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How the implementation of two resiliency scales, the CD-RISC and the RSCA, can help in the evaluation of child and adolescent maltreatment in Ecuador

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Resumen

Muchos niños y adolescentes sufren de maltrato en Ecuador. La violencia física no es contemplada como delito en la ley ecuatoriana y muchos casos de abuso sexual son presentes alrededor del país. Ecuador también cuenta con un problema de poco financiamiento en el área de salud mental. Dado la poca regulación de los trabajadores en esta área no existe una predicción positiva en las intervenciones y evaluaciones públicas en cuanto el maltrato sufrido por niños y adolescentes. La implementación de dos escalas de resiliencia, la escala de resiliencia Connor-Davidson (CD-RISC) y la escala de resiliencia para niños y adolescentes (RSCA), ayudaran a los trabajadores de salud mental en el sector público a evaluar maltrato y posibles intervenciones para estos casos en el país. La resiliencia es descrita como una capacidad de superar problemas, la cual ha demostrado una correlación positiva con la adaptación positiva frente a estresores significativos. El uso de las escalas de resiliencia ayudara a mostrar que niños y adolescentes tienen más necesidad y urgencia de apoyo psicológico e intervención tras casos de maltrato. Esto ayudara a crear un sistema basado en urgencia de tratamiento, superando el sistema actual de él que primero que llega, primero se atiende. Las escalas de resiliencia también ayudaran en evaluar las áreas en las cuales el paciente tiene menor o mayores áreas de protección, lo cual es útil para los trabajadores de salud mental que buscan una intervención y tratamiento psicológico. La administración de prueba al principio de tratamiento y al final del mismo también es de gran ayuda ya que puede mostrar la efectividad de la intervención. Esto ayudara de gran manera en la evaluación de los trabajadores públicos de salud mental en un país que actualmente no tiene una entidad que controle o regule a estos profesionales.

Palabras Clave: resiliencia, niños, adolescentes, Escala de resiliencia de Connor Davidson, escala de resiliencia para niños y adolescentes, maltrato, Ecuador.

Abstract

Many children and adolescents suffer from maltreatment in Ecuador. Physical violence is not punishable by law and many sexual abuse is present throughout the country. Ecuador also has a severely under-funded mental health program, due to the lack of regulation of mental health practitioners in this country there is not a positive prediction regarding public assessment and therapeutic intervention regarding child and adolescent maltreatment. The implementation of two resiliency scales, The Connor-Davidson Resiliency Scale (CD-RISC) and the Resiliency Scale for Children and Adolescents (RSCA), will help the public mental health sector in the assessment and possible intervention of child and adolescent maltreatment in this country. Resiliency is described as a bounce back mechanism that has shown to positively correlate with positive adaptation in face of a significant stressor. The use of resiliency scores will help in showing which children or adolescents have a more urgent need of psychological treatment and intervention following maltreatment. This will help in creating an urgency of treatment rather than the first come first served approach that is currently applied to these types of cases. Both the CD-RISC and the RSCA will also help in evaluating the areas in which the patient is lacking protective factors, which is useful for the mental health practitioners when considering a therapeutic treatment and intervention. A test-retest prior and post therapeutic intervention in these type of cases can also help in showing the effectiveness of the intervention done, which will greatly help in the evaluation of mental health practitioners in this country that currently has no entity that controls or regulates these professionals.

Key words: resilience, Connor Davidson Resiliency Scale, Resiliency Scale for Children and Adolescents, children, adolescents, maltreatment, Ecuador.

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Introduction

Resilience is considered one of the newer topics in today´s literature of Psychology. Although its introduction and definition have been somewhat unclear, its potential uses can be of great importance to healthcare and social workers in order to accurately recognize the type of intervention needed to foment positive adaptation in the patient. Having been introduced in the 1980´s with work done by Emmy Wenner and Smith on children who grew up in Hawaii, with alcoholic parents (Werner, & Smith, 1982). Wenner and Smith, in this study, noticed how the majority of the kids with adverse family situations, alcoholism and lack of money, grew up to show maladaptive behaviors, while others did not. This led Wenner and Smith to call the children who grew up without maladaptive behavior, resilient. Since this article written by Wenner and Smith, this new term became the upfront in the literary conversation of psychology, with studies building upon the term with theoretical and empirical literature of the subject in hopes of constructing a capable measurement model that could in some way assess the different factors of resiliency (Bolton, 2013). There was also a varying amount of literature that wanted to generalize the discovery found by Wenner to other cohorts of the mental health patient's population.

