game is useful in session.	□	□	□	□	□
I understood the rules of The Incredible 5-Point Scale board game.	□	□	□	□	□
I understood the topics in The Incredible 5-Point Scale board game	□	□	□	□	□
The Incredible 5-Point Scale board game is easy to use.	□	□	□	□	□
The Incredible 5-Point Scale board game's rules are easy to understand.	□	□	□	□	□

What did you like about The Incredible 5-Point Scale board game?

What would you change about The Incredible 5-Point Scale board game?

Appendix E: Client (ages 9 and younger) Questionnaire for Pilot Testing

For each question, circle the face that matches how you feel.
The Incredible 5-Point Scale board game is fun.

I understood the rules of The Incredible 5-Point Scale board game.

I understood the things we talked about in The Incredible 5-Point Scale board game.
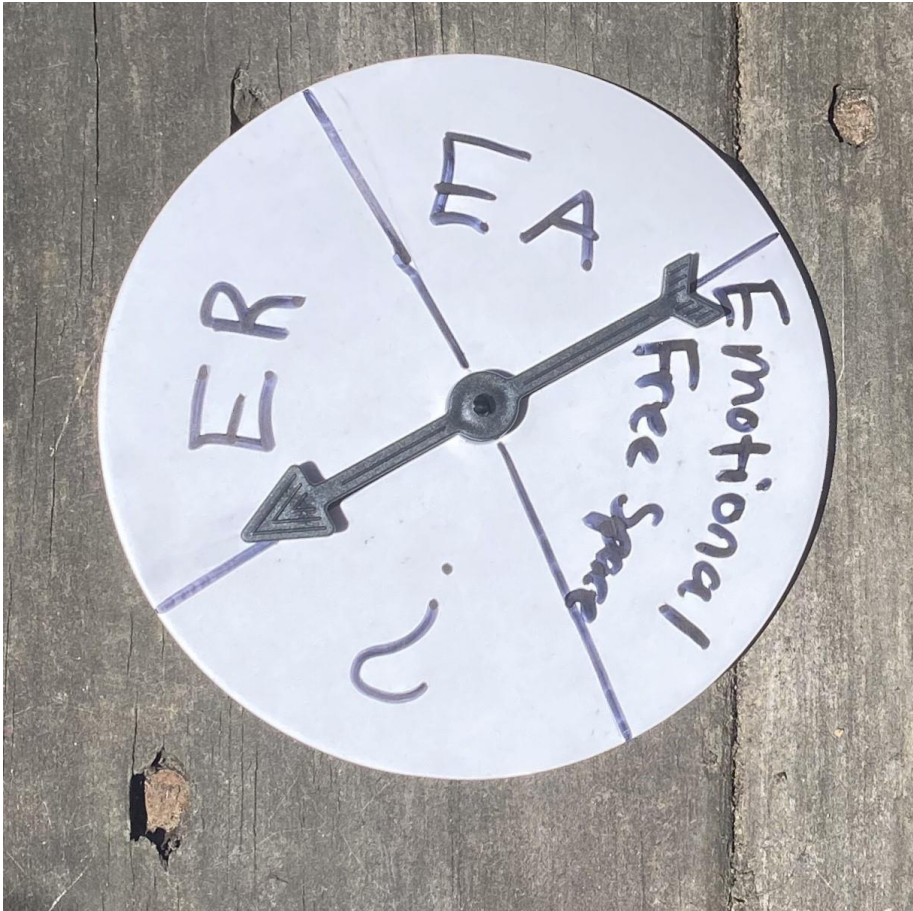
The Incredible 5-Point Scale board game is easy to play.

