An-Najah National University
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Validation of the Arabic Revised Manifest Childhood Anxiety Scale (RCMAS) in the Palestinian Context

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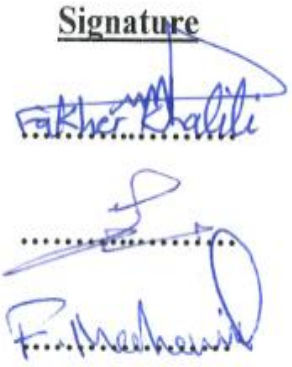

Dedication

To those who believe in me, my family

To my true friends

To those who have joined me the journey, my classmates

To all knowledge seekers all around the world

Acknowledgment

I consider the completion of this thesis not merely as a higher education degree, but as the culmination of my career. Therefore, I would like to express my thanks and gratitude to the many colleagues who have supported me in countless ways in accomplishing this mission. First, I would like to express my deepest gratitude to my Academic Supervisor, Dr. Fakher Al-Khalili, Chair of the Graduate Studies Committee, Department of Humanities, and Coordinator of the Clinical Psychology Program, Dr. Fayez Mahameed, who have been a constant source of support and guidance throughout my long journey in Graduate School.

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إقرار

انا الموقع ادناه مقدم الرسالة التي تحمل العنوان:

التحقق من صلاحية النسخة العربية لمقياس قلق الطفولة (RCMAS) في السياق الفلسطيني

Validation of the Arabic Revised Manifest Childhood Anxiety Scale (RCMAS) in the Palestinian Context

اقر بأن ما اشتمات علية هذه الرسالة انما هي نتاج جهدي الخاص باستثناء ما تمت الإشارة الية حيثما ورد وان هذه الرسالة ككل او أي جزء منها لم يقدم من قبل لنيل اية درجة علمية او بحث علمي او بحث لدى مؤسسة تعليمية أخرى.

Declaration

The work provided in this thesis, unless otherwise referenced, is the researcher's own work, and has not been submitted elsewhere for any other degree or qualification.

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List of Abbreviations

RCMAS: Revised Manifest Childhood Anxiety Scale

DMS 5: Diagnostic and Statistical Manual of Mental Disorders.

CFA: Chartered Financial Analyst

PCC: Palestinian Center for Counseling

APA: American Psychiatric Association

CMAS: Children’s Manifest Anxiety Scale

EFA: exploratory factor analysis

GAD: Generalized Anxiety Disorder

TME: Tri-Modal Evaluation

SEM: structural equation modeling

Validation of the Arabic Revised Manifest Childhood Anxiety Scale (RCMAS) in the Palestinian Context

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Abstract

The current study aimed at discovering and testing the psychometric properties of the RCMAS-2 (Arabic Version) in the Palestinian context in terms of construct validity and reliability by evaluating the factorial stability of the RCMAS-2. Furthermore, it aimed at revealing the potential impacts of gender, age, and place of residence on anxiety level among the Palestinian children 6-19 years old in the Nablus governorate. In addition, this study evaluated the extent that RCMAS-2 could meet the anxiety criteria according to DSM-5.

A quantitative, cross-sectional, descriptive design was used to achieve the objectives of the study. The translated and adapted RCMAS-2 was used to collect data from (201) children (109 males and 92 females) who were selected by a stratified random sampling technique, that to represent gender and locations of residence of children. Moreover, in order to discover to what extent RCMAS-2 meets anxiety criteria according to DSM-5; the convergent validity was assessed using the DSM-5 Level 2 of Anxiety-Parent/Guardian of child age 6-17 as a gold standard tool. Multivariate correlational and structural equation modeling [SEM] by confirmatory factor analysis [CFA] and multiple regression statistical analyses were performed in this study.

The findings confirmed the stability of factor structure, validity, and internal consistency of RCMAS-2 for measuring anxiety among Palestinian children. The goodness-of-fit indicators for the RCMAS-2 provided good evidences to accept the proposed model where CFI = 0.904, IFI = 0.906, AGFI = 0.807, and RMSEA = 0.042. Cronbach's alpha for each of the subscales and total scale were PHY = 0.763, WOR = 0.846, SOC = 0.864, and the RCMAS-2 = 0.910.

The result emphasized that the RCMAS-2 has convergent validity and is suitable as a research tool among the Palestinian children population and meets the anxiety criteria according to DSM-5. The findings revealed that about 39% of the Palestinian children exhibited clinically significant levels of anxiety. About 7% of the variance in the score for the anxiety was due to place of residence and in favor to children from camps.

A cutoff point of ≥ 21 (percentile: 65th) based on ROC analysis revealed a significant predictive power of the RCMAS-2 scale for the DSM-5 Level 2 of Anxiety-Parent/Guardian scale. The area under the curve [AUC] equals .89 ($p < .001$, 95% CI = .84-.94), sensitivity .80, and specificity .80. In light of the findings, the current study recommended the use of the RCMAS-2 in clinical settings in Palestine because the findings revealed good psychometric evidence.

Keywords: RCMAS-2, Anxiety, Palestinian children, psychometric properties.

Chapter One

Introduction

Chapter One

Introduction

1.1 Background of the Study

An increasing number of children are exposed to risk of psychological crises and behavioral problems that negatively affect their social competencies, academic achievement, and potential for becoming productive adults (Gallegos, 2008; World Health Organization [WHO], 2004). Anxiety disorders are the most common types of mental health disorders which probably resulting in more risky disorders such as depression later in life and substance abuse (Gallegos, 2008).

Anxiety disorders are usually comorbid with different types of disorders among children such as; conduct disorder, learning disabilities, oppositional defiant disorder, depression, and attention-deficit hyperactivity disorder [ADHD] (Kessler et al., 2009). Anxiety disorders cause significant dysfunction in children's social, emotional, and academic aspects (Crowe & McKay, 2017), and their complications may persist in later stages of development (Kessler et al., 2005). Anxiety disorders may develop into more serious mental health disorders (Eysenck & Fajkowska, 2018). Therefore, research on anxiety disorders among children is very necessary.

Anxiety is an emotional state characterized by apparent and hidden symptoms in terms of cognitive, behavioral, and physiological indicators such as negative thoughts, increased heart rate, trembling, and breathing

rapidly (hyperventilation) (Andrews et al., 2003; Kumari, 2020). There are two types of anxiety; normal anxiety and abnormal or pathological anxiety.

Anxiety is adaptive or normal when it serves to enhance individuals' performance. Natural or normal anxiety is a normal reaction to many different children of situations and events in their lives since normal anxiety is one of the internal warning systems, which alerts us to danger or other threats and prepares our bodies to fight back or get out of a dangerous situation (Robinson et al., 2015).

However, anxiety converts into pathological form when it is prolonged for a long period of time without a real or objective reason and with high intensity or frequency resulting in dysfunction in different life domains which in turn affects negatively on overall well-being. The factors of intensity, frequency, and duration distinguish natural anxiety from pathological or abnormal anxiety. When the intensity, frequency, and/or duration of anxiety become chronic and distressful, such that it interferes with a person's functioning, it is often referred to as pathological anxiety (Greene, 2020). So, pathological anxiety is a chronic case that impairs individuals' functioning and negatively affects their happiness and well-being (Emilien et al., 2002).

Children's anxiety and fear are a strong emotional response that serves to protect the child from a potential threat, danger, and harm; and the emotional responses may go down over a short term (Iram & Riaz, 2010). Based on the tripartite model of anxiety, it contains three major components:

physiological features, cognitive ideation, and behavioral responses (Ollendick, Shortt, & Sander, 2005).

Anxiety disorders among children are the most common psychological disorders and many studies found that between 8% and 12% of children and adolescents suffer from anxiety disorders, which in turn affects their daily functioning and performance negatively and obstructing their psychological adjustment (Allen, Benningfield, & Blackford, 2020; McKay & Storch, 2011; Muris et al., 2002).

The Palestinian Center for Counseling [PCC], found a quarter of patients who visit mental health clinics in West bank suffer from anxiety disorders and the Community Mental Health Program [CMHP] in Gaza in 2017 reported the percentage of anxiety disorders among clients visiting mental health centers is 26% (Marie, SaadAdeen, & Battat, 2020). Furthermore, Thabet and Thabet (2015) found 30.9% of the Palestinian children had anxiety disorder and no differences found due to gender. They found anxiety disorders were more among children living in camps and family monthly income less than $300.

Many factors determine children's vulnerability to anxiety disorders. These factors can be put into two categories personal and interpersonal factors. Personal factors include genetic causes, child personality, age, gender, cognitive process, and behavioral inhibition. While, interpersonal factors include attachment patterns, parenting styles, learning process, and socio-economic class (Cicchetti, 2016; Gallegos, 2008; Iram & Riaz, 2010).

Anxious children tend to overestimate danger and threat and underestimate their ability to cope, and they often come from families where parents are overly protective and restrictive (Kendall & Suveg, 2006).

For many decades, clinicians and researchers in the area of childhood disorders have reached an agreement about the different types of anxiety disorders that may happen in this period (Fernandez, 2017). Where the most common types of anxiety disorders in children based on the Diagnostic and Statistical Manual of Mental Disorders [DSM-5] (American Psychiatric Association [APA], 2013) include social anxiety disorder (social phobia), specific phobia, agoraphobia, selective mutism, panic disorder, separation anxiety disorder, and generalized anxiety disorder.

The common features of anxiety disorders are excessive or inappropriate anxiety and fear that causes significant impairment in functioning and related disturbances (Selek, 2011). In more details, anxiety is the anticipation of a future threat, whereas fear is the emotional response to a real or perceived current threat (Taylor, 2014).

The more a child gets in contact with the social and natural world, the more he/she will be exposed to situations that cause anxiety and fear (Iram & Riaz, 2010). Children do not express their fears and anxiety in the same way, they differ in that, and it is not possible to rely only on behavioral indicators related to anxiety, because it includes cognitive, emotional, physiological, and behavioral reactions (Eysenck, 2014). Therefore, merely depending on behavioral observation checklists that are used by caregivers, parents, and

teachers is not enough to reveal the subjective feelings of anxiety among children.

Getting reliable and valid scales to measure underlying anxiety symptoms often difficult, that because symptoms are apparent and hidden from one side and occurring cognitively, emotionally, behaviorally, and physiologically from another side (Jansen et al., 2017). Anxiety disorders are classified as internalizing (emotional) problems, therefore, their symptoms are difficult to detect or directly observe like the externalizing (behavioral) problems such as conduct and oppositional-defiant disorders (Silverman & Ollendick, 2005).

Constructing reliable and valid scales to measure anxiety disorders is important. For clinicians, psychotherapists, and psychiatrists it is necessary to quantify the effectiveness of their treatments and to prevent the course of the disorders by immediate intervention. Regarding researchers it is important in order to test their hypotheses respecting factors correlate with anxiety disorders which in turn resulting in reducing risk factors and enhancing protective factors (Muris et al., 2017).

In clinical practice and research, self-report questionnaires for assessing anxiety symptoms among children are frequently used (March et al., 1997; Mashhadi et al., 2012; Muris et al., 2002). This type of instrument requires a minimum of time, is easy to apply, and measure anxiety symptoms from the children’s perspective (Morris, & March, 2004).

The Revised Children's Manifest Anxiety Scale [RCMAS] (Reynolds & Richmond, 1978), the State-Trait Anxiety Inventory for Children [STAIC] (Spielberger, 1973), and the Fear Survey Schedule for Children-Revised [FSSC-R] (Ollendick, 1983) are the most common scales used for measuring anxiety symptoms. The RCMAS is a widely used self-report scale and contains three domains: worry and oversensitivity, problems with fear and concentration, and physiological aspects of anxiety (Muris et al., 2002).

Given that, the current study aimed at translating, adapting, and discovering the factorial stability of one of the most anxiety disorders scale widely used that is RCMAS. Furthermore, this study was designed to provide normative data for anxiety among Palestinian children.

1.2 Statement of the Problem

The RCMAS is one prominent scale designed to measure the symptoms of anxiety and it has been widely used in clinical settings and scientific research (Holmbeck et al., 2008; Silverman & Ollendick, 2005). In 2008 Reynolds and Richmond revised their original scale (Children's Manifest Anxiety Scale [CMAS]), resulting in the Revised Children's Manifest Anxiety Scale, Second Edition (RCMAS-2; Reynolds & Richmond, 2008).

Many studies have examined the psychometric properties of the RCMAS among samples of school children (Al Jabery & Arabiat, 2011; Lee et al., 2020; Lowe, 2014; Lowe, 2015; McGovern, 2016; Raad, 2013; Zhu & Lowe, 2018; Wu et al., 2016). However, little evidence available on the

psychometric properties of the RCMAS-2 among samples of children across cultures. For the new or revised scales, it is important to discover the issue of construct validity by evaluating the factorial stability of a given scale.

Normative data for anxiety among children usually are derived from the studies conducting in Western countries. There is a shortage of research in the field of cross-cultural differences in anxiety among children (Iram & Riaz, 2010). The picture is still unclear about the anxiety prevalence among children across different cultures, and we still need more evidence about the validation of the self-report questionnaires used to measure anxiety symptoms across countries and to reveal the structural or factorial stability of these tools across cultures.

Cross-cultural studies discover variables that affect children’s anxiety such as economic status, traditions, customs, socialization processes, political conditions, health care system, luxury level, living in developing or developed countries, which in turn resulting in different mental health outcomes, and anxiety prevalence one of these outcomes (Iram & Riaz, 2010).

In conflict and war zones such as Palestine; children are real victims of political conflicts; they experience war zones' endless stressors and endure a lifetime of suffering as a consequence and may develop anxiety disorders (Al-Krenawi, Graham, & Sehwail, 2004; Veronese et al., 2017). War zones' overwhelming amount of stress can lead to emotional and behavioral

problems in children (Mahamid, Rihani, & Berte, 2015; Parson, 2000). Therefore, the current study aimed at answering the following questions:

1. What are the psychometric properties of the RCMAS-2 (Arabic Version) in the Palestinian context in terms of validity and reliability?

2. Do gender, age, and place of residence affect the anxiety level among the Palestinian children 6-19 years old in the Nablus governorate?

3. What are the normative values of the responses on the RCMAS-2 among the Palestinian children 6-19 years old in the Nablus governorate across the place of residence?

4. To what extent RCMAS-2 does meet the anxiety criteria according to DSM-5?

5. What is the optimal cut-off score on the RCMAS-2 among the Palestinian children 6-19 years old in the Nablus governorate?