Resilience in the present literature is usually associated with the ability of a person to recover from a hardship or adverse conditions (Bolton, 2013). Resilience is often referred to as a bounce-back mechanism allowing a person to bounce-back from an important hardship, which can include a one-time stressor such as a traumatic event, or a prolonged exposure to a stressor like child maltreatment (Poole, Dobson, & Pusch, 2017). Adversity and hardship can ultimately come from

many places, however most of the literature done with resilience has come from mistreated children and army veterans suffering from PTSD (Kim, H., Kim S. A., & Kong, 2017) (Poole, Dobson, & Pusch, 2017). Resilience study has been overall criticized for not having any empirical construction. However, it is evident that the research does exist and it shows that resilience plays a significant role in positive adaption in patients as studies done in 2017 by Kim, Poole and Long have shown.

In order to try and establish a definition for resiliency, Katheryn Connor and Jonathan Davidson in 2003 developed a resilience scale named the Connor-Davidson Resilience Scale (CD-RISC) that yielded a factor analysis of five different factors (Connor, & Davidson 2003). The first factor encompasses the notion of personal competence, high standards and tenacity. The second factor corresponds to trust in one´s instinct as well as tolerance of negative affect and strengthening effects of stress. The third factor is related to the positive acceptance of change as well as secures relationships. Factor four is related to control and factor five to spiritual influences (Connor, & Davidson 2003).

It has been shown throughout the literature that resilience has had an important impact on the rate of recovery and positive adaptation of not only childhood trauma or maltreatment and PTSD (Kim, H., Kim S. A., & Kong, 2017; Poole, Dobson, & Pusch, 2017), but also on alcohol use (Long et al., 2017). Resilience has also been linked with morphological changes in brain measures in the areas of subparental sulcus, intraparental sulcus, anterior and midcingulate cortex and subgenual cingulate cortex as well as the amygdala (Gupta, Love, Kilpatrick, Labus, Bhatt, Chang, Tillisch, Naliboff, & Mayer, 2017). Overall resilience has been linked with a change of the brain morphology of regions involved in cognitive and affective processes related to cortico-limbic inhibition, suggesting

protection against possible mood swings and disorders (Gupta et al., 2017). It has also been found that resilience correlates positively with positive affect and negatively with negative affect, suggesting once again that resilience could play an important role for people suffering from mood disorders such as depression or anxiety (Gupta et al., 2017). It is therefore not any surprise the importance of resilience in a positive prognostic for people suffering from mental illnesses involving mood.

Given all the positive research linking resilience to higher recovery rates across mental health patients and the development of positive adaptations to psychological trauma, it is no wonder the emphasis on this subject. It is therefore important to study resilience and its factors to be able use them in such a way that it will be easy to promote and predict positive recovery adaptation in an advantageous way for mental health professionals and patients.

1.2 Problem Statement.

Ecuador has a population that is made up of 37% children (Humanium, 2018). Many policies regarding the protection of children have been legally established, but still there is much left to be desired. Violence towards children is still a very real situation, with a country that has a high poverty rate, many kids live in a precarious state. It is estimated that around 40.7% of children and adolescents in 2014 were living in poverty, while 15.1% of them were reported as living in extreme poverty (Humanium, 2018). It is therefore not surprising that due to these difficult conditions many of the child's needs are not fully met. Physical violence as well as sexual violence is also very common in Ecuador, with a

constitution that has not effectively penalized these practices, many families or schools still use physical violence as a form of punishment. Sexual abuse is also an everlasting problem with children in Ecuador, teenage pregnancies in this country is one of the highest in the region, and lack of proper education and support system often force abused victims to be silent.

The lack of economic resources often alienates these children from receiving therapeutic mental health interventions with proper treatments. Even when government-run interventions do take place, these are often very under-founded and over demanded. There is still no governmental mental health framework in this country and the public mental health practitioners resort to a "first come first served" approach. The public mental health practitioners are not ruled by one type of assessment and since there is no psychological regulator, practices and effectiveness can vary greatly, with many interventions being potentially harmful rather than beneficial. It is therefore why it is proposed to use resilience-based interventions administered by the governmental mental health professionals for children and adolescents who have faced some type of maltreatment. It is hypothesized that children and adolescents with higher levels of resilience scores in this country will be more likely to have less mental health consequences in the future than children and adolescents with lower levels of resilience scores.