I liked…

I didn't like…

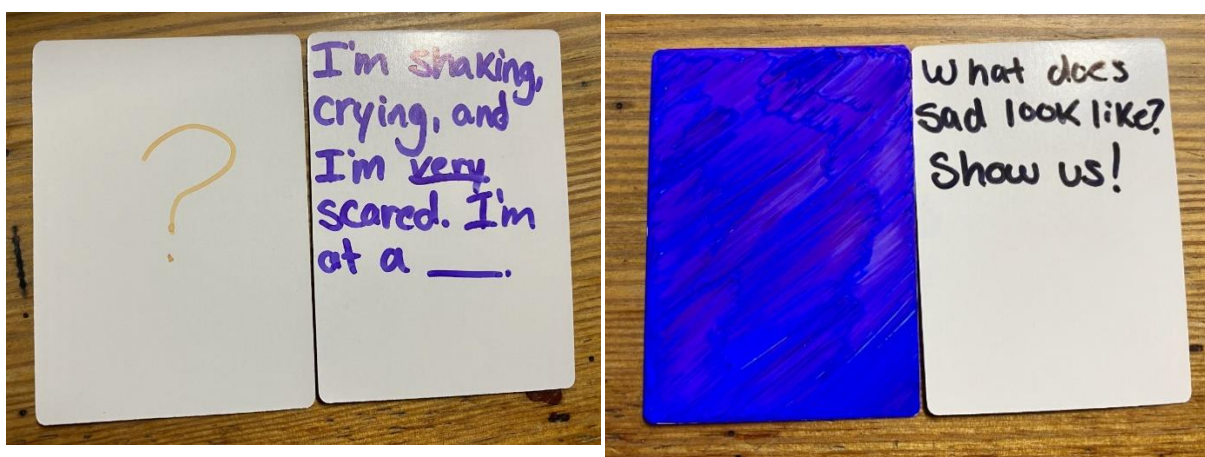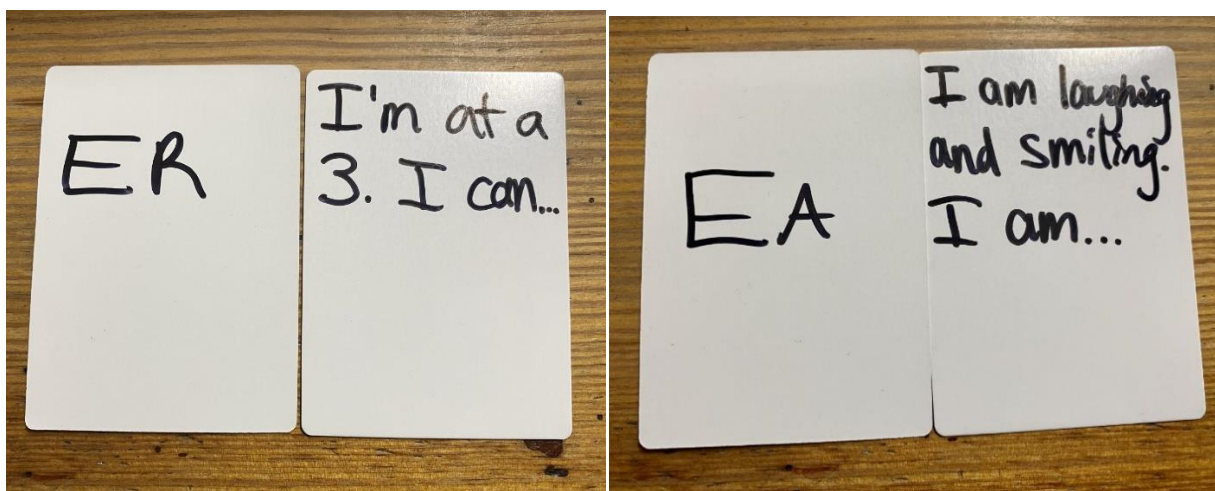Appendix F: Photos of Spinner and Game Pieces

Appendix F: Photos of Spinner and Game Pieces

Appendix G: Card Examples

Appendix G: Card Examples

ER — I'm at a 3. I can...

EA — I am laughing and smiling. I am...

? — I'm shaking, crying, and I'm very scared. I'm at a ___.

What does sad look like? Show us!

Appendix H: Board Game Prototype

Appendix H: Board Game Prototype

Appendix I: Photo of Box Design