1.3 Objectives of the Study

The current study aimed at discovering and testing the psychometric properties of the RCMAS-2 (Arabic Version) in the Palestinian context in terms of construct validity and reliability by evaluating the factorial stability of the RCMAS-2. Furthermore, it aimed at revealing the potential impacts of gender, age, and place of residence on anxiety level among the Palestinian children 6-19 years old in the Nablus governorate. Moreover, this study tried to establish normative values of the responses on the RCMAS-2 and discover

the optimal cut-off score on the RCMAS-2 among the Palestinian children 6-19 years old. Finally, this study evaluated the extent that RCMAS-2 could meet the anxiety criteria according to DSM-5.

1.4 Significance of the Study

This study aspires to present a valid and reliable tool for assessing anxiety symptoms among Palestinian children, which may useful for researchers, psychiatrists, counselors, and psychologists working in areas of scientific research, diagnosis, and clinical assessment in the mental health field. Furthermore, this study draws the attention of counselors, psychologists, and researchers to the need to ascertain the psychometric properties of tools used in the field of mental health and to provide them with theoretical knowledge on the subject of constructing and validating psychological scales. Additionally, this study will specify whether the RCMAS-2 is an appropriate scale for use among Palestinian children from diverse backgrounds. Finally, this study will provide us with normative values of the responses on the RCMAS-2 and establish an optimal cut-off score on the RCMAS-2 among the Palestinian children 6-19 years old, which in turn psychologists, psychiatrists, and counselors be able to distinguish normal children from anxious children.

1.5 Limitations of the Study

The current study targeted a sample of 201 respondents, which is relatively considered a small sample size to test the factorial stability of the RCMAS-

2, consequently, generalization of findings to a greater population should carefully consider. Furthermore, the data collection process was through an online survey due to closing the public schools and it was difficult to reach the intended children physically and directly because of the social distancing of the COVID-19 pandemic. Moreover, data were collected just from the Nablus area, which limits the number of respondents.

1.6 Definitions of Terms

Validation:

It is defined as "the process by which researchers provide ongoing evidence to establish the range of appropriate inferences that can be made from our observed scores to our theoretical expectations (conceptualization) for a particular construct, taking into account all potential ethical and social influences" (Messick, 1995, as cited in Forer, 2009, p. 3).

Anxiety:

According to APA, anxiety is defined as "the apprehensive anticipation of future danger or misfortune accompanied by a feeling of worry, distress, and/or somatic symptoms of tension, and the focus of anticipated danger may be internal or external" (APA, 2013, p. 818).

Revised Manifest Childhood Anxiety Scale (RCMAS-2):

The RCMAS-2 designed to assess the level and nature anxiety in children from 6 to 19 years old. The instrument may be administered either in

individual or to the group of respondents, a child responds to each statement by indicating a Yes or No answer (Reynolds & Richmond, 2008). The RCMAS-2 yields scores for the four scales; includes a Total Anxiety score (TOT) and scores for three anxiety-related scales; Physiological Anxiety (PYS), Worry (WOR), and Social Anxiety (SOC).

Chapter Two

Literature Review and the Previous Studies

Chapter Two

Literature Review and the Previous Studies

2.1 Literature Review

The current study aimed at investigating the validation of the Arabic translated and adapted version of the RCMAS-2 among children in the Palestinian context. Consequently, this chapter is covering three sections :

The first section provided an overview of anxiety definitions, nature of pathological anxiety, anxiety disorders types according to DSM-5 and their symptoms, anxiety among children, prevalence, and incidence of anxiety disorders.

The current study provided a review of the most common theories that interpreting anxiety. In addition, the first section addressed methods of assessing and measuring anxiety, a description of the RCMAS-2 and its domains, and its psychometric properties in terms of validity and reliability .

The second section provided an overview of psychometric properties in terms of construct validity and internal consistency or reliability, the purposes and functions of both exploratory factor analysis [EFA] and confirmatory factor analysis [CFA] in discovering and testing factorial structure and stability as methods or techniques to explore construct validity of psychological measurements .

Furthermore, respecting the CFA, the current study addressed the structural equation modeling [SEM] technique specifically regarding measurement models. In addition, reliability concepts and techniques were presented. Finally, the third section presented the findings of the previous studies that have attempted to examine the psychometric properties of the RCMAS-2.

2.1.1 Anxiety

2.1.1.1 Anxiety Definitions

Anxiety is a normal emotional reaction that individuals experience from time to time; people usually feel anxiety in difficult or stressful situations (Cooley & Boyce, 2004). Therefore, when people expect that events or situations will be uneasy or apprehensive or outcomes will be uncertain probably they will feel anxiety.

Anxiety expresses itself in many ways, and although it is an uncomfortable emotion, individuals have different ways to manage or deal with anxiety (Stefan, Berchtold, & Angstwurm, 2020). Anxiety is a state of discomfort arising from either supposed or real dangers or threats, especially when an individual the individual perceives that he does not have the ability to deal with that danger or threat (Cooley & Boyce, 2004).

Anxiety is defined as phenomenologically a state of tension or uneasiness that cause is unknown (Rogers, 1959, as cited in Stulmaker, 2014, p. 59). According to Carl Rogers, when an individual finds his/herself in a state of incongruence between his potential or self-concept and experience, or

between his real self and ideal self, he feels anxious (Kosslyn & Rosenberg, 2006). Therefore, anxiety results when the self-structure does not congruent with the perceived or actual experience that makes the individual feels threatened.

Given that, anxiety is a state of threat to the self-structure that manifested by some symptoms such as worrying, nail biting, and nervousness (Stulmaker, 2014). Tang and Gibson (2005) defined anxiety as an emotional state that encompasses the apprehension and sense of the impending threat.

When individuals during their childhood interact with environments that lack acceptance, warmth, and empathy, they will develop rigid self-concept or self-structure, and if a person is behaving through a rigid self-structure, personal experiences may not match a personal sense of self; hence the person will feel threatened, creating anxiety or incongruence (Rogers, 1959, as cited in Stulmaker, 2014, p. 65).

The level of anxiety is dependent upon the level of threat experienced to the self-structure (Rogers, 1959, as cited in Stulmaker, 2014, p. 65). Thus, anxiety represents an internal conflict inside an individual. Anxiety can be an indication that something is not matching internal experience within-person or that a threat is present (Bryant-Jefferies, 2012).

According to Freud, anxiety is an emotional reaction against a feeling of helplessness (Spielberger, 2013). Anxiety is an “unpleasant emotional state or reaction that is distinguished from other states by a unique combination

of experiential qualities and physiological changes" (Spielberger & Rickman, 1990, p. 69). The physiological or emotional changes are responses to perception of real or imagined threat or danger (Friedman & Bendas-Jacob, 1997).

The literature distinguishes between anxiety as state and anxiety as trait, where anxiety as state represents the current anxiety level that an individual experiences at a specific time (Tsao et al., 2006). On the other hand, anxiety as trait has been defined as a relatively stable and general tendency to experience anxiety and reporting negative emotions such as worries and fears across many situations (Price & Budzynski, 2009).

Anxiety trait considered as one dimension of the personality that called neuroticism versus emotional stability, consequently anxiety as trait makes individual perceives various situations as threatening, dangerous, and stressful (Strelau & Eysenck, 2013; Tang & Gibson, 2005).

2.1.1.2 Nature of Pathological Anxiety

When people experience anxiety so intensely and with emotional and physical symptoms that disrupt their functions and well-being they suffer from pathological anxiety that they cannot control their fears, tensions, and worries and fears consequently they are unable to live normally (Small & Vorgan, 2019).

The emotional and physical symptoms that characterize pathological anxiety can become so annoying especially that left without intervention, resulting

in a state of distress and a sense of severely restricted life (Beesdo, Knappe, & Pine, 2009).

Anxiety disorders are types of common mental health disorders that are overly intense or occur in different situations where anxiety typically would not occur. Whereas, anxiety is a natural reaction to dangerous or threatening situations, extreme anxiety or pathological anxiety is not (Durbano, 2015).

It is a type of inappropriate response to the events or situations, which interferes with daily activities or functioning, that may be considered pathological anxiety (Essau & Petermann, 2013; Kumari, 2020).

Anxiety disorders are the most common psychological disorders in childhood and adolescence, with prevalence rates between 15% to 20% (Beesdo, Knappe, & Pine, 2009). The most common symptoms of a pathological anxiety that one or more of the following symptoms: extreme worry, intense self-consciousness, irrational fears, increasing heart rate, restlessness, muscle tension, concentration difficulties, rapid breathing, and sleep problems (Durbano, 2015; Essau & Petermann, 2013; Simpson et al., 2010).

Anxiety disorders are associated with poor social relationships, low self-esteem, academic failure, depression, and substance use disorders (Muroff & Ross, 2011). Manifestations of anxiety disorders symptoms include cognitive, affective, physiological, and behavioral symptoms (Essau & Petermann, 2013).

Cognitive manifestations include fear of death or physical injury, fear of losing control, fear of losing mind, terrifying thoughts, fear of negative evaluation by others, confusion, concentration problems, memory difficulties, sense of unreality, easily distracted, attention problems, bad memories, hypervigilance for threat, sleep and talking difficulties (Chand & Marwaha, 2021).

Affective or emotional symptoms include fearful, terrified, frightened, frustrated, tense, nervous, preparedness, impatient, jumpy, edgy, and jittery (Chand & Marwaha, 2021). Physiological symptoms include palpitations, increased heart rate, chest pain or pressure, shortness or rapid breathing, choking sensation, headache, dizziness, sweating, nausea, chills, stomach pain, tingling or numbness, diarrhea, tremor, shaking, weakness, tense muscles, and dry mouth (Chand & Marwaha, 2021). Behavioral symptoms include escape, avoidance of threatening events or situations, freezing, flight, restlessness, and hyperventilation (Chand & Marwaha, 2021).

According to the DSM–5 (APA, 2013) anxiety disorders in children include social anxiety disorder (social phobia), specific phobia, agoraphobia, selective mutism, panic disorder, separation anxiety disorder, and generalized anxiety disorder. Social Anxiety Disorder [SAD]: it is intense fear or anxiety in social situations in where the individual feels scrutiny (APA, 2013; Essau & Petermann, 2013).

In these context, the individual fears of negative evaluation by others. He/she also fears being embarrassed, rejected, or humiliated. In these situations, the

individual tries to avoid or endured with intense fear and anxiety (Essau & Petermann, 2013; Joy & Dorian, 2002).

Specific Phobia [SPh]: Individual with specific phobias is fearful or anxious about specific objects or situations that he/she avoid or endure with intense anxiety or fear (APA, 2013; Essau & Petermann, 2013). The anxiety, fear, and avoidance are usually immediate and tend to be persistently out of proportion to the actual threat or danger that posed by the specific object or situation (Essau & Petermann, 2013; Joy & Dorian, 2002). There are different types of phobias: animal, blood-injection-injury, and situational (APA, 2013; Essau & Petermann, 2013).

Separation Anxiety Disorder [SAD]: In this disorder, the individual displays fear and anxiety atypical for his/her age and development level of separation from attachment figures (APA, 2013; Essau & Petermann, 2013). There is persistent and excessive anxiety or fear about loss of, harm to, or separation from caregiver. The symptoms of SAD include physical symptoms and nightmares (Essau & Petermann, 2013; Joy & Dorian, 2002).

Selective Mutism [SM]: This disorder is manifested by a consistent failure to speak in social situations where there is an expectation to speak even though the individual speaks in other situations, can speak (APA, 2013; Essau & Petermann, 2013; Joy & Dorian, 2002).

Panic Disorder [PD]: Individuals with this disorder experience unexpected, recurrent panic attacks, and experience persistent worry and concern about

having another panic attack (APA, 2013; Essau & Petermann, 2013; Joy & Dorian, 2002). Individuals with PD usually avoid activities and situations to prevent the occurrence of panic attacks (Joy & Dorian, 2002).

Panic attacks are abrupt surges of intense fear or extreme discomfort that reach a peak within minutes, accompanied by physical and cognitive symptoms such as palpitations, sweating, shortness of breath, fear of going crazy, or fear of dying (APA, 2013; Joy & Dorian, 2002). Panic attacks can occur unexpectedly with no obvious trigger, or they may be expected, such as in response to a feared object or situation (APA, 2013; Essau & Petermann, 2013; Joy & Dorian, 2002).

Agoraphobia: Individuals with agoraphobia are anxious and fearful in two or more of the following situations: using public transportation, being in enclosed spaces like shops and theaters, being in open spaces, being in a crowd or standing in line, or being outside of the home alone (APA, 2013; Joy & Dorian, 2002). The individual fears and avoids these circumstances because he/she is concerned that escape may be difficult or help may not be available in the event of panic-like symptoms, or other incapacitating or embarrassing symptoms (e.g., falling or incontinence) (Joy & Dorian, 2002).

Generalized Anxiety Disorder [GAD]: This disorder is characterized by excessive and persistent worry about various domains, including work and school performance that the individual cannot control (APA, 2013; Essau & Petermann, 2013). The individual also may experience feeling tense, restless or on edge; being easily fatigued; difficulty concentrating

or mind going blank, muscle tension, irritability, and sleep disturbance (Joy & Dorian, 2002).

2.1.1.3 Anxiety among Children

Normal anxiety occurs in all children and usually does not persist and is not distressing (Beesdo et al., 2009). Normal anxiety among children is considered one of the manifestations of normal growth and adaptation to the demands of the environment in order to preserve themselves and avoid dangerous experiences. Furthermore, Normal anxiety motivates them to strive for the highest possible standards in their functioning (Essau & Petermann, 2013). According to Beesdo et al (2009), there is an inadequate criterion for distinguishing normal from pathological anxiety in children.

Beesdo et al (2009) added that the assessment of anxiety in childhood faces many challenges, especially among young children since they have limited abilities to communicate, speak, and express their thoughts and emotions. Moreover, the lack of cognitive development among younger children does not serve them to take the right action or behavior against threatening situations or events (Beesdo et al., 2009; Essau & Petermann, 2013).

However, symptoms of pathological anxiety or anxiety disorders in children include concentration or sleeping problems, waking in the night with bad dreams, quickly getting angry, losing control during, having negative thoughts, tension, not eating properly, nervous, crying, stomach ache, cling,

and feeling unwell (Beesdo et al., 2009; Essau & Petermann, 2013; Tsao et al., 2006).

Studies have shown that children diagnosed with social phobia tend to be older than children with specific phobia (Ollendick, King, & Muris, 2002; Strauss & Last, 1993). Social phobia and separation anxiety disorder were found to be more prevalent in females than males (John, 2005). Children with separation anxiety disorder usually belong to families of lower socio-economic state (Conger, Conger, & Martin, 2010; Vine et al., 2012).