Literature Review

Children and adolescents are a high-risk population in Ecuador and South America. Maltreatment to these groups are linked with a vast numerous of adverse outcomes for their life. Child maltreatment includes sexual abuse, physical abuse, emotional abuse and neglect (Afifi, & MacMillan, 2011). Child maltreatment has been shown to have devastating consequences for the individual, contributing to higher mortality and morbidity rates as well as poor academic performances, diverse mental and physical health problems, higher rates of aggression, crime, use of violence and suicidal behavior (Afifi, & MacMillan, 2011). Overall child maltreatment is highly linked with a decreased quality of life (Afifi, & MacMillan, 2011). In the review done by Afifi and MacMillan the authors provide a good basis on how resiliency should be measured in children following maltreatment. This study focuses mainly on the importance of assessment in more than one domain of functioning, meaning cognitive –academic, emotional, social, physical and/or behavioral as well different levels of domain, meaning internalizing and externalizing symptoms, in order to measure resiliency in a complete way. Afifi and MacMillan also reviewed the different protective factors that associate strongly with resiliency, and found that across all studies stable family relationships as well as having supportive familiar relationships were the most consistent association with resiliency across all the studies. Individual factors such as personality traits also showed some association with resiliency, although intelligence showed no relatedness to resiliency after child maltreatment. Information about these protective factors also helps the task of understanding resiliency. Good therapeutic intervention which can help promote these protective

factors could help in a big way the overall development of a child after he/she has suffered from maltreatment. This is why it's important to administer help to these affected and vulnerable groups in an effective way. In Ecuador, the situation of metal health is very critical. According to the ministry of public health in this country by 2014 there were 174 clinical psychologists distributed in 23 provinces, with The Galapagos Island not counting on any psychologists available for attention in any of the different islands (Pérez et al., 2014). Reportedly by this time, there were about 9.88 beds for each 100.00 habitants in the 4 psychiatric hospitals in the country, of which three are privately owned (Pérez et al., 2014). The same ministry of public health in Ecuador admits that they are severely understaffed, with many of their workers being under-prepared and with lack of resources (Pérez et al., 2014). In this study it was found that the most common mental health problem for children and adolescents was depression, representing 19% of the population, and problems related with school abilities representing 14%. It was shown that the third most common problem was behavioral, representing 13%, amongst kids and adolescents (Pérez et al., 2014). However, privately owned mediums have found other data. El Telégrafo, a respected Ecuadorian journal found that by 2014 there was an increase in child maltreatment from 35% to 44% among the child and adolescent population in Ecuador ("El maltrato a los menores", 2014). The lack of official data is troubling since one cannot really see the full scope on how this problem affects the Ecuadorian population; however, a string of sexual abuse by professors in public schools during this autumn of 2017, showed the public just how real and devastating child abuse is, and forced the government to react to the new public expectations. However, lack of resources and solid plan structures have been

leaving many children and adolescents without any type of mental help. In 2012 the annual budget destined for public health was of 1.881.061.107 dollars, of which only of 0.44% of those were administered to mental health (Pérez et al., 2014). There is clearly a huge lack of support for people suffering from mental health in this country, with children and adolescents being the most vulnerable demographic.

2.1 Development of Resiliency

Resiliency through time has had an interesting development. First proposed in 1980s by Wenner in a study done with 698 children born in 1955 in the island of Kauai on Hawaii, who had alcoholic parents, the first wave of resiliency emerged (Werner, & Smith, 1982). By this time, researchers moved from looking at the pathology and development of disease, to looking at why and how individuals managed to thrive in the face of adverse conditions (Bolton, 2013). This particular shift led mental health professionals to investigate the healthy psychological development and therefore come up with resiliency. In the Kauai study, a team of mental health and social workers monitored the development of children born on this island in six different stages in their life. These were the ages of 1, 2, 10, 18, 32 and 40 years old. Of these participants, 210 were born and raised in poverty and had experienced some type of natal complications with families that were afflicted by divorce, or parental psychopathology (Werner, 2005). Two thirds of the children that were exposed to such risk factors by age 2, would have developed behavioral problems by age 10 and would have some sort of delinquency and or mental health problems by age 18 (Werner, 2005). However, the remaining third

of these children grew up to become competent adults. These participants succeeded in a varying number of factors: these children showed success in school, had a good social and home life and didn't have any problems with the law. These participants by the time that were 40, had fewer divorce, mortality and chronic health problem rates and none of them were unemployed. This led to Werner and Smith proposing a varying of factors that were protective against the adverse conditions in youth. These factors were social competence, problem solving skills, and a sense of purpose (Werner 1993; Werner,1995). The findings and implications presented by such research led to a new and exciting literary shift in the discipline. Work done by Rutter (Rutter, 1979; Rutter, 1985), in London, with homeless children, as well as Garmezy (1991), with children who were raised in adverse conditions associated with poverty, further helped to evidence the existence of resilience and its diverse components.

As we have discussed before, it is important to understand that resilience is not static and that people that have suffered child maltreatment may be considered resilient in some areas of functioning but fail to meet criteria for resiliency in other areas of functioning (Afifi, & MacMillan, 2011). However, it is clear throughout the literature that resilience does provide the person with more positive outcomes for coping with stress throughout lifetime. In a study done by Kim H. in conscripted marines in the Republic of Korea, Kim found that childhood neglect and abuse accounted for higher levels of post-traumatic stress symptoms which were mediated by higher levels of resilience in the CD-RISC scale (Kim, H., Kim S. A., & Kong, 2017). In this cross-sectional study 169 Korean conscripts were administered the Childhood Trauma Questionnaire-Short Form in order to measure childhood maltreatment. These conscripts also took the Impact of Event

Scale- Revised in order to measure PTSS and the Connor –Davidson Resiliency Scale to measure resiliency. What was found throughout this study is that Childhood abuse and PTSS during military service were significantly associated but not mediated by resilience. However, resiliency did mediate the relationship between PTSS during military service and childhood neglect. In this study Kim concluded that it is important to assess childhood maltreatment and resilience in order to identify conscripts with an increased risk for PTSS during military service.

In another study done by Poole and the University of Calgary, a group of 4006 adults were administered the Adverse Childhood Experiences Questionnaire, which is a retrospective measure of childhood adversity, the Patient health questionnaire-9, which serves as an identification of the presence and severity of major symptoms of depressive disorder, and the Connor Davidson Resiliency Scale, which intends to measure resilience (Poole, Dobson, & Pusch, 2017). The results provided by a regression analysis proved that both the Adverse childhood experiences (ACEs) and the resiliency score independently predicted symptoms of depression (Poole, Dobson, & Pusch, 2017). Even more interesting resilience was a successful mediator between depression and ACEs, since people with lower resiliency seemed to have a higher association between their past ACEs and depression; relative to people with higher resiliency (Poole, Dobson, & Pusch, 2017).

Resilience does not only provide a better ability for mental health disorders, but it also proves its effect on morphological brain measures. The study done by Gupta et al proves that resiliency has some effect on morphological brain measures (Gupta et al., 2017). In this study 48 subjects were administered the Connor and Davidson Resiliency Scale as well as had to undergo completed structural MRI

scans. The results showed significant associations between gray matter changes in the subpariental sulcus, intrapariental sulcus, the amygdala, anterior mid cingulate cortex and the subgenual cingulate cortex and the resilience scored by the subjects (Gupta et al., 2017). These regions of the brain morphology were involved in cognitive and affective processes in charge of cortico-limbic inhibition (Gupta et al., 2017). Lymbic-cortical dysregulation is a potential catastrophe for a patient, since it is related to depression (Mayberg, 1997), bipolar disorder and schizophrenia (Morris et al., 2012). This is the reason why Gupta concluded that resilience may be linked in a very important way to a biomarker of vulnerability to disease. This study shows that resiliency is not merely a construct of behavior but also has neurological importance for the treatment of patients and population as a whole.

2.2 Resiliency measurements.

Although there are different instruments that measure resiliency, a study done by Smith-Osborne and Whitehill Bolton in 2013 showed that ten measurement tests met the requirements to be located amongst the literature of acceptable instruments of measurement (Smith, & Bolton, 2013). Out of those ten, Smith and Bolton did extensive assessment which intended to further aid in the information of resiliency as well as help practitioners which have worked with populations that have faced adversity (Smith, & Bolton, 2013). On these results it was analyzed which test would best be suited for the implementation in the Ecuadorian mental health care system, and due to availability in language as well as overall effectiveness it was decided that the best tests for integration were the Connor Davidson Resiliency Scale (CD-RISC) to use exclusively on the adolescent

and young-adult population and the Resiliency Scale for Children and Adolescents (RSCA) to be used on children and adolescents (Prince-Embury, 2008).

The inclusion criteria for resiliency in the review of measurements done by Smith and Bolton (2013) was defined as a process of personal, interpersonal, and contextual protective mechanisms which in turn result in irregular positive outcome in the face of adversity, including a range of outcomes like health, educational achievement and vocational success. These irregular positive outcomes were defined as those shown to be better than expected from the empirical literature done given the gravity of the adversity experienced. This definition of resiliency aligned with what is proposed on today's literature of resiliency. All the instruments had quality indicators of a sufficient sample size and type, with appropriate validation criteria as well as statistical methods. The instruments analyzed by Smith and Bolton were as follows:

The Resilience Scale for Adolescents (READ) is a 28-item scale, which is rated on a 5 point Likert scale. Five factors are shown which are social competence, personal competence, family cohesion, social resources and structured style. The READ was validated on 425 adolescents between ages of 13-15 in Norway. Due to its currently small age size, it was not preferred for this proposal.

The Adolescent Resiliency Scale (ARS) is a measurement designed for college-age youth, which consists of a 5-point Likert 21 item scale. This measurement consists of three factors which are emotional regulation, positive future orientation and novelty seeking. This test was validated on a Japanese population of 207 young adults whose ages ranged from 19 to 23. This test was not picked for this proposal due to the age group of its intention.