According to John (2005), anxiety disorders are more common among children from lower socio-economic status. Beesdo et al. (2009, p. 29) have provided normative anxiety and fears in childhood and adolescence according to their ages (see Table 1).

Table (1): Normative Anxiety and Fears in Childhood and Adolescence

Age		Development Conditioned Periods of Fear and Anxiety	Psychopathological Relevant Symptoms	Corresponding DSM-IV Anxiety Disorder
Early infancy	Within first weeks	Fear of loss, eg, physical contact to caregivers	–	–
	0–6 months	Salient sensoric stimuli	–	–
Late infancy	6–8 months	Shyness/anxiety with stranger		Separation anxiety disorder
Toddlerhood	12–18 months	Separation anxiety	Sleep disturbances, nocturnal panic attacks, oppositional deviant behavior	Separation anxiety disorder, panic attacks
	2–3 years	Fears of thunder and lightening, fire, water, darkness, nightmares	Crying, clinging, withdrawal, freezing, eloping seek for security and physical contact, avoidance of salient stimuli (eg, turning the light on), pavor nocturnus, enuresis	Specific phobias (environmental subtype), panic disorder
		Fears of animals	–	Specific phobias (animal subtype)
Early childhood	4–5 years	Fear of death or dead people	–	Generalized anxiety disorder, panic attacks
Primary/elementary school age	5–7 years	Fear of specific objects (animals, monsters, ghosts)	–	Specific phobias
		Fear of germs or getting a serious illness	–	Obsessive compulsive disorder
		Fear of natural disasters, fear of traumatic events (eg, getting burned, being hit by a car or truck)	–	Specific phobias (environmental subtype), acute stress disorder, posttraumatic stress disorder, generalized anxiety disorder
		School anxiety, performance anxiety	Withdrawal, timidity, extreme shyness to unfamiliar people and peers, feelings of shame	Social anxiety disorder
Adolescence	12–18 years	Rejection from peers	Fear of negative evaluation	Social anxiety disorder

In general, research indicates that anxiety more prevalent in females than males (Altemus, Sarvaiya, & Epperson, 2014; Bahrami & Yousefi, 2011; Hosseini, & Khazali, 2013). Behavioral genetic studies can address questions about whether the magnitude of genetic and environmental influences is similar in females and males and whether the genetic and environmental influences accounting for individual differences in symptoms of anxiety in females are the same as those accounting for individual differences in symptoms of anxiety in males (Essau & Petermann, 2013).

With regard to whether the magnitude of genetic and environmental influences is similar in females and males, several studies have demonstrated greater heritability for anxiety in girls as compared to boys (Eaves et al., 1997; Feigon et al., 2001). However, it appears that the genetic factors involved in the anxious/depressed phenotype are likely to be similar in boys and girls (Boomsma, Van Beijsterveldt, & Hudziak, 2005).

Moreover, according to DSM-5 (APA, 2013, p. 189), “many of the anxiety disorders develop in childhood and tend to persist if not treated. Most occur more frequently in females than in males (approximately 2:1 ratio)”.

2.1.1.4 Prevalence and Incidence of Anxiety

The occurrence of anxiety is determined by many factors, and it is important to know prevalence rates of anxiety disorders specifically among children, additionally, knowledge regarding risk factors that contribute to anxiety disorders is very necessary to control them, and investigating comorbidity of

anxiety with other disorders is important (Rice, 2008). Furthermore, the prevalence of anxiety can vary widely in the previous studies, depending on how it is measured, defined, and assessed.

Costello, Egger, & Angold (2004) found that the overall prevalence of any type of anxiety disorders that met the diagnostic criteria ranged from 6% to 18% of children between the ages of 8 and 18 years of age. These prevalence rates are higher than previously reported rates of 3% to 4% during the 1960s and 1970s (Rice, 2008).

Costello et al. (2004) also found that the prevalence rates of anxiety disorders tend to increase with age. Recently, DSM-5 (APA, 2013) has shown the incidences of anxiety disorders in USA and Table 2 presents that.

Table (2): Incidences of Anxiety Disorders in USA

Anxiety disorders	Developmental stages	Prevalence rates	Age and Gender differences in childhood
Separation anxiety	Children (6-12 month)	4%	– In clinical samples, separation anxiety disorder is equal in males and females.
	Adolescents	1.6%	– In general population, the disorder is more common in females.
	Adults	0.9%-1.9%	
Selective mutism	School children	0.03%-1%	– Selective mutism is more likely to occur in young children than others.
Specific phobia	Children (13-17 years old)	16%	– Females are more frequently affected than males, at a rate of approximately 2:1. – Natural environment, animal, and situational specific phobias are mostly experienced by females, – Blood-injection-injury phobia is experienced equally by males and females.
Social anxiety disorder	Children and adolescents.	7%	– Prevalence rates decline with age. – Higher rates of this disorder are found in females than in males in the community.
	Adults	2%-5%	– Gender rates are equivalent or slightly higher for males in clinical samples.
Panic disorder	Children	<0.4%.	– Females are more frequently affected than males, at a rate of approximately 2:1.
	adolescents	2%-3%.	– The gender differentiation occurs in adolescence and is already observable before age 14 years.
	Adults over the age of 64.	0.7%.	– The rates of this disorder show a gradual increase during adolescence, particularly in females
Agoraphobia	Adolescents and adults.	1.7%.	– Females are twice as likely as males to experience this disorder.
	Individuals older than 65 years.	0.4%.	– This disorder may occur in – childhood, but incidence peaks in late adolescence and early adulthood.
Generalized anxiety disorder	Adolescents and adults	0.9%.	– Females are twice as likely as males to experience this disorder. – The prevalence of the diagnosis peaks in middle age and declines across the later years of life.

In their work, Costello et al. (2004) found that social anxiety disorder in the overall population ranged between 3% to 13% that according to the DSM-IV diagnostic criteria. Recently, Stein et al. (2017) found that the prevalence rates of social anxiety disorder with a lifetime were highest in high-income countries with 5.5%, intermediate in upper-middle income countries with 2.9%, and lowest in low/lower-middle income countries with 1.6%.

Different factors may contribute to the development and maintenance of anxiety disorders. Some of these factors include socioeconomic status, gender, age, regional background, parents' mental health status, and the presence of disabilities; these factors combine and interact, affecting each individual in a unique manner (Rice, 2008).

According to Stein et al. (2017), prevalence rates were highest in the Americas and the Western Pacific region, and lowest in Africa and the Eastern Mediterranean. Across all countries (n = 28 countries), social anxiety disorder was a prevalent disorder with 4.0%. In addition, in their study, they found that across the 28 countries social anxiety disorder is associated with specific factors that with female gender, younger age, lower education, unmarried status, and lower income. Whilst, in clinical anxious samples Last, Perrin, Hersen, and Kazdin, (1992) reported that prevalence rates ranged from 15% to 32% for social anxiety disorder.

On the other hand, according to DSM-IV (APA, 1994), prevalence rates for generalized anxiety disorder were 5% lifetime prevalence in a community and 12% in mental health centers. Furthermore, Costello et al. (2004)

summarized the occurrence of generalized anxiety disorder as ranging from 2.6% to 15.4% with average of 4.89%. Meanwhile, Last et al. (1992) reported that a prevalence rate of generalized anxiety disorder was 13% in clinical samples with a lifetime prevalence rate of 27% that based on interviews.

Regarding separation anxiety, the prevalence rate was approximately 4% in children and young adults under the age of 18 based on DSM-IV diagnostic criteria (APA, 1994). In addition, Costello et al. (2004) reported provenance rates of separation anxiety ranged from .05%-13.1%, with an overall average of 4.12%. According to Westenberg et al. (1999, as cited in Rice, 2008), many children with separation anxiety disorder in childhood may develop generalized anxiety disorder later in life. Furthermore, in clinical settings Last et al. (1992) found that the prevalence rates for separation anxiety disorder to be 27% at intake and 43% at 12-24 months follow-up.

2.1.1.5 Theories of Anxiety Development

There are different theoretical perspectives that explain and interpret the nature and development and maintenance of anxiety disorders. For example, psychoanalytic perspective might describe anxiety emotional reaction stems from poor difficulties in attachment or nurturing between child and parent or from repressed feelings of hostility toward the same sex parent (Silverman et al., 2003). Whilst, a behaviorism considers anxiety as learned response, and under the laws and principles of modeling, classical, and operational conditioning. A behaviorism identifies the antecedents and consequences

that reinforce avoidance of the anxiety-provoking stimulus or situation (Turner, 2012).

Currently, focusing is on understand the interaction of different factors that cause anxiety such as genetics, physiology, and environment (Compton, McKnight, & March, 2004) since single factor is unable to explain the development and maintenance of anxiety.

Traditionally, the common way to interpret the causes of anxiety was through the medical model approach, behavioral theories perspectives, and the cognitive theories (Rice, 2008), and the following texts present the main perspectives that explain the occurrence of anxiety:

a. **Medical model approaches.** This model considers anxiety an innate process, in the same time it emphases on physiological causes that resulting anxiety. Some of these causes might include (a) a chemical imbalance (imbalance in the secretion of neurotransmitters and hormones), (b) disruption in nervous system caused by abnormalities in size or functioning of anatomical structures, or (c) improper parenting styles, such as over-protectiveness or over-controlling (Rice, 2008). In addition, research found the impact of maternal drug ingestion on developing anxiety among their children (Huang et al., 2007).

b. **Psychodynamic theory.** Internalized disorder such as anxiety is caused by the suppression of innate or instinctive desires, drives, wishes, and impulses, which are unacceptable or forbidden to express, consequently

causing discomfort. This discomfort is repressed and transforms into the unconscious, and defense mechanisms are developed to overcome anxiety (Engler, 2013). Freud suggested three anxiety types; reality anxiety, moral anxiety, and neurotic anxiety. According to Freud, reality anxiety is considered objective anxiety where the individual feels painful emotional experience caused by a perception of real danger or threat in the external world, and this type of anxiety is necessary for adjustment (Rice, 2008). In objective or reality anxiety, the child has a fear of reality and of the outside world. The child may feel that external punishments will happen when unacceptable emotions are expressed. Basically, fear and anxiety are derived from early experiences of helplessness (Nurhariyati, 2016). On the other hand, neurotic anxiety is defined as "apprehension about an unknown danger" (Feist & Feist 2008, p.34), and the source of this anxiety type is a perception of danger from the instincts. Neurotic anxiety caused by a clash between the id and reality. Furthermore, Hall and Lindzey (as cited in Mayestika, Suharyati, & Setyowati, 2019) neurotic anxiety develop often out of early childhood experience in which parental styles and behavior is uncaring and harsh. Meanwhile, moral anxiety caused by a feeling of guilt, that when the dictates of superego are ignored (Nurhariyati, 2016). Moral anxiety resulting from the struggle between the superego and ego (Mayestika et al., 2019). In other words, moral anxiety is aroused when an individual violates moral standards (Nurhariyati, 2016). In superego anxiety or moral anxiety, the superego sets up ideal standards that prevent certain

emotions, drives, and fantasies from arising since they are unacceptable resulting in a sense of shame and guilt.

c. **Behavioral Inhibition.** It is a concept that refers to a temperamental tendency to avoid or withdraw from non-social and novel social situations (Morgan, 2006). Behavioral inhibition results in restraint, fearfulness, withdrawal, and reticence after exposure to novel or unfamiliar experiences (Rice, 2008). This response emerges "differently at different ages, with young children possibly being clingy to parents or more solitary in play, and in older children may present as exhibiting restraint in groups of unfamiliar peers, or hesitating to smile, approach others, or initiate conversations (Rice, 2008, p. 71). Consequently, anxiety occurs when an individual is not used to being exposed to new and unfamiliar situations or stimuli. Furthermore, inhibited children probably belong to shy or anxious parents those who are considered as modeling for their children (Rice, 2008).

d. **Behavioral Genetics:** This perspective focuses on the genetic basis of anxiety development, where genetic research of anxiety is conducted through the study of the disease history of the family, that to determine the impact of heredity on children's anxiety (Clément, Calatayud, & Belzung, 2002; Gregory & Eley, 2011). However, it cannot be certain that children with anxiety are due to genetic factors from their parents since environmental factors could play role in anxiety development (Rapee, 2012). To resolve this issue, twins' studies are usually conducted

because they are a useful way to examine genetic and environmental influences on traits and disorders and their transmission across generations (Topolski et al., 1997). Therefore, twins' studies are used to understand the origin of anxiety, which discover the role of genetics in the emergence of anxiety. Previous studies believe that the contribution of genetics in anxiety is up to 30%, while the environment contributes by 20% (Rice, 2008).

e. **Cognitive-Behavioral Learning Perspectives:** according to Behaviorism Children repeat the behavior that is being reinforced or gain rewards from it, conversely, they do not repeat the behavior that results in punishment. Children repeat the same responses even when a direct reward or punishment is not immediately given (Baum, 2017). Therefore, it appears that the anxiety response in some children brings them certain benefits. Classical conditioning theory explains the development of anxiety as a conditioned response to specific stimulus conditions (Miller, Boyer, & Rodoletz, 1990, as cited in Rice, 2008). Classical conditioning explanations of anxiety and fear have been criticized for many reasons since these explanations do not take additional factors into account (i.e. temperament and cognition). In addition, traditional behavioral experiments conducted by Watson or Raynor are often difficult to duplicate (Wenar, 1990, as cited in Rice, 2008). On the other hand, anxiety disorders are explained by cognitive distortions and irrational beliefs about the dangers of certain stimuli or situations (Schniering & Rapee, 2004).

2.1.1.6 Anxiety Assessment

Currently, there are different methods one may use in order to assess and determine anxiety degree affecting children. Psychologists may benefit from the DSM-5 (APA, 2013) in order to establish their assessment on standardized diagnostic criteria. Assessment serves many objectives, where in light of effective assessment, psychologists could provide the most appropriate and beneficial interventions, through assessment they deliver quantifiable data that serves to measure progress and relapse during the intervention (Wing, Cooper, & Sartorius, 2012).

Assessment should discover and highlight information regarding weaknesses, strengths, protective factors, and risk factors across different using varied sources (Wing et al., 2012).

Anxiety is assessed by varied methods, and the common ways are behavioral and traditional methods, where behavioral assessment focuses on the interaction between an individual and his or her environment, specifically antecedents, consequences, and reinforcement of particular behaviors, while traditional methods measuring internal components related to motivational, cognitive, and emotional aspects (Rice, 2008).

Majority of scholars prefer to utilize mixed methods by using behavioral and traditional assessment (Lopez-Fernandez & Molina-Azorin, 2011). Therapists from different theoretical perspectives may use interviews, behavioral, and traditional assessment to gain quantitative and qualitative

information that serves them to address some clinical and scientific questions related to specific disorders such as anxiety (Rice, 2008).