The Resilience Skills and Abilities Scale (RSAS) is a test that is made up of 35 items which are rated on a 5-point Likert scale. The test has three subscales: Active Skill Acquisition, Future Orientation, and Independence/Risk taking. This scale was validated through four different studies with high school students. This test, due to its lack of measurement of interpersonal factors, was not chosen for this proposal.

The Resiliency Scale for Children and Adolescents (RSCA) is the only test done which is peer-reviewed and that can adequately measure resilience in children under the age of 13 (Prince-Embury, 2008). The Resilience Scale for Children and Adolescents (RSCA) is a test that consists of three scales that assess resiliency in children and adolescents alike. The scales are divided as sense of mastery, sense of relatedness, and emotional reactivity. The sense of mastery is a 20-item scale which is rated on a 5-point Likert scale with three sub areas defined as self-efficacy, adaptability and optimism. The Sense of Relatedness is made up of 24 items rated on a 5 point Likert scale which incorporate comfort and trust in others, capacity to tolerate differences in others and perceived access to support by others. The emotional Reactivity scale is made up of a 20 item 5 point Likert scale. This scale encompasses sensitivity/threshold for and intensity reaction, impairment while upset and length of recovery time. This test was validated through a normative sample of 226 children aged 9 to 11 years, 224 adolescents aged 12 to 14, 200 adolescents between 15 to 18 years old, as well as a clinical sample of 169 adolescents between ages 15 to 18 years old (n= 819). Unlike other resiliency tests, the RSCA is one of the only tests that measures resiliency as a response to a temporary adversity faced by a child, such as child maltreatment (Prince-Embury, 2008). It is important to note that the RSCA is not a valid

predictor of resiliency in a long term, but instead should be administered after a specific stressor or traumatic event. Due to controversy in identifying resilience in a child, we must look at the research done by Walsh, Dawson and Mattingly in 2010 regarding resiliency. In this paper, the authors have noted that resilience in children that have suffered maltreatment is present only when children show a normal range of competence across several domains of functioning. There must be present some behavior competence, meaning adaptive and positive patterns of behavior towards others. The child must also prove to have emotional competence, which is directly related to mental health as well as social competence, meaning peer relationships maintained by the child. The child must also prove some sort of academic achievement, meaning, school performance. It is important to note that for adults, other types of requirements are emphasized, although the absence of a disorder may be a somewhat strong factor to conclude resiliency, it is not a fully adequate when considering children after maltreatment (Afifi, & MacMillan, 2011). Throughout this paper we will emphasize the distinction done by Walsh (Walsh, Dawson, & Mattingly, 2010) and will propose to measure resiliency in children suffered maltreatment as competence in the diverse disciplines, which is why the RASC has been chosen as the preferred test in these cases, since the three-factor assessment of this gives us an overview of the function of the child in different areas. The versatility of ages in which it can be administered also makes this test fit well with the proposed application of resiliency in Ecuador. It must be noted that a potential problem by choosing this test over others is that it might not be great in predicting resiliency based on prolonged exposure to maltreatment, but rather focused on adversity after one particular stressor. This is why it is important for the mental health practitioners to know when to apply this assessment over the

CD-RISC, which in turn is great in predicting resilience in prolonged exposure to adversity and stressors.

The Resilience Scale (RS) consists of a 25- item scale rated on a 7-point Likert scale which measure two factors, personal competence, as well as acceptance of self and life. The RS was validated on 810 adults between ages 53 and 95. Although its validation was done on older women, the RS has been used on many studies with individuals of all ages and ethnicity. A 14-item version of this test was also developed and validated. This particular test was not chosen for this proposal due to its limits in scale of two factor measurement.

The Baruth Protective Factors Inventory (BPFI) was validated on 98 undergraduate students taking a Human Development course between the ages 19 to 74. It consists of a 16 item 5-point Likert scale which addresses four different factors. These factors are a supportive environment, compensating experiences, fewer stressors and adaptable personality. The scale was modified to generate a family scale but does not have further validation studies to date and should be evaluated on a larger sample prior its use in the assessment for protective factors contributing to the presence of resilience. This inventory was not picked to be used in this proposal because of its small sample size of validation.

The Resilience in Midlife Scale (RIM) consists of 25 items which are rated on a 5-point Likert scale. These include four factors which are family and social networks, self-efficacy, internal locus of control, coping and adaptation and preservation. The RIM was validated on 130 adults between the ages of 35 and 60 and is currently the only peer reviewed instrument which focuses on midlife in the literature. This test was not picked for this proposal due to the target audience for which this test was designed for.

The Resilience Scale for Adults (RSA) consists of 33 items that address six different factors. The factors which it addresses are positive perception of future, structured style, social resources, positive perception of self, social competence and family cohesion. It was validated on a Scandinavian population of people between ages of 18 to 75. This test was not picked for this proposal due to the target audience for which this test was designed for.

The Brief Resilient Coping Scale (BRCS) is a brief test that is aimed to see one´s ability to cope with stress. There are four items on this test with a 5-point Likert scale which measure Adaptive Coping. This test was not picked for this proposal because of its one level measurement.

The Connor Davidson Resiliency Scale (CD-RISC) was chosen since it is test with most literature behind it, as well as the availability of the test in Spanish. This is a test that is comprised of 25 items in which each of them is rated on a 0-4 point scale. A greater score showing greater resiliency as a measure of stress coping ability (Connor, & Davidson, 2003). This test has been validated by different group samples: the community sample, primary care outpatients, general psychiatric outpatients, clinical trial of generalized anxiety disorder, and two clinical trials of PTSD patients were administered this test for validation and reliability purposes. The test of Connor and Davidson is constructed of five important factors which encompass resiliency, these are: personal competence, high standards and tenacity; positive acceptance of change and secure relationships; spiritual influences; trust in one´s instinct, tolerance of negative effects, and strengthening effects; and control (Connor, & Davidson, 2003). The CD-RISC has also shown that health influences resilience and that resilience can improve through treatment when psychiatric disorders constitute the ongoing context of adversity. The CD-

RISC has been the go-to test when trying to measure resilience and although its intention was to measure resiliency in adults, reliability of the test done for other cohorts have also proven to work amongst adolescents. In a study done by Xiao-nan Yu a total of 2914 Chinese adolescents took the resiliency scale after an earthquake in their city, the results after a battery of test showed consistency of the CD-RISC amongst teenagers which demonstrated a positive correlation with positive support and negative correlations with depression and anxiety (Yu et al., 2011). This test demonstrates that the CD-RISC was reliable and valid in measuring resilience for young adults in this country. A version in Spanish has also been done and successfully applied in Spain with non-professional caregivers of elderly (Crespo, Fernández-Lansac, & Soberón, 2014). In this study it was found that 4 items decreased the reliability of the test and therefore were removed. The 21 item revised test showed good reliability a=.90 showing significant correlations with self-esteem as well as perceived self-efficacy as a caregiver. More importantly it showed significant inverse correlations with depression, anxiety and caregiver's burden (Crespo, Fernández-Lansac, & Soberón, 2014). Even though further investigation should be done with this test and the ability to generalize it to the adult and teenage population in Spain, the fact that it is already translated will benefit the implementation of this version of the CD-RISC in Ecuador, after the proper validation of the test in this population.

It is important to note that the authors Smith and Bolton suggest that resilience measurements should be administered as a way to measure the outcomes of social work prevention and treatment interventions. Resilience and its assessment can also be particularly helpful to help identify the strengths for support and enhancement in the diverse intervention plans. There has been

empirical evidence that suggests that by identifying and analyzing the protective ad risk factors found within resiliency can help in setting measurable goals in the intervention plan, because levels of resiliency are linked to treatment response across different types of adversity (Smith, & Bolton, 2013).

Discussion.

In this chapter it will be presented the discussion regarding the proposal of the implementation of the CD-RISC and the RSCA in Ecuador. The purposes throughout this study were primarily twofold. The first, was to help the government with mental health care by identifying children and adolescents with a greater risk of developing mental health issues after a scenario of maltreatment or abuse. The second was to establish both reliability and validity of these two tests within the population of Ecuador. The impetus for doing this research came from seeing the lack of mental health support to children and adolescents who have faced abuse, usually ending up in no proper therapeutic process or intervention and or long waiting times which ruin any type of therapeutic process. This particular problem is attributed to the lack of resources overall, like instruments and human availability. This proposal aims to help with that burden laid on practitioners of mental health, since the implementation of these scales can showcase in a very clear way which children or adolescents are in more urgency of a therapeutic process and which children have more tools to overcome what has happened. It is important to note that if at all possible, all of the cases of child and adolescent maltreatment should be properly followed up with a clinical therapeutic process, although it is apparent that in the reality of Ecuador this is not possible due to the limitations mentioned above.

The implementation of the CD-RISC in the Ecuadorian population will require strict and high methodological rigor. As there is already a Spanish version of this test (Crespo, Fernández-Lansac, & Soberón, 2014) one must apply this version to the Ecuadorian population, since it is already translated from English to

Spanish. In this version of the test there were four items removed since these decreased reliability of the overall test. In the implementation of this instrument in the Ecuadorian population, one must try to implement it with all 25 constructs and depending on the outcomes see if one must also remove these four items or any others. The test done by Maria Crespo et al proved a good reliability in resilience for chronic stress situations, with (a=0.90) (Crespo, Fernández-Lansac, & Soberón, 2014). In the implementation of this test in the Ecuadorian population one must consider that many different samples must be taken. Following the work done by Connor and Davidson the test must validated n different group samples: the community sample, primary care outpatients, general psychiatric outpatients, clinical trial of generalized anxiety disorder, and clinical trial of PTSD patients (Connor, & Davidson, 2003). However, since the aim of this study is to administer this test to adolescents suffering from maltreatment, a validation of the adolescent population is also in order. One must prove that the test yields significant positive correlations with self-esteem and positive support as well as negative correlations with depression, anxiety and other psychopathology.