Behaviorism concerning about ask questions that address what, when, how, and where behaviors are occurring in addition to inquires about the intensity, frequency, and duration of the anxious behavior (Hunsley & Mash, 2007).

One prominent approach to assess anxiety is Tri-Modal Evaluation [TME] (Morris et al., 2008). TME evaluate different aspects related to anxiety those are cognitive, physiological, and motor aspects of anxiety or fear (Morris et al., 2008). Where, the first aspect is the cognitive or subjective component that describes thoughts and self-statements made by individuals.

This mode is helpful in discovering negative beliefs and thoughts that in turn activates negative responses and reactions. The second one is the motor aspect, is also referred to as overt behavior. This component addresses an observable behavior for children that reflects physiological arousal such as trembling hands or escape and avoidant behaviors (Bergman & Piacentini, 2005).

The third aspect is the physiological mode; it is a sympathetic portion of the autonomic nervous system (Morris et al., 2008). This component measures blood pressure, heart rate, respiration rate, galvanic skin response, and finger pulse blood volume (Rice, 2008). Therefore, in order to assess child or adolescent anxiety, assessment methods should use collect information from these three channels.

In order to assess the motor aspects of anxious children, observational checklists are useful and helpful. To assess cognitive or subjective components, self-report tools are appropriate. Meanwhile, to assess the physiological aspects using mechanical tools are proper (Morris et al., 2008; Rice, 2008).

In general, anxiety assessment tools include semi-structured or structured interviews, rating scales and self-report, direct observations, mechanical instruments and, diaries (Velting, Setzer, & Albano, 2004). A combination of these methods is usually used to gain a more complete picture of the child's well-being and overall functioning (Rice, 2008).

2.1.1.7 Description of the RCMAS-2

Many revisions of the RCMAS have resulted in the development of the RCMAS-2. The RCMAS-2 is a self-report scale of children's manifest and chronic anxiety. Updating in the RCMAS-2 include providing new normative data, new items to represent different aspects of anxiety in different settings, as well as RCMAS-2 covers subscales to current conceptualizations of anxiety among children (Reynolds & Richmond, 2008).

RCMAS-2 is developed to measure anxiety in children ages 6-19, the RCMAS-2 contains 49 items with "yes/no" that follow Likert system, in addition, the RCMAS-2 includes three domains or subscales (Physiological

Anxiety, Worry, and Social Anxiety), as well as a Total Anxiety scale (Reynolds & Richmond, 2008).

The Total Anxiety scale is composed of all 40 items and provides an overall estimate of the child's chronic, manifest anxiety. The Physiological anxiety subscale measures physical manifestations of anxiety, such as sleep difficulties, headaches, fatigue, and nausea, and this component is covered by 12 items (Reynolds & Richmond, 2008). The Worry subscale contains 16 items measuring emotional and cognitive symptoms of anxiety, such as feeling afraid, obsessive worry, nervous, and oversensitivity toward criticism (Reynolds & Richmond, 2008). Finally, the Social Anxiety subscale encompasses twelve items and includes items measure performance anxiety, as well as concerning social relationships, expectation, and efficacy (Reynolds & Richmond, 2008).

The RCMAS-2 contains two validity measures: Defensiveness and Inconsistent Responding (Reynolds & Richmond, 2008). The Defensiveness index contains nine items that reflect common mistakes or negative behaviors, and measure the degree to which individuals are willing to admit engaging in these behaviors or mistakes (Reynolds & Richmond, 2008).

High scores on the Defensiveness index may indicate that the individual is unwilling to acknowledge mistakes or imperfect behavior, or is trying to portray him or herself in an overly negative manner (Reynolds & Richmond, 2008).

The Inconsistent Responding index contains nine pairs of similar items, and measures the degree to which individuals endorse the content in similar ways for each pair of items (Reynolds & Richmond, 2008). High scores on the Inconsistent Responding index may indicate that the individual did not pay close attention to the meaning of the items, or responded in a careless or random manner (Reynolds & Richmond, 2008).

Reynolds and Richmond (2008) have mentioned that the RCMAS-2 had adequate internal consistency reliability coefficients. Specifically, they reported internal consistency reliability estimates of .92 for Total score, .86 for Worry subscale, .80 for Social Anxiety subscale, .79 for Defensiveness scale scores, and .75 for Physiological Anxiety subscale scores.

With regard to test-retest reliability, Reynolds and Richmond (2008) reported that reliability coefficients over a 1-week was .76 for the total score, .73 for the Physiological Anxiety subscale, .71 for the Worry subscale, .64 for the Social Anxiety subscale, and .67 for the Defensiveness scale scores.

In the clinical sample, Cronbach's alpha was .92 for the total score and values of .70, .89, .82, and .81 was reported for the physiological anxiety, social anxiety, worry, and defensiveness scales, respectively (Reynolds & Richmond, 2008).

Factor analysis of the RCMAS-2 items resulted in a four-factor structure comprising of the three anxiety factors (Social Anxiety, Physiological

Anxiety, and Worry) and one Defensiveness factor (Reynolds & Richmond, 2008).

2.2 Psychometric Properties of Measurements

In this section, an overview of psychometric properties in terms of construct validity and internal consistency or reliability will be provided, the purposes and functions of both exploratory factor analysis [EFA] and confirmatory factor analysis [CFA] in discovering and testing factorial structure and stability as methods or techniques to explore construct validity of psychological measurements.

2.2.1 Reliability

The concept of reliability describes the consistency of measuring across conditions (Dorfman & Hersen, 2013. Reliability describes to the extent to which findings are replicable (Dorfman & Hersen, 2013; Groth-Marnat, 2009).

Sufficient reliability is obtained when scales are made in a way that decreases the impact of chance, although some degree of error will always be a part of the measuring process (Dorfman & Hersen, 2013).

Scale scores are often influenced by sources of error related to inadequate measurement content, period of time between measuring, poor testing conditions, failure to follow appropriate administration procedures, or clients

characteristics such as fatigue, illness, response bias, or lack of motivation (Dorfman & Hersen, 2013).

Different types of reliability coefficients are evaluated to determine the quality of a measurement those are internal consistency reliability, test-retest reliability (stability), and alternate forms reliability. A coefficient of .80 the lower limit of acceptable reliability for tests used in clinical settings. The following texts explain reliability types (Davidshofer & Murphy, 2005).

Internal consistency reliability estimate is achieved from a single administration of a scale. It represents content sampling and the degree to which items in the scale "hang together" and assess the same construct. There are three methods for getting internal consistency coefficients (Dorfman & Hersen, 2013).

The split-half method divides a scale into equivalent halves and correlates the both. Cronbach's alpha coefficient provides more evidence than the split-half method because it is the avarage of all possible split-half correlations for the scale (Dorfman & Hersen, 2013). Alpha and split-half coefficients are designed for scales with items that have multiple possible answers.

In addition, the Kuder-Richardson-20 is a special equation of the alpha coefficient that is suggested for scales that use a “yes or no” answer system (Dorfman & Hersen, 2013).

Test-retest reliability (stability) requires administration of a scale on two (or more) times to the same examinee allows for an estimation of test-retest

stability (Dorfman & Hersen, 2013). By correlating scores across two scales, the extent to which the results can be generalized from one situation to the next is determined. This method assumes that the traits being measured are relatively stable traits. A high test-retest reliability or stability coefficient indicates only that the individuals ordered themselves in the same manner at both assessment occasions (Davidshofer & Murphy, 2005).

Alternate forms reliability it describes to content sampling, or the selection of items that occurs during the initial phases of scale development, should be completed in a systematic manner so that the tool is comprised of items that are representative of the attribute being measured (Davidshofer & Murphy, 2005).

When a sufficient number of items have been developed, a second form of the scale may be compiled. Administration of the two tools, using a variety of test intervals (e.g., four hours and four weeks), provides an opportunity to assess alternate form reliability and the degree of variance associated with content sampling. If the correlation between alternate forms administered over a couple of weeks is low, and the correlation between the scales given on the same day is also low, this suggests that the two scales have largely different content (Dorfman & Hersen, 2013).

If the correlation between the forms is high for the same day administration, but low for the two-week administration, the construct measured by the test is very likely a state variable (e.g., anxiety level, mood, etc.) that is unstable

over time. If the two test forms yield high correlations, the tools appear to measure the same construct (Dorfman & Hersen, 2013).

2.2.2 Validity

A measurement is valid if it measure or assess what it is intended to do (Finch & French, 2018). Validity focuses on the usefulness of a scale in both its theoretical and applied and aspects (Bandalos, 2018). It describes the ability of specialists to make inferences about individuals and environments from an examination of instrument scores (Dorfman & Hersen, 2013).

Varied sources support the validity of a specific scale that depends on empirical evidence, which regards to different types of validity that are face validity, content validity, criterion-related validity, and construct validity (Finch & French, 2018)., which are discussed in the following texts.

Face validity describes the extent to which the final form of a scale looks like it measures what it intended to measure and it is not a psychometric term, but it is necessary for many scales, this type of validity based on the subjective judgment of judges (Bandalos, 2018). Meanwhile, content validity refers to whether the items composing a scale reflect the construct or of interest. Items are chosen to conform to theoretical or operational aspects of trait of interest (e.g., those that reflect separation anxiety versus social anxiety) (Dorfman & Hersen, 2013).

Criterion-related validity correlates scale scores with an external indicator, and it includes two types of validity that predictive and concurrent validity

Groth-Marnat, 2009). The predictive validity describes the association between a scale and an external criterion in the future; it should be a period of time between scale score and the future performance which is considered as an external criterion (Dorfman & Hersen, 2013). Meanwhile, concurrent validity reflects the extent to which scale scores are related to some currently available measure of the criterion of interest collected at approximately the same time (Bandalos, 2018).

Construct validity addresses how well a scale assess a specific theoretical concept or construct, and this type of validity requires a three-stage process: (a) formulating an measurable definition of the construct based on a theoretical framework, (b) measuring the construct, and (c) discovering the association between scale scores and other variables hypothesized to be correlated or uncorrelated with the latent construct (Dorfman & Hersen, 2013).

2.2.3 EFA and CFA

When researcher has a solid and coherent theory that proposed particular latent constructs and their relationships to the observed variables (measured items), then CFA technique is the right choice (Bandalos, 2018).

CFA allows for testing various proposed measurement models to be compared with each other and to get the most appropriate model that fits data, which collected from a given sample (Finch & French, 2018). Using CFA requires establishing measurement model derived from strong theory

that has been empirically supported in the literature with concrete evidence (Bandalos, 2018; Finch & French, 2018).

Without strong theoretical and empirical evidence, CFA may not be appropriate (Bandalos, 2018; Finch & French, 2018). Conversely, when the theory is still under testing with few empirical evidence regarding particular latent construct, then EFA technique is the right choice (Bandalos, 2018; Finch & French, 2018).

Despite, the researcher may have a primary conception regarding the nature and numbers of the latent construct, sub-construct, how items or observed variables could be distributed across domains or sub-constructs, and the nature of associations among sub-constructs, but a priori determination of these is not required (Bandalos, 2018; Finch & French, 2018).

2.2.4 SEM and Measurement Models

SEM is a combination of statistical techniques that evaluate the relationships between one or more independent variables and one or more dependent variables (Tabachnick, Fidell, & Ullman, 2007). SEM is similar to path analysis because “both test theories of causal relationships between variables” (Gall et al., 2007, p. 371). However, SEM is more powerful than path analysis due to more reliable and valid measures of the independent and dependent variables (Gall et al., 2007). SEM provides visual diagrams of the pathways created by the hypothesized set of relationships; the model (Tabachnick et al., 2007).

The use of SEM is to replicate research on a particular latent construct in new settings and to provide psychometric evidence to support its construct validity, reliability, and item statistics. SEM isy used to evaluate the adequacy of fit between one model (based on previous research) to another model of interest (Tabachnick et al., 2007).

An investigator using SEM, purports that a hypothesized model "has a set of underlying parameters which correspond to (1) the regression coefficients, and (2) the variances and covariances of the independent variables in the model" (Tabachnick et al., 2007).

2.3 Findings of the Previous Studies

In this section, the findings of the previous studies that have attempted to investigate the psychometric properties of the RCMAS-2 were presented, in addition, levels of anxiety among children and adolescents across cultures were addressed. Furthermore, gender differences in anxiety were demonstrated.

Mahamid (2020) aimed at testing collective trauma, quality of life and resilience in among Palestinian refugee children through listing and analyzing their narratives. The sample consisted of thirty children aged (14-16) years selected from five Palestinian refugee camps in West Bank. Findings showed that Palestinian refugee children till the time of the study still suffer from collective trauma due to the 1948 Nakba. They suffer from poor quality of life; live in very narrow homes and places, with lack of

stadiums and recreational facilities. Despite that, Palestinian refugee children reported a high level of resiliency.

Lowe and Ang (2016) carried out a study in order to test measurement invariance across gender and culture on RCMAS-2 in a sample of 1,003 Singapore and U.S. adolescents. The results of multi-group confirmatory factor analyses across gender and culture partially supported measurement invariance. ANOVA results revealed significant effects of cultural and gender on anxiety level, where American adolescents had higher levels of anxiety than Singapore adolescents and females had higher levels of anxiety than males.

McGovern (2016) tested the RCMAS-2 cluster for the possibility of construct bias across age and gender, internal consistency reliability, and convergent validity with a sample of 1,002 American students, ages 7 to 19 years. CFA results supported a one-factor structure for the RCMAS-2 and bias did not exist across age and gender. Moreover, findings reported that older students and females had higher levels of anxiety than younger students and males. Internal consistency reliability for RCMAS-2 also was supported.

Wu et al. (2016) evaluated the psychometric properties of the RCMAS-2 among 370 pediatric cancer patients aged between 6–19 years in Taiwan. CFA was performed to test the factor structure. The reliability coefficient for the total score was adequate with .90. However, the reliability coefficient of Physiological Anxiety domain was low .65. The hypothesized three-factor

model did not adequately fit ($\chi 2/d.f = 2.4$; $p < 0.01$, GFI = 0.80, CFI = 0.71, RMSEA = 0.06, SRMR = 0.01).

Lowe (2015) explored the psychometric properties of a short form of the RCMAS-2 through selecting a sample of 1,003 American elementary and secondary students. The RCMAS-2 short form consists of the first 10 items. The findings of the CFA revealed one modified factor model could providan adequate fit for students. Moreover, the results supported the structural stability of the RCMAS-2 across gender. Age and gender differences were also examined and the results showed that female adolescents and adolescents aged 12-19 years had significantly higher anxiety than male children and aged 7-11 years.

Planck, Watkins, Worrell, and Hall (2013) aimed to assess the level of anxiety in the adolescent population of Trinidad and Tobago through using the RCMAS. The sample consisted of 897 adolescents that were selected from secondary schools. This study provided normative data of anxiety for the Trinidadian adolescents. Females reported greater anxiety than boys and were more likely to exhibit clinically significant symptom levels. CFA, reliability estimates, and convergent validity supported the RCMAS. Moreover, the authors reported that anxiety level was mild among adolescents in Trinidad and Tobago in Central America.

Raad (2013) aimed at discovering the psychometric properties the RCMAS-2 among children and adolescents with specific learning disabilities, and testing whether the RCMAS-2 is a good instrument for measuring anxiety

among them. Results showed that the RCMAS-2 revealed a different factor structure among students with specific learning disabilities compared to community samples of children and adolescents. The findings did not support the factorial invariance of the RCMAS-2 scores across students with and without this disability. Convergent and discriminant validity were supported for the RCMAS-2 scales and subscales Reliability estimates indicated adequate internal consistency reliability and stability for the RCMAS-2.

Al Al-Jabery and Arabiat (2011) tested reliability and construct validity of an Arabic translated version of the RCMAS. A sample of 98 children was selected from two primary schools in Jordan. Analysis showed that the RCMAS possesses satisfactory internal consistency; however, the test-retest reliability over an average of two weeks was lower than desirable. CFA results revealed factor loading with the five-factor solution that were two lie scales accounting for 75%, and 25% of the variance, and three Anxiety subscales accounting for 34%, 42%, and 24% of the variance.

Ahmad and Mansoor (2011) aimed at translating and adapting of the RCMAS-2. The RCMAS-2 was translated into Urdu language (through forward and backward translation) and adapted according to the Pakistani context. The researchers selected random sample of 400 children of 6 to 19 years from Karachi in Pakistan. Cronbach's alpha for Total Anxiety was .828 and by test retest was.939. Inter-scale correlations for the sub scales of the RCMAS-2 were significant.

Ang, Lowe, & Yusof (2011) conducted a study that to investigate the psychometric properties and American norms of the RCMAS-2 scores in a Singapore sample of 1,618 school-age children and adolescents. The American norms appear adequate for use in the Asian Singapore sample. Results of factor analyses on the RCMAS-2 scores using CFA supported the presence of a single anxiety factor, that the Total Anxiety factor, and the 5-factor structure. Reliability estimates were sufficient and discriminant and convergent validity of the RCMAS-2 scores were supported.

Varela & Biggs (2006) investigated the psychometric properties of the RCMAS and explored its factorial invariance across samples of Mexican, Mexican American, and European American children using SEM technique. CFA revealed the stability of the scale across the three groups. Reliability estimates supported the RCMAS and did not differ across groups.

Boyd et al. (2000) conducted a study in order to investigate the prevalence of anxiety using RCMAS among 1,299 Australian adolescents sample. The findings showed that about 13.2% of the Australian adolescents were identified as anxious and girls reported significantly higher levels of anxiety than boys. Finally, Dong, Yang, & Ollendick (1994) examined the level of anxiety among 825 Chinese children and adolescents aged 11-13 years. They found that anxiety level among Chinese adolescents was slight.

2.4 Summary of the Previous Studies

Several studies were conducted to test the factorial structure of the RCMAS and RCMAS-2 in different cultures and countries such as Singapore, America, Taiwan, Trinidad and Tobago, Pakistan, and Mexico (Ahmad & Mansoor, 2011; Ang et al., 2011; Lowe, 2015; Lowe & Ang, 2016; McGovern, 2016; Planck et al., 2013; Raad, 2013; Varela & Biggs, 2006; Wu et al., 2016). Most of these studies revealed stable factor structures for RCMAS and RCMAS-2 with sufficient psychometric properties to screen anxiety in different contexts. Therefore, many studies used RCMAS and RCMAS-2 to assess anxiety levels among individuals in different populations such as sick and healthy children and adolescents and pupils with specific learning disabilities. However, very few studies were conducted to test the factorial structure of the RCMAS or RCMAS-2 in the Arabic context (Al Al-Jabery & Arabiat, 2011). Therefore, to fill this gap, there is a need to retest the psychometric properties for RCMAS-2 in new contexts such as the Arabic context or in Palestine since children and adolescents live in exceptional circumstances under the Israeli occupation.

The current study benefited from previous studies in the drafting of the study problem, establishing its theoretical framework, preparation of study tools, testing methods of the psychometric properties for the RCMAS-2, selecting the statistical procedures to achieve the current study objectives, and comparing previous findings with the current study findings.

A major three strengths of the current study are; establishing normative values of the responses on the RCMAS-2 and discovering the optimal cut-off score on the RCMAS-2 among the Palestinian children 6-19 years old. Finally, this study evaluated the extent that RCMAS-2 could meet the anxiety criteria according to DSM-5.

Chapter Three

Research Methodology

Chapter Three

Research Methodology

3.1 Introduction

This chapter describes the methods, statistical techniques, research tool, variables, and procedures which were followed by the researcher to achieve the study objectives. Moreover, this chapter shows the study design and description of the sample of the study.

3.2 Study Design

A quantitative, cross-sectional, descriptive design was used to achieve the aims of the study to discover the validation of The Revised Children's manifest Anxiety Scale second edition [RCMAS-2] in the Palestinian context (The Arabic Version), the prevalence of anxiety among the Palestinian children from 6 to 19 years old in Nablus governorate, testing the effect of some demographic variables on anxiety prevalence, and discovering to what extent RCMAS-2 meets anxiety criteria according to DSM-5.

Multivariate correlational and structural equation modeling [SEM] research methods were performed in this study. Multivariate correlational methods can be applied to many psychological settings (Gall, Gall, & Borg, 2003). The RCMAS-2 - Arabic Version was used in this study to obtain empirical data that were analyzed by multivariate correlational methods.

Confirmatory factor analysis [CFA] and multiple regression analyses were conducted in this study. Specifically, CFA using SEM was performed to test the validation of the scale. CFA measures variables related to the latent factors by factor loading estimates. When each measured variable loads highly (. >50) on a specified factor and has smaller loadings on other factors, and then it is associated with the highest loading factor (Murtagh & Heck, 2012). In CFA, the investigator specifies both the number of factors and which measured variables will load highly on a particular factor (Murtagh & Heck, 2012). CFA was used to generate evidence for construct validity by examining the theory of the proposed constructs (factors).

In this study, CFA was used to confirm the existence of the three-factor structure fit of the RCMAS-2: Physiological Anxiety, Worry, Social Anxiety, and Defensiveness. CFA was used to assess a latent factor structure or construct purported by a specific theory that is based on previous research (Ahmad & Mansoor, 2011; Ang et al., 2011; Lowe & Ang, 2016; McGovern, 2016; Raad, 2013; Wu et al., 2016).

The use of SEM in this study attempted to replicate research on the RCMAS-2 in the Palestinian context and provide psychometric evidence to support its validity, reliability and item statistics. SEM was used to evaluate the adequacy of fit between one model (based on previous research) to another model of interest (Tabachnick et al., 2007).

SEM was used in this study to compare the factor structure of the RCMAS-2 in previous research to the factor structure identified in the sample of the

study. In addition, SEM was used to evaluate whether or not the 49 items of the previous studies identify the factor structure.

In order to discover to what extent RCMAS-2 meets anxiety criteria according to DSM-5; the convergent validity was assessed. According to Eysenck (2004); convergent validity is defined as the evaluation of an instrument against an already validated measure or criterion of the construct the instrument should be assessing. The DSM-5 Level 2 of Anxiety-Parent/Guardian of child age 6-17 was used as a well-established and validated scale in the Palestinian context. This scale is widely used at An-Najah Child Institute after several validation procedures, it was confirmed that the DSM-5 Level 2 of Anxiety-Parent/Guardian of child age 6-17 could well serve to measure childhood anxiety. Therefore, the DSM-5 Level 2 of Anxiety scale considered as an already validated measure or criterion of the anxiety construct. Meanwhile, RCMAS-2 considered a new instrument. To conduct convergent validity; the Pearson correlation coefficient was calculated in evaluating this kind of validity. If the two scales correlated highly ($r > 0.70$), the researcher could state there was a good convergent validity between the two measures (Drisko & Grady, 2019). In this case, we can conclude that; the RCMAS-2 meets anxiety criteria according to DSM-5.

Moreover, multiple regression analysis was used; where the primary purpose of multiple regression analysis is to predict a criterion (dependent) variable from a set of predictor (independent) variables. In addition, multiple

regression analysis was used to compare the ability of several sets of independent variables (gender, age, and place of residence) to predict the dependent variables (total score on the RCMAS-2). Multiple regression analysis was used to analyze demographic questions (IV) included in the survey in how well they predict the overall score and subscale scores (DV) of the RCMAS-2.

Furthermore, this study was designed to provide an optimal cut-off score and normative data for diagnosing anxiety by utilizing RCMAS-2 scale in order to obtain more accurate findings from the Palestinian context. Because no gold standard or optimal cutoff score has been established to diagnose pathological anxiety among Palestinian children. Thus, the aim of this study was to specify the appropriate cutoff point to carefully define and distinguish children with extreme or severe anxiety from those with a normal anxiety that by using the DSM-5 Level 2 of Anxiety-Parent/Guardian scale as a gold standard scale for the following reasons:

a. DSM-5 Level 2 of Anxiety-Parent/Guardian scale was well constructed and validated.

b. DSM-5 Level 2 of Anxiety-Parent/Guardian scale has been utilized widely in the literature.

c. DSM-5 Level 2 of Anxiety-Parent/Guardian scale was supported by various scales measuring anxiety, depression, and phobia.

DSM-5 Level 2 of Anxiety-Parent/Guardian scores on were converted to dichotomous based on a cut-off point of (4) as recommended by the American Psychiatric Association [APA] (2013). Individuals who scored more than 4 were considered to have mild anxiety and those below this cut-off point were considered as having a normal anxiety. The Youden Index method was used to determine the optimal cut-offs for the RCMAS, and sensitivity and specificity were calculated.

Youden Index equals (sensitivity + specificity – 1) (Dunstan & Scott, 2020). Where sensitivity refers to the probability that respondents are accurately diagnosed with pathological anxiety, whereas specificity refers to the probability that healthy respondents were diagnosed with no pathological anxiety, the larger the value of sensitivity and specificity indicate a better diagnosis (Tan, Cai, Li, Zhang, Tu, 2018).

3.3 Study Population

The population of this study consisted of all children from 6 to 19 years old in the Nablus governorate and from both gender. According to the Palestinian Central Bureau of Statistics (2020) about half of the citizens (200.000) in the Nablus governorate are under the age of 18.

3.4 Sampling and Sample Size

The researcher used a stratified random sampling technique, which resulted in selecting (201) children to represent gender and locations of residence of children.

Regarding SEM technique; there is no consensus on the best sample size or sample size calculation approach; however, there are recommendations for determining an appropriate sample size (Kline, 2005). However, several references recommended a sample size of 200 can provide adequate power for SEM studies (Cuttance & Ecob, 2009; Jackson; 2003; Kline, 2005). Therefore, the current study selected sample size of (201) children (109 males and 92 females), and the following table shows additional demographic information.

Table (3): Participant demographics (N = 201)

Demographic Variables		Frequency	Percentage
Gender	Male	109	54.2
	Female	92	45.8
Age Group	6-8	13	6.5
	9-14	110	54.7
	15-19	78	38.8
Place of Residence	Village	47	23.4
	City	101	50.2
	Camp	53	26.4
Total		201	100

3.5 Instrumentation

In the standard procedure of survey research for measuring anxiety, a self-report questionnaire was presented to participants. The RCMAS-2 designed to assess the level and nature anxiety in children from 6 to 19 years old. The instrument may be administered either in individual or to the group of respondents, a child responds to each statement by indicating a Yes or No answer. A response of Yes is given if the item is descriptive of the child's feelings or actions, whereas a response of No is given to items that generally are not descriptive of the child's perceptions of self (Reynolds & Richmond,

2008). Moreover, The RCMAS-2 contains six reversed items (14, 19, 24, 29, 33, and 38).

The RCMAS-2 yields scores for the four scales; includes a Total Anxiety score (TOT) and scores for three anxiety-related scales; Physiological Anxiety (PYS), Worry (WOR), and Social Anxiety (SOC). The Physiological Anxiety subscale (12 items) assesses physical symptoms, such as headaches, nausea, and fatigue that are often associated with anxiety; the Worry subscale (16 items) assesses cognitive symptoms, such as worrying about things that might happen, that are often associated with anxiety; and the Social Anxiety subscale (12 items) assesses anxiety associated with social or performance situations (Reynolds & Richmond, 2008).

RCMAS-2 also includes two validity indices: Inconsistent Responding and Defensiveness. The Inconsistent Responding index (INC) includes 9 pairs of similar items, and assesses the degree to which individuals endorse the content in similar ways for each pair of items. High scores on the Inconsistent Responding index may indicate that the individual did not pay close attention to the meaning of the items, or responded in a careless or random manner (Reynolds & Richmond, 2008). The Inconsistent Responding Index compares an individual's responses across nine pairs of items to identify contradictory responses. For the purpose of this study, the Inconsistency Index will not be analyzed; since the Cronbach Alpha reliability method will be used instead of this index, moreover; Inconsistent Responding Index is only used in the case of a single assessment.

The Defensiveness index (DEF) includes 9 items that describe common mistakes or negative behaviors, and assesses the degree to which individuals are willing to admit engaging in these mistakes or behaviors. High scores on the Defensiveness index may indicate that the individual is unwilling to acknowledge mistakes or imperfect behavior, or is trying to portray him or herself in an overly negative manner (Reynolds & Richmond, 2008).

Reynolds and Richmond (2008) have reported strong to very strong internal consistency reliability estimates for the RCMAS-2 scores. Specifically, the authors reported internal consistency reliability estimates of .92 (very strong) for Total Anxiety scale scores, .86 (strong) for Worry subscale scores, .80 (strong) for Social Anxiety subscale scores, .79 (strong) for Defensiveness scale scores, and .75 (strong) for Physiological Anxiety subscale scores. With regard to temporal stability, Reynolds and Richmond (2008) reported test score stability coefficients over a 1-week test-retest interval of .76 (strong) for the Total Anxiety scale scores, .73 (strong) for the Physiological Anxiety subscale scores, .71 (strong) for the Worry subscale scores, .64 (moderate) for the Social Anxiety subscale scores, and .67 (moderate) for the Defensiveness scale scores.

According to the manual, factor analysis of the responses of the full reference subsample on the RCMAS-2 items resulted in a four-factor structure consisting of the three anxiety factors (Physiological Anxiety, Social Anxiety, and Worry) and one Defensiveness factor (Reynolds & Richmond, 2008).

Cronbach's alpha estimated for RCMAS-2 is .92 for total (TOT) anxiety. For the RCMAS-2 alpha reliability estimates were .75 for physiological anxiety (PHY), .86 for worry (WOR), .80 for social anxiety (SOC), and .79 for defensiveness (DEF). In the clinical sample an alpha reliability value of .92 was observed for TOT and values of .70, .89, .82, and .81 was reported for the PHY, WOR, SOC, and DEF scales, respectively (Reynolds & Richmond, 2008). Table 4 illustrates blueprint of RCMAS-2.

Table (4): The Components of RCMAS-2

Subscales	Number of items	Items' numbers	Positive items	Negative items
PHY	12	1, 5, 7, 11, 15, 20, 25, 31, 34, 39, 43, 46.	All items	
WOR	16	2, 3, 6, 8, 12, 16, 17, 18, 21, 26, 30, 32, 35, 42, 45, 49.	All items	
SOC	12	4, 9, 10, 13, 22, 23, 27, 28, 36, 37, 41, 47.	All items	
DEF	9	14, 19, 24, 29, 33, 38, 40, 44, 48.	40, 44, 48	14, 19, 24, 29, 33, 38.

In order to assess responses on RCMAS-2; Reynolds and Richmond (2008) recommended the following criteria:

- A: 71 (T-score) and high considered extremely problematic.
- B: 61-70 (T-score) considered moderately problematic.
- C: 40-60 (T-score) considered "no more problematic than for the most student".
- D: 39 (T-score) and lower considered less problematic for most students.

3.6 The DSM-5 Level 2 of Anxiety-Parent/Guardian scale

This tool is the 10-item PROMIS anxiety form that assesses the pure domain of anxiety in children and adolescents based on the DSM-5 criteria. The parent or guardian about the child completes the measure prior to a visit with the clinician. Each item asks the parent or guardian to rate the severity of his or her child's anxiety during the past 7 days (APA, 2013).

Each item on the scale is rated on a 5-point Likert scale (1=almost never; 2=rarely; 3=sometimes; 4=often; and 5=almost always) with a range in score from 10 to 50 with higher scores indicating greater severity of anxiety. The T-score table should be used to identify the T-score associated with the total raw score and the information entered in the T-score row on the measure. The T-scores are interpreted as follows (APA, 2013):

A. Less than 55 = None to slight

B. 55.0-59.9 = Mild

C. 60.0-69.9 = Moderate

D. 70 and over = Severe

3.7 The Procedures

The following section describes the procedures followed to translate and prepare the RCMAS-2, and to collect data:

A. Translation of the RCMAS-2: The current study preferred to benefit from the recommendations of Pan and De la Puente (2005) method in translation psychological scales because they are more practical and easy to apply it in the reality. Pan and De la Puente (2005) method recommended five steps for translating surveys: prepare, translate, pretest, revise, and document. This method did not recommend direct translation with back translation, but instead strongly promoted a process of translation and review by a team of translators, reviewers, and adjudicators. At a minimum, the team should include two translators to perform the translation, an expert in the subject matter, a person knowledgeable in survey design, and an adjudicator (Pan & De la Puente, 2005). Based on these recommendations, the translated (the Arabic Version) scale was reviewed by three academic members from the Department of Psychology and Counseling at An-Najah National University. Three meetings were held with the reviewers and translators, in order to make required corrections in light of the goals of the current study.

B. The pilot study: The researcher conducted a pilot study, and the translated and reviewed scale was administered to a sample of (35) children in order to check the appropriateness of the Arabic version of the RCMAS-2. This procedure resulting in modifying item (22) because more than half of the sample did not understand the meaning of it.

C. The final data collection: The data collection was conducted online with a sample of parents of children aged 6-19 in the Nablus governorate, because of closing the public schools and it was difficult to reach the intended children physically and directly because of the social distancing of the COVID-19 pandemic. The data were collected over a period of two months from Nablus city, Balata, Askar, and Al-Ain camps, and some villages in Nablus. Via a google form, the online survey was sent to parents by social media tools. The online survey included informed consent, demographic questionnaire, and the RCMAS-2. The researcher asked each parent to sign a consent form before the administration of the online survey on his/her child.

D. Data analyses: after collecting data, statistical analysis was performed using two softwares; the Statistical Packages of Social Sciences (SPSS) and the analysis of a moment structures (AMOS). A preliminary exploratory data analysis was conducted to screen the data to ensure that underlying assumptions have been met to allow for appropriate statistical tests to be performed (Tabachnick et al., 2007). This analysis examined entering data accuracy, missing data, univariate and multivariate normality, and outliers.

Accuracy of data entry: The researcher checked values that out of range and implausible values. To achieve this goal frequencies and descriptive statistics in terms of range, mean, and standard deviation were calculated.

Missing data analysis: Since the researcher used an online survey via a google form, all items were designed to force respondents to answer them by the “required’ option. Therefore, no missing data were present.

Univariate and multivariate normality: Underlying procedures in SEM are based on the assumption of multivariate normality. Multivariate normality means that all the univariate distributions are normal, the joint bivariate distributions of any pair of the variables are normal, and the linear combinations of the variables are normally distributed (Kline, 2005). Although it is not very practical to test all aspects of multivariate normality, many instances of multivariate non-normality can be detected by the inspection of univariate distributions (Kline, 2005).

Therefore, univariate normality was utilized for the multivariate normality inspection in the study. Univariate normality can be examined by skew and kurtosis (Kline, 2005). Skew implies that the shape of a unimodal distribution is asymmetrical about the mean of a variable. Positive skew indicates that most of the scores are below the mean, and negative skew indicates that most of the scores are above the mean (Thomson, 2004). Kurtosis represents the peakedness of the distribution (Thomson, 2004). For the unimodal, symmetrical distribution, positive kurtosis indicates a higher peak and heavier, short tails, and negative kurtosis indicates a lower peak and thin, long tails. The positive kurtosis is described as leptokurtic and the negative kurtosis is described as platykurtic (Kline, 2005).

The data distribution of variables can be significant skew, kurtosis, or both. Researchers can test whether a variable has significant skew or kurtosis by dividing the unstandardized skewness or kurtosis index by its corresponding standard error; this ratio is interpreted as a z-test of skew or kurtosis (Kline, 2005). Therefore, ratios greater than 1.96 would have p-value less than 0.05, and ratios greater than 2.58 would have p-value less than 0.01, indicating significant skewness or kurtosis in the data.

Table (5): Skewness and Kurtosis Indices for RCMAS-2 Components

Subscale	Skewness	Standard error	Ratio	Kurtosis	Standard error	Ratio
PHY	0.255	0.172	1.48	-0.559	0.341	1.64
WOR	-0.059	0.172	0.34	-0.603	0.341	1.77
SOC	0.323	0.172	1.88	-0.577	0.341	1.69
DEF	0.334	0.172	1.94	-0.652	0.341	1.91
TOT	0.219	0.172	1.27	-0.544	0.341	1.59

As shown in Table 5; all of the skewness and kurtosis values are smaller than 1.96. These results give us good evidence of the presence of univariate and multivariate normality.

Outliers: Outliers are extreme or very unusual cases that can bias estimators and significance tests (Yuan & Bentler, 2001). Cases can be univariate or multivariate outliers. Univariate outliers have extreme scores on one variable and can be detected by examining z -scores; cases with z- scores greater than 3.0 in absolute value are unusual and maybe outliers (Kline, 2005). Based on the cut-point of 3, there were no univariate outliers, and Table 6 shows the results.

Table (6): Z-scores of RCMAS-2 Components

Subscales	Minimum value	Maximum value
Zscore (PHY)	-1.96	2.31
Zscore (WOR)	-2.02	1.75
Zscore (SOC)	-1.35	2.33
Zscore (DEF)	-1.86	1.93
Zscore (TOT)	-2.10	2.56

On the other hand, Multivariate outliers may have extreme scores on more than one variable or may have an unusual combination of values, but none of the individual variable has extreme scores. Mahalanobis distance can be used to identify multivariate outliers; for this study, the Mahalanobis distance was used to examine potential multivariate outliers in the sample.

The Mahalanobis distance is a multidimensional version of a z-score. This statistic indicates the distance of a case from the centroid (the sample mean) of all cases (Kline, 2005). The Mahalanobis distance follows a chi-square statistic with degrees of freedom equal to the number of cases. The p-value less than 0.001 ($p < 0.001$) is recommended for statistical significance in this multivariate outlier test (Kline, 2005).

AMOS 22 was used to inspect multivariate outliers of the data. Five outliers in the sample ($p< 0.001$, Kline, 2005) were observed. The percentages of the outlier cases were 2% (5/201) which considered small.

Based on the whole results of the data screening, five cases in the sample were observed as outliers and the researcher preferred to keep all cases including the outliers to get realistic results. All the subscales did not violate the univariate and multivariate normality assumption. In addition, when the data did not violate the underlying assumptions of SEM, the maximum

likelihood estimation method [ML] is a good choice (Brown, 2006). Therefore, the ML method was used to estimate the parameters of study variables.

Confirmatory factor analysis: The data in this study were analyzed using AMOS version 22 and was interpreted using the major steps of SEM of: (a) specifying the model, (2) estimating the model, (3) assessing the fit of the model, and (4) modifying the model.

Model specification. In AMOS, the rectangular shapes represent the measured or observed variables. In this study, each rectangle in Figure 1 represents an item from the RCMAS-2. There are errors variances represented by circles associated with each measured variable that is shown in Figure 1. The unobserved variables (latent factors) are represented by ovals. Every oval represents the underlying factor structure of the model being tested in the current study. Lines from each factor are directed towards the test items that belong to each subscale. Covariances are represented by two-ways directional lines connecting the underlying factors.

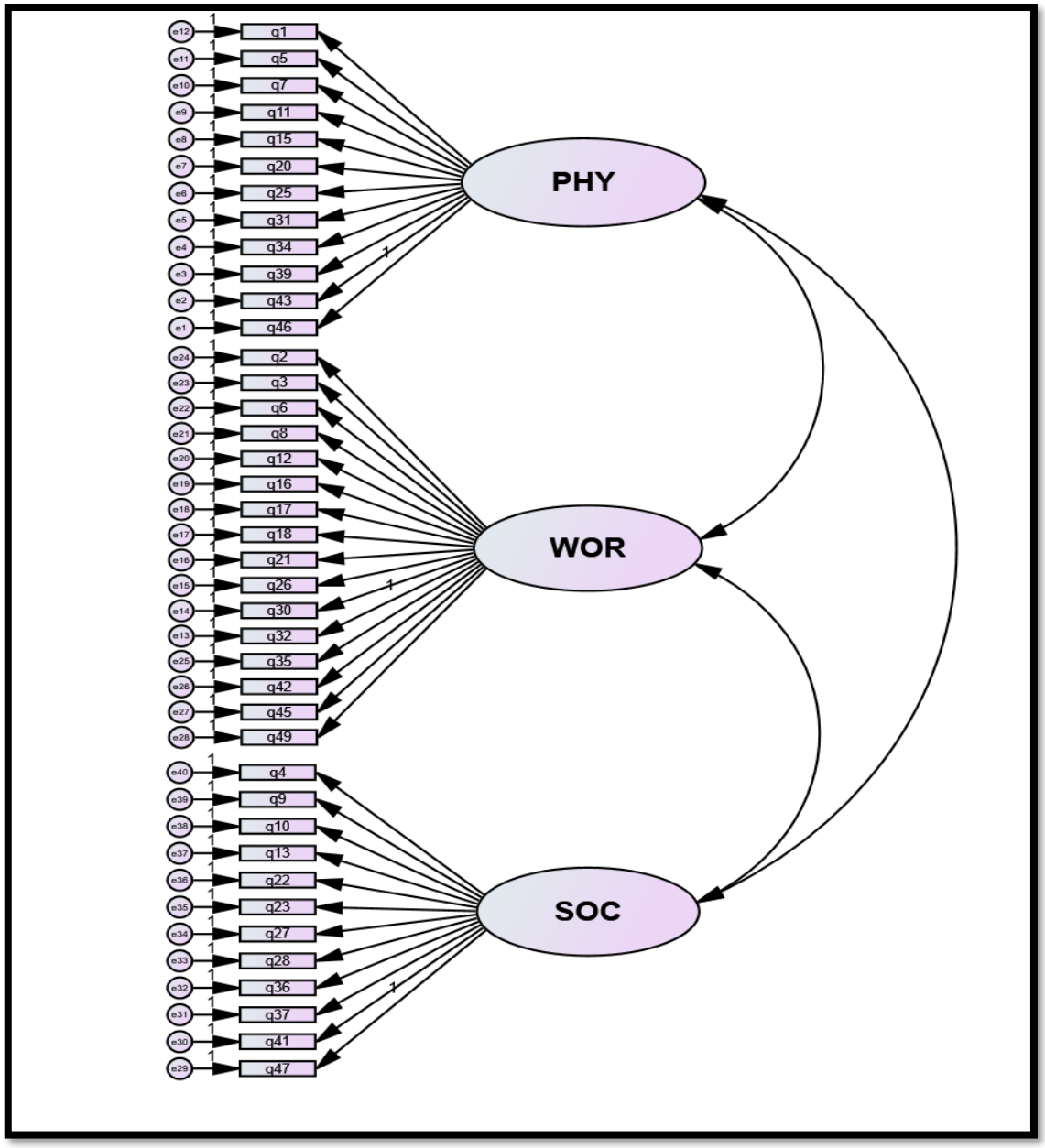

Figure (1): The factor structure model of the RCMAS-2 being tested using CFA.

Model identification. Before estimation techniques are utilized, it is important to make a determination as to whether the parameters are identified (Tabachnick et al., 2007). Parameters for the model are estimated using the data from this study and are used to produce the estimated population covariance matrix. At a minimum there must be as many data points as parameters (identified model) to allow for adequate estimating

techniques. An over-identified model is desirable because it has more data points than parameters. The formula for calculating data points is p(p+1)/2. Where p= the number of measured variables (40 items; 49 -9 items of DEF index). The number of data points in the current study is 820. The number of distinct parameters to be estimated is 83. There are more data points than parameters so the model in the current study is said to be over-identified.

Estimation techniques. Estimation methods are used to estimate the population parameters with the intent of minimizing the difference between the observed and estimated population covariance matrix (Tabachnick et al., 2007). The ML is a commonly used estimation technique. The ML is the estimation technique used in this study. Moreover, ML is used to identify modifications to a model in order to improve the model fit if the chi-square and other fit indices do not suggest a good fitting model.

Assessing fit of model. CFA was conducted on the (40) items of the RCMAS-2 with the AMOS 22 software. Comparisons were made between the proposed model from the previous studies (Ahmad & Mansoor, 2011; Ang et al., 2011; Lowe & Ang, 2016; McGovern, 2016; Raad, 2013; Wu et al., 2016) to the model of the current study. The adequacy of the model fit is evaluated by producing an estimated population covariance matrix (Tabachnick et al., 2007). If the model is a good fit, the estimated matrix, produced by the parameter estimates, will be close to the sample covariance matrix proposed by the previous studies. Several model fit indices were used in this study to evaluate the models. Table 7 presents fit indices.

Table (7): Model Fit Indices and Recommended Values for SEM Analysis (Kline, 2005)

Model fit index	Recommended values
CMIN (Chi-square p value)	> .05
CMIN/df	< 3
GFI (goodness-of-fit index)	> .90
CFI (comparative fit index)	> .90
IFI (incremental fit index)	> .90
AGFI (adjusted goodness-of-fit index)	> .80
RMR (root mean square residual)	< .05
RMSEA (root-mean square error of approximation)	< .08

Specifying an optimal cut-off: receiver operating characteristic [ROC] method was used to define cutoff value for the RCMAS-2 scale in relation to findings of the DSM-5 Level 2 of Anxiety-Parent/Guardian scale.

3.8 Statistical Methods and Data Analysis

After data collection, the researcher digitally coded the data and conducted statistical analysis SPSS and AMOS. Statistical measures calculated were:

A. Frequencies and percentages were calculated to describe the demographic data in terms of gender, age group, and place of residence.

B. Skewness and kurtosis indices for RCMAS-2 subscales and all scale were computed to check univariate and multivariate normality.

C. Z-scores range of the RCMAS-2 components were calculated to check univariate outliers.

D. The Mahalanobis distance analysis was used to check multivariate outliers.

E. Confirmatory factor analysis was conducted to check the validity of the RCMAS-2.

F. Chronbach alpha coefficient was used to calculate the reliability of subscales and all scale of the RCMAS-2.

G. Means and standard deviations were calculated to assess anxiety level among participants.

H. One sample t-test was conducted to compare sample means with corresponding the cut points.

I. Multiple linear regression by stepwise method was used to test the effects of the demographic variables on anxiety.

J. Z-scores, T-scores, and percentile values for responses on the RCMAS-2 across gender and age.

K. ROC method was used to define cutoff value for the RCMAS-2 scale.

3.9 Study Variables

A. Independent Variables. Gender with two levels (male and female), age group with four levels (6-8, 9-14, and 15-19) and place of residence with three categories (village, city, and camp).

B. Dependent variables. Anxiety in term of subscale and total score.

Chapter Four

The Results

Chapter Four

The Results

The main goal of this study was to investigate the psychometric properties of the RCMAS-2 (Arabic Version) in the Palestinian context in terms of validity and reliability. This instrument covers the three-factor structure of the RCMAS-2 which comprised of PHY, WOR, and SOC; thus the current study reexamined the stability of the factorial structure in the Palestinian context. Furthermore, it aims to assess the anxiety level among Palestinian children. Additionally, this study tests the effects of gender, age group, and place of residence on anxiety using RCMAS-2. Moreover, this study aims to produce normative-referenced percentile values for RCMAS-2 across gender and age. Accordingly; this chapter answered questions related to the above objectives:

4.1 The Results of the First Question

What are the psychometric properties of the RCMAS-2 (Arabic Version) in the Palestinian context in terms of validity and reliability?

To answer this question two steps were followed; the first was investigating the validity of the RCMAS-2 using CFA to reexamine the factorial structure of it and the second step was investigating the reliability using the Cronbach Alpha coefficient.

CFA was conducted on the 40 items of the RCMAS-2 using the ML estimation method with the AMOS 22. Comparisons were made between the proposed model and the original model. The model fitness was evaluated by fit indices and comparing with recommended values. If the model is a good fit using different fit indices, the proposed model close to and matches the original model. Several methods were used for assessing model fitness including the chi-square value, CMIN/df, goodness-of-fit index (GFI), CFI (comparative fit index), IFI (incremental fit index), AGFI (adjusted goodness-of-fit index), RMR (root mean square residual), and RMSEA (root-mean square error of approximation).

The chi-square test can be used to compare the proposed model with the original model to specify the degree of "closeness". However, the chi-square test is sensitive and its value depends on sample size. In the case of a large sample size, in spite of the fitness of the proposed model, the chi-square value tends to be significant which in turn leads to rejecting the proposed model. Therefore, several other indices were used as the chi-square ratio (chi-square value divided by degree of freedom [CMIN/df].

The goodness-of-fit indicators for the RCMAS-2 are illustrated in Table 5. As shown, the chi-square value was significant (1180.13, $p < 0.001$). While the chi-square ratio indicates a good fitting model (CMIN/df = 1.60; recommended value < 3). However, the other fit indices indicate inconsistent to accept or to reject the proposed model.

Table (8): Goodness-of-fit Indicators for the Proposed Model of the RCMAS-2 in the Palestinian context n =201

Model fit indices	The calculated value	Recommended value	The decision
Chi square	1180.13	Significant	Reject
Df	737	----	----
P-value	0.000	> .05	Reject
CMIN/df	1.60	< 3	Accept
CFI	0.801	> .90	Reject
GFI	0.769	> .90	Reject
IFI	0.805	> .90	Reject
AGFI	0.743	> .80	Reject
RMSEA	0.055	< .08	Accept
RMR	0.016	< .05	Accept

According to the above results, most of the fit indices suggest that the proposed model is not a good fit for the original model. Therefore, the researcher checked all path coefficients from subscales to their corresponding items. Seven items should be dropped (2, 8, 13, 21, 22, 42, and 43) because their coefficients were insignificant (p-value > 0.05) which means they are not loaded on their subscales.

Moreover, the modification indices [MI] index in AMOS suggested some modifications to improve the proposed model. Making covariances between the errors of items (5) and (15) in PHY, between errors of items (4) and (28) in SOC, between errors of items (23) and (37) in SOC, between item (7) in PHY and item (18) in WOR, between item (25) in PHY and item (41) in SOC, and between item (4) in WOR and item (18) in WOR. Therefore, the researcher followed these modifications since all items belong to the anxiety scale, and these modifications based on statistical justification.

CFA was conducted after the previous modifications; on the 37 items of the RCMAS-2 using the ML estimation method with the AMOS 22. The goodness-of-fit indicators for the RCMAS-2 are illustrated in Table 6. As shown, the chi-square value still significant (658.54, $p < 0.001$) as expected with a big sample size. While the chi-square ratio indicates a good fitting model (CMIN/df = 1.35; recommended value < 3) and the other fit indices indicate provided good evidences to accept the proposed model.

Table (9): Goodness-of-fit Indicators for the Proposed Modified Model of the RCMAS-2 in the Palestinian context n =201

Model fit indices	The calculated value	Recommended value	The decision
Chi square	658.54	Significant	Reject
Df	487	----	----
P-value	0.000	> .05	Reject
CMIN/df	1.35	< 3	Accept
CFI	0.904	> .90	Accept
GFI	0.833	> .90	Reject
IFI	0.906	> .90	Accept
AGFI	0.807	> .80	Accept
RMSEA	0.042	< .08	Accept
RMR	0.014	< .05	Accept

According to the above results, most of the fit indices suggest that the proposed model is a good fit for the original model. Thus we can conclude that the modified RCMAS-2 in the Palestinian context has sufficient evidence to be valid on their (37) items and the researcher suggested a new name for the modified scale to be the PRCMAS-2. The researcher checked all path coefficients from subscales to their corresponding items. All items path coefficients were significant (p-value < 0.05) which means they are

loaded on their subscales. Table 9 shows these results and Figure 2 shows the proposed model after the suggested modifications.

Table (10): The Results of Parameter Estimates of the Regressions Coefficients for the CFA of the PRCMAS-2

Parameter description	Standardized regression coefficient	P-value
Item 1 from PHY	0.459	0.010
Item 5 from PHY	0.466	0.010
Item 7 from PHY	0.524	0.008
Item 11 from PHY	0.298	0.022
Item 15 from PHY	0.525	0.008
Item 20 from PHY	0.347	0.016
Item 25 from PHY	0.488	0.009
Item 31 from PHY	0.545	0.008
Item 34 from PHY	0.621	0.007
Item 39 from PHY	0.538	0.008
Item 46 from PHY	0.212	0.024
Item 3 from WOR	0.348	0.000
Item 6 from WOR	0.597	0.000
Item 12 from WOR	0.315	0.000
Item 16 from WOR	0.542	0.000
Item 17 from WOR	0.446	0.000
Item 18 from WOR	0.642	0.000
Item 26 from WOR	0.700	0.000
Item 30 from WOR	0.537	0.000
Item 32 from WOR	0.519	0.000
Item 35 from WOR	0.438	0.000
Item 45 from WOR	0.594	0.000
Item 49 from WOR	0.567	0.000
Item 4 from SOC	0.560	0.000
Item 9 from SOC	0.480	0.000
Item 10 from SOC	0.712	0.000
Item 23 from SOC	0.673	0.000
Item 27 from SOC	0.607	0.000
Item 28 from SOC	0.655	0.000
Item 36 from SOC	0.420	0.000
Item 37 from SOC	0.644	0.000
Item 41 from SOC	0.697	0.000
Item 47 from SOC	0.487	0.000
Correlation between PHY and WOR	0.762	0.000
Correlation between PHY and SOC	0.815	0.000
Correlation between WOR and SOC	0.821	0.000

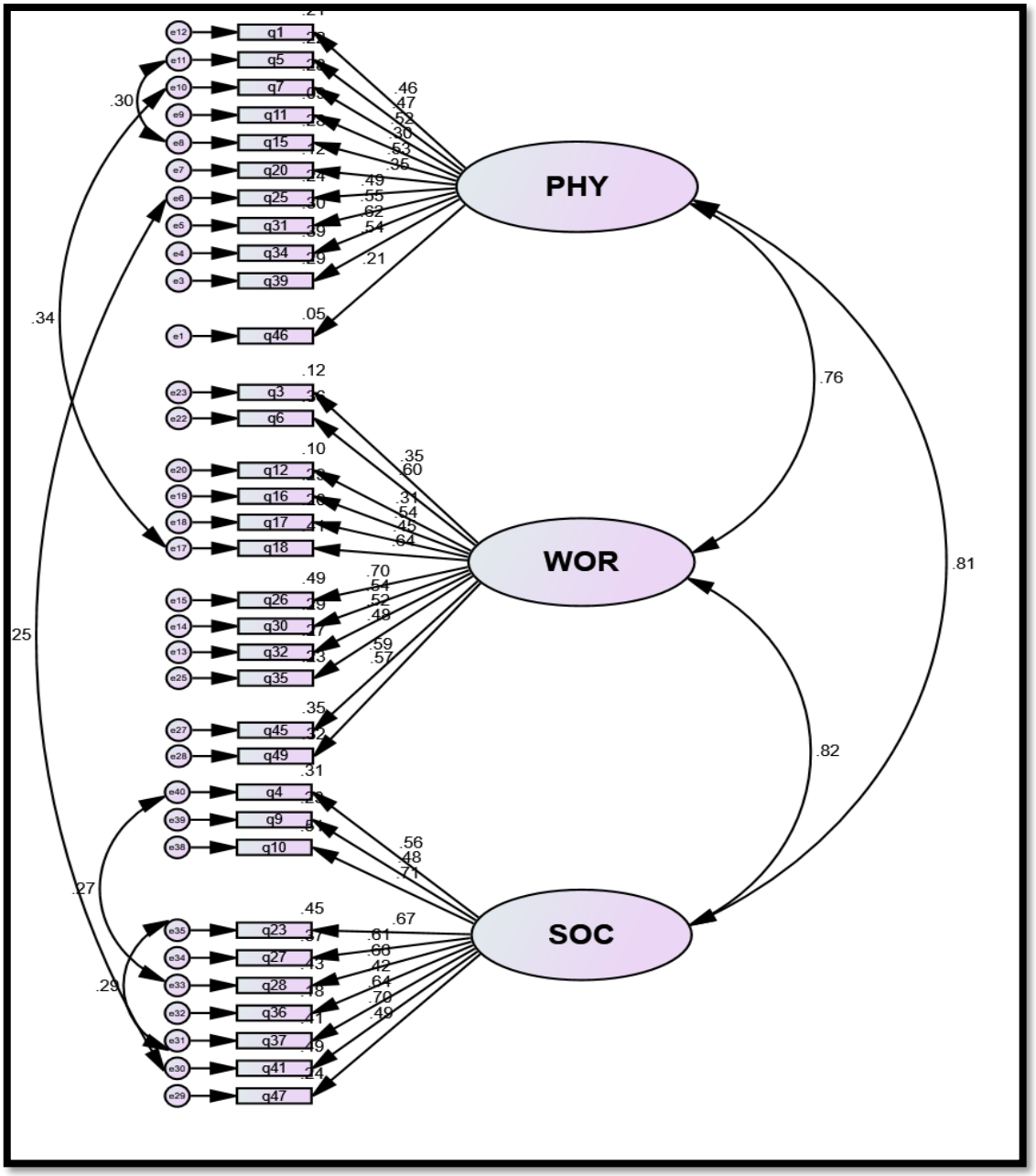

Figure (2): The factor structure modified model of the PRCMAS-2 being tested using CFA.

According to CFA results; the following table shows the blueprint of the PRCMAS-2.

Table (11): The Components of the PRCMAS-2

Subscales	Number of items	Items' numbers
PHY	11	1, 5, 7, 11, 15, 20, 25, 31, 34, 39, 46.
WOR	12	3, 6, 12, 16, 17, 18, 26, 30, 32, 35, 45, 49.
SOC	10	4, 9, 10, 23, 27, 28, 36, 37, 41, 47.

To assess the internal consistency of the PRCMAS-2; Cronbach's alphas were calculated for subscales and total scale. Cronbach's alpha for each of the subscales and total scale were PHY = 0.763, WOR = 0.846, SOC = 0.864, and the PRCMAS-2 = 0.910. Overall, there is additional evidence of the validation of the PRCMAS-2 based on the Cronbach's alpha internal consistencies.

4.2 The Results of the Second Question

Do gender, age, and place of residence affect the anxiety level among the Palestinian children 6-19 years old in Nablus governorate?

To answer this question multiple linear regression by stepwise method was used to test the effects of the demographic variables on the anxiety level among the Palestinian children 6-19 years old in Nablus governorate. Multiple linear regression was conducted using the selected demographic factors of the current study to check the most powerful predictor that can predict the total score of the PRCMAS-2. The three demographic factors of the present study were the independent variables, while the dependent variable was the total score on the PRCMAS-2. Moreover, the researcher calculated means and standard deviations of the anxiety across the demographic variables. Table 11 summarizes the descriptive statistics for each demographic variable.

Table (12): Means and Standard Deviations of the Anxiety across the Demographic Variables

Demographic Variables		Frequency	Mean	SD
Gender	Male	109	15.22	8.37
	Female	92	18.35	9.01
Age Group	6-8	13	15.61	9.50
	9-14	110	17.95	9.13
	15-19	78	15.00	8.48
Place of Residence	Village	47	14.98	9.49
	City	101	14.88	8.05
	Camp	53	21.53	8.54
Total score on the PRCMAS-2		201	16.66	8.97

Multiple linear regression analysis was performed using a stepwise method. The regression model showed that; place of residence significantly contributes to anxiety among the Palestinian children 6-19 years old in Nablus governorate. Meanwhile, gender and age could not predict anxiety. Adjusted R^2 value of the regression model was ($R^2 = 0.066$) indicated that 6.6% of the variance in the score for the anxiety was due to place of residence. ANOVA result shows that there is a significant relationship, ($F_{(1, 199)} = 15.14$, $p < 0.000$) between the place of residence and the anxiety. The standardized beta coefficient of place of residence was significant ($\beta = 0.266$, $p < 0.000$) which indicates that children from camps are more anxious comparing with those from Nablus city and its villages. While, The standardized beta coefficients of gender ($\beta = 0.133$, $p = 0.056$) and age ($\beta = -0.066$, $p = 0.341$) were insignificant. Table 10 shows the results of multiple linear regression.

Table (13): Regression Model Summary

Model	Standardized β	T	P	R^2	Adjusted R^2	F	P
Place of residence	0.266	3.89	0.000	0.071	0.066	15.14	0.000
Gender	0.133	1.92	0.056				
Age	-0.066	-0.954	0.341				

4.3 The Results of the Third Question

What are the normative values of the responses on the PRCMAS-2 among the Palestinian children 6-19 years old in Nablus governorate across place of residence?

To answer this question many procedures were followed; they were the calculation of means and standard deviations, conversion of the responses (raw scores) on the PRCMAS-2 into standard scores (Z-scores and T-scores), then the researcher calculated the percentile values focusing on 60% cut off scores which referring to cut-off for highest percentile in light of the Reynolds and Richmond (2008) suggestion in criterion (C). It is worth mentioning that the RCMAS-2 manual contains tables of T-scores that were derived from non-local samples. Therefore, the researcher preferred to establish local criteria to assess anxiety in the Palestinian context across place of residence. Table 13 illustrated means, standard deviations, conversion of the raw score into standard scores (Z-scores and T-scores), and the percentile values using the value of 60% as a cut-off score.

Table (14): Means, Standard Deviations, Standard Scores (Z-Scores and T-Scores), and the Percentile of 60%

Descriptive statistics	Place of residence		
	Village	City	Camp
Means	14.98	14.88	21.53
SD	9.49	8.05	8.54
Z-scores range	-1.61-2.27	-1.86-2.14	-1.73-2.27
T-scores range	33.94-72.65	31.44-71.40	32.69-72.65
Perc. of 60%	47.68	50.17	59.41
Number of cases above the norms	18 out of 47 (38%)	39 out of 101 (39%)	21 out of 53 (40%)

As shown in table 13, and in relation to the place of residence, Z-scores of anxiety for children from villages ranged between -1.61 - 2.27 and T-scores ranged between 33.94 - 72.65. The 60th percentile of the anxiety of children from villages is 47.68 T-score, which means children from villages who obtained above the value of 47.68 T-score are considered moderately problematic in anxiety. Those children represent (38%) of children from villages (18 respondents out of 47). Meanwhile, Z-scores of anxiety for children from Nablus city ranged between -1.86 - 2.14 and T-scores ranged between 31.44 - 71.40. The 60th percentile of the anxiety of children from Nablus city is 50.17 T-score, which means children from Nablus city who obtained above the value of 50.17 T-score are considered moderately problematic in anxiety. Those children represent (39%) of children from Nablus city (39 respondents out of 101). On the other hand, Z-scores of anxiety for children from camps ranged between -1.73 - 2.27 and T-scores ranged between 32.69 - 72.65. The 60th percentile of the anxiety of children from camps is 59.41 T-score, which means children from camps who obtained above the value of 59.41 T-score are considered moderately

problematic in anxiety. Those children represent (40%) of children from camps (21 respondents out of 53).

4.4 The Results of the Fourth Question:

To what extent RCMAS-2 does meet the anxiety criteria according to DSM-5?

To answer this question, the convergent validity was assessed. The DSM-5 Level 2 of Anxiety-Parent/Guardian of child age 6-17 was used as a well-established and validated scale in the Palestinian context. This scale is widely used at An-Najah Child Institute after several validation procedures, it was confirmed that the DSM-5 Level 2 of Anxiety-Parent/Guardian of child age 6-17 could well serve to measure childhood anxiety. Therefore, the DSM-5 Level 2 of Anxiety scale considered as an already validated measure or criterion of the anxiety construct. Meanwhile, PRCMAS-2 considered a new instrument.

To conduct convergent validity; the Pearson correlation coefficient was calculated in evaluating this kind of validity. If the two scales correlated highly ($r > 0.70$), the researcher could state there was a good convergent validity between the two measures (Drisko & Grady, 2019). In this case, we can conclude that; the PRCMAS-2 meets anxiety criteria according to DSM-5. Table 14 illustrated means, standard deviations, T-scores, and Pearson correlation coefficients between the PRCMAS-2 and the DSM-5 Level 2 of Anxiety-Parent/Guardian of child age 6-17.

Table (15): Means, standard deviations, Cronbach Alpha, and Pearson correlation coefficients for the two scales

Statistics	The PRCMAS-2	The DSM-5 Level 2 of Anxiety scale
Mean	16.66	2.15
Standard Deviation	8.97	1.13
T-scores range	31.44-72.65	33.67-75.53
Cronbach Alpha	0.910	0.869
Pearson correlation coefficient (n = 65)	0.735**	

Based on the results; The PRCMAS-2 and the DSM-5 Level 2 of Anxiety-Parent/Guardian of child age 6-17 are highly correlated ($r = 0.735$, $P < 0.01$). Therefore, the result of this study emphasized that The PRCMAS-2 has convergent validity and suitable as a research tool among the Palestinian children population and meets the anxiety criteria according to DSM-5.

4.5 The Results of the Fifth Question

What is the optimal cut-off score on the PRCMAS-2 among the Palestinian children 6-19 years old in Nablus governorate?

To answer this question ROC method was used to define cutoff value for the PRCMAS-2 scale in relation to findings of the DSM-5 Level 2 of Anxiety-Parent/Guardian scores. Scores on the DSM-5 Level 2 of Anxiety-Parent/Guardian scores were converted to dichotomous based on a cut-off point of (4) as recommended by APA (2013). Childern who scored more than 4 were considered to have mild anxiety and those below this cut-off point were considered as having a normal anxiety. The Youden Index method was used to determine the optimal cut-offs for the PRCMAS-2, and sensitivity and specificity were calculated (see Table 15).

Table (16): The optimal cut-off, percentile, sensitivity, and specificity for PRCMAS-2

State scale	Test scale	Percentile	Sensitivity	Specificity	AUC	95% CI**	Y.I.*
DSM-5 Level 2 of Anxiety-Parent/Guardian scales ≥ 4	PRCMAS-2 ≥ 20	The 65th	0.80	0.80	0.89	0.84-0.94	0.60

Using the ROC method, the result showed that 40 out of 161 (25%) participants were considered to have mild anxiety. ROC curve was performed to explore the predictive validity of the PRCMAS-2. A cutoff point of ≥ 21 (percentile: 65th) based on ROC analysis revealed a significant predictive power of the PRCMAS-2 scale for the DSM-5 Level 2 of Anxiety-Parent/Guardian scale. The area under the curve [AUC] equals .89 ($p < .001$, 95% CI = .84-.94), sensitivity .80, and specificity .80. A positive predictive value equals 84.6% where among those who had positive results on the PRCMAS-2 and the DSM-5 Level 2 of Anxiety-Parent/Guardian scales, the probability of mild anxiety was about 85%. On the other hand, a negative predictive value equals 74.3%, where among those who had negative results on both scales; the probability of having a normal anxiety was 74% (see Figure 3).

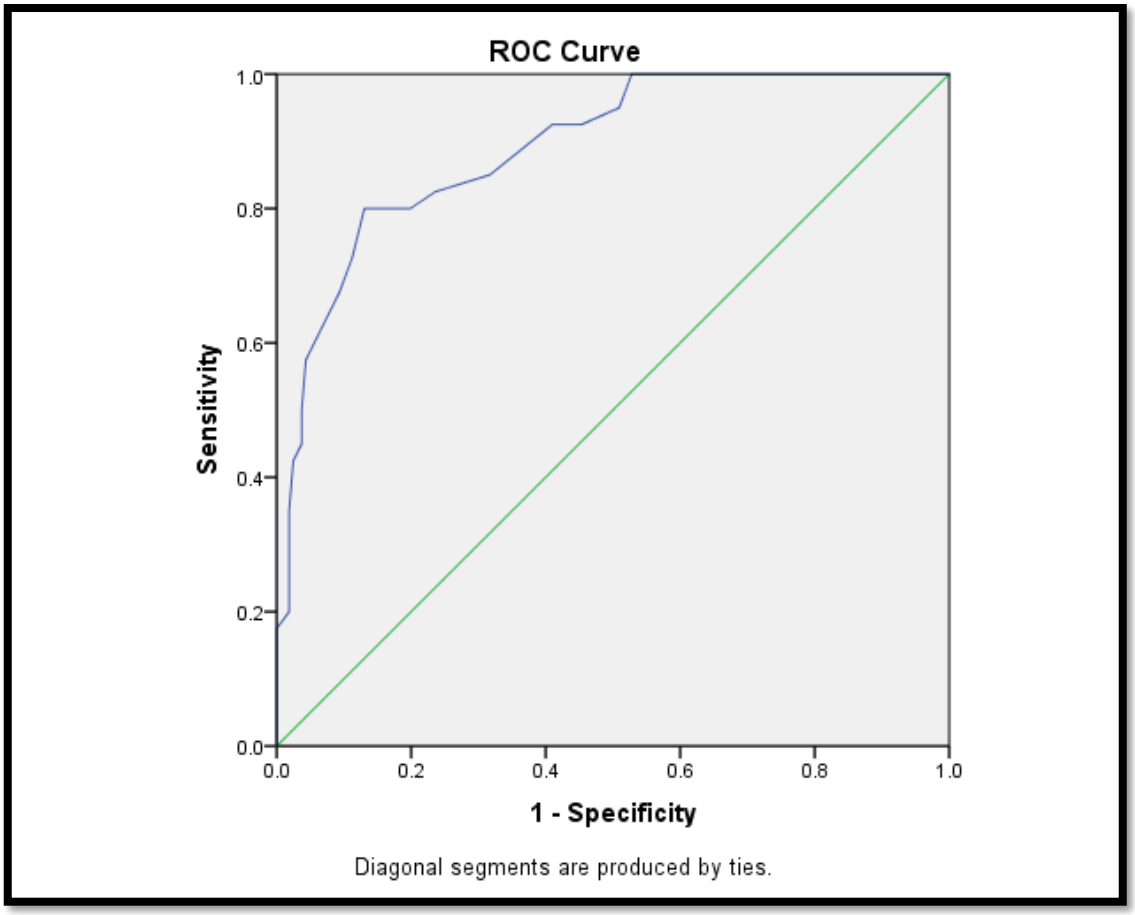

Figure (3): ROC curves of the PRCMAS-2 in relation to the DSM-5 Level 2 of Anxiety-Parent/Guardian scale.

Chapter Five

Discussion and Recommendations

Chapter Five

Discussion and Recommendations

The main goal of this study was to test whether the RCMAS-2 is an appropriate scale for use with Palestinians, that through the examination of the scale's psychometric properties in the Palestinian context. Where, this study examined the factor structure (using CFA), convergent validity, and reliability of the RCMAS-2 scores among Palestinian. In addition, this study also investigated the anxiety level among Palestinian children 6-19 years old in Nablus governorate in light of some demographic variables. Finally, this study aimed to produce normative-referenced percentile values for RCMAS-2 across gender and age.

Accordingly, the findings of the study were discussed. Each research question was presented, answered, discussed, and linked to the previous literature, where possible. Implications, limitations, and recommendations were then presented.

5.1 Discussion of the First Question's Results

This question interested in discovering the psychometric properties of the RCMAS-2 (Arabic Version) in the Palestinian context in terms of construct validity and reliability. In order to answer these question two-steps were followed; the first was investigating the validity of the RCMAS-2 using CFA to reexamine the factorial structure of it and the second step was investigating the reliability using the Cronbach Alpha coefficient.

Based on preliminary results, most of the fit indices suggested that the proposed model was not a good fit for the original model. Therefore, the researcher checked all path coefficients from subscales to their corresponding items. Seven items were dropped (2, 8, 13, 21, 22, 42, and 43) because their coefficients were insignificant and they are not loaded on their subscales.

Probably those items need to be reworded into the Arabic language to be more close to measuring anxiety and those items may belong to other psychological constructs rather than anxiety construct in the Palestinian context. When the researcher took a closer look at those items, he noticed that item 2 (I am nervous) perhaps it measures anger rather than anxiety.

Item 8 (I get nervous around people) it could be associated with social phobia rather than anxiety. Item 13 (Others seem to do things easier than I can) perhaps it measures self-evaluation, self-esteem, or self-confidence and this item is likely make respondents defensive and sensitive which in turn pushed them to answer this item by underestimating manner.

Item 21 (I worry about what my parents will say to me) perhaps parents' authority and their negative judgments is not considered as source of anxiety since in Islamic, Arabic, and collectivistic culture as Palestine; respecting parents' authority is one of children duty and moral responsibility. Consequently, it is more likely respondents answered this item by underestimating manner. Item 22 (I feel that others do not like the way I do

things) perhaps it measures self-awareness or social emotional intelligence rather than anxiety.

Item 42 (I worry when I go to bed at night) it could be suitable for younger children more than older children and perhaps it associated with separation anxiety rather than generalized anxiety as RCMAS