The implementation of the RSCA will prove to be a harder task since there is no translation from the English version to a Spanish counterpart. Following the guidelines set by The International Test Commission (International Test Commission, 2017) the translation of the test should be only the first step when considering the adaptation of the test. There should be also a special consideration to difference in cultural linguistic and other contextual aspects of the translation. In order to properly achieve this, the ITC has suggested the use of experts in the field, with enough in-depth knowledge of the subject matter, that are proficient in both languages, the original and intended one for translation. It is important to

work with at least two versions of the translated test, which will allow the creation of a truer sole version of the test later on. After an evaluation of the translation done by the experts the test must pass an instrument evaluation by the target population which is responsible for the verification of the items, the response scale, and the instructions and whether they are understandable for the desired population. In this case the desired population will be children and adolescents. Then there must be a back translation of the synthesized test into the source language (Borsa, Damásio & Bandeira, 2012). It is recommended that other translators, who did not partake in the first translation of the instrument, will be in charge of the translation of this instrument to the source language. This step should not mean that the items must remain literally identical to the original but rather find conceptual equivalences and approximation in the cultural context (Borsa, Damásio & Bandeira, 2012). The authors and other experts must consider this now translated version and give any input in whether any item or construct deviates in an important way from the original intent.

Later there must be a pilot study which is intended to the application of the instrument in small samples which should reflect the characteristics of the targeted population, which in this case will be of children and adolescents who suffered some sort of maltreatment. This step can be repeated as many times as it's necessary in order to assess if the instrument can be ready to be used (Borsa, Damásio & Bandeira, 2012).

In order to achieve evidence of instrument validity there must be an exploratory factor analysis and confirmatory factor analysis that assist the researchers in the most plausible structure for the sample (Borsa, Damásio & Bandeira, 2012). The researcher must also ensure that the measurements can

similarly assess the same constructs in varying populations. The use of the multi-group confirmatory factor analysis can help in achieving this goal. The process of translation of this instrument should focus on semantic contextual equivalence and linguistic properties between the original version and the translated items, as well as an analysis of the psychometric properties of the original instrument, the translated and new version (International Test Commission, 2017).

It is hypothesized that it will be of great help the implementation of these two resiliency scales for the mental health practitioners of Ecuador in cases of child and adolescent maltreatment since the implementation of these will give the mental health practitioners a range of resilience for each patient. This ultimately will help the effectiveness of the diagnosis of the patients since the range of resiliency will show the potential risk the patient has of developing maladaptive behaviors and psychopathology. It is important to note that resiliency should not be the only instrument used in assessment, but rather following the work done by Afifi and MacMillan, there must be a normal range of competence across several domains of functioning which should include behavioral competence, emotional competence, social competence, and academic achievement. Given the results of these evaluations the mental health practitioners can prioritize patients in accordance to “risk” or “help needed”, where a lower resiliency score should be moved to the most urgent need of therapy and higher scores be left to a less urgent need to treat. Since the mental health practitioners in Ecuador often find themselves with a vast amount of childhood and adolescent maltreatment cases, there are often many cases of poor interventions and long waiting times. The first come, first served approach to these types of cases can be fatal, since many of the abused children and adolescents often come from poor families where mental

health information and prevention is often nonexistent. Therefore, the long waiting times and unclear treatment plan will ultimately discourage the families of the child to continue with the treatment, often separating the patient from a much-needed therapy that can help his quality of life in a great way. Resiliency can also help in this situation. By assessing patients in resiliency, mental health practitioners could potentially disclose this information (resiliency scores) with the parents in cases in which the family does not want to continue with the treatment of the patient, this could possibly entice the family into continuing the therapeutic process due to evidence of the mental health situation of the patient.

Another importance of the implementation of resiliency scales in Ecuador is the information that can be gathered from the data given by these tests. The information of resiliency scores could prove patterns of resiliency which can ultimately be very helpful for the mental health community. Although maltreatment and resiliency scores may vary depending on type of abuse, age, social economic status, and personality traits, some sort of resiliency range could be evidenced by the collection of data gathered from cases in Ecuador. It could be that children may have better resiliency than adolescents overall, or that resiliency scores are changing through time across the population. Resiliency is a construct that has a lot of potential to be a useful tool for the prevention of pathology and mental disorder and Ecuador can be the first Latin American country to adopt this tool in a productive and useful way developing the construct of resilience and potential uses even further.

As evidenced by Smith and Bolton, resilience measurement of a patient before and after an intervention and treatment can also help in showing just how

helpful a practitioner can be in regard to its patient. This could also help by evaluating the work done by the mental health workers in the public sector.

Conclusion

What was aimed to solve throughout this thesis was to find an effective and practical way in which to help in the assessment on children and adolescents who have suffered maltreatment by implementing two resiliency scale measurements, the CD-RISC and the RSCA in Ecuador. A proper use of these two tools after abuse or maltreatment is present on children and adolescents can also be a great advantage to mental health practitioners since it helps identify the potential recovery factor of the patient and therefore help guide an action plan moving forward a therapeutic intervention.

Resiliency is often associated with the ability to bounce back from a hardship or adverse condition (Bolton, 2013). In Ecuador, a country that has both incredibly high child and adolescent maltreatment and incredible low resources devoted to mental health recovery and treatment, it is only natural to find a solution that will realistically help both the overworked mental health practitioners as well as the overall affected population. The measurement of resiliency is the perfect fit for this plan. Resiliency will allow to evaluate the damage done by the abuse as well as the overall support factors that the patient has to be able to cope to the trauma (Kim, H., Kim S. A., & Kong, 2017; Poole, Dobson, & Pusch, 2017; Long, Lichstein, Sundquist J., Sundquist K., & Kendler, 2017). It is important to note that not all abuse is the same and that the severity of the abuse, as well as if it's a first time offence or repeated will also modify the ability of the patient to positively cope with the trauma. As explained earlier, the CD-RISC, as well as the RSCA, is an instrument that measures resiliency in a multi-factor way, providing a good overview of the patient as well as an adequate recovery rate. It is therefore hypothesized that children and adolescents that score

higher levels of resiliency will be less likely to have mental health consequences in the present or future, than those of children with lower levels of resiliency. The administration and proper use of these tests in Ecuador will therefore create a scenario of "urgency of treatment" in which the public and private mental health practitioners can have an instrument that place patients with lower resiliency scores as more "urgent" to receive a therapeutic intervention and treatment. This will be a huge improvement over the current "first come first served" approach that the government has to these types of cases, in which due to shortage of resources, many patients don't get to even do a first time interview, and many others don't have any type of constant therapeutic intervention.

Resiliency can also have a great effect on how the treatment of a patient is guided. By assessing resilience and its components, a mental health practitioner can help guide treatment in such a way that it strengthens the particular limitations of each particular case. Since both the RSCA and the CD-RISC have multi-level factor assessment, the mental health workers will be able to identify which area of functioning, either personal or contextual, is lacking in each particular case. With this information, a guided treatment and intervention designed to strengthen the area lacking could be of great help in the recovery of each particular case. The evaluation of resilience prior and post an intervention and treatment can also help in showing the progress made by each mental health practitioner in the public sector and whether the intervention done did in fact help strengthen the areas of functioning aimed. By doing a prior and post resiliency assessment will also help regulate professionals to a much higher and demanding standard when regards to the way they intervene and treat their patients. This is

crucial in a country that lacks any psychological entity that regulates this type of profession.

One must also recognize the potential risks and limitations that the inclusion of these test will have in Ecuador. A potential problem that could be faced is that the mental health practitioners would disregard patients with a high resiliency score. However, that is not what is proposed throughout this thesis. After a trauma and maltreatment, if possible, all of the patients should have a proper treatment and follow up interventions. Having a high resiliency score doesn't make the patient's immune to mental health problems, it simply makes the patient better prepared to cope with the stressor in a more productive and positive way.

If the inclusion of these tests will benefit the Ecuadorian population and help diminish mental health problems in children and adolescents, then it can be expanded to other South American countries that suffer from the same problems that Ecuador has regarding mental health.

One must also establish that another potential use for the resiliency scales is as a tool that will help promote a therapeutic plan based on the protective factors of resiliency. Kristin Bolton (2013) did a review of the protective factors among older adults and found two separate measures to assess resilience protective factors, where one measure focused on internal (innate) protective factors and another measure focused on the behavioral and experiential protective factors. It would be of great interest to conduct a similar review of the protective factors among maltreated children and adolescents. In accomplishing this one can help in the promotion of these protective factors in a preventive way which could help in a great way strengthen resiliency in the patient and therefore help in the

recovery of children or adolescents who will suffer from maltreatment or other stressors. The incorporation of these resiliency scales will ultimately serve the Ecuadorian population the most but will also help in the contribution of the theoretical development of this concept.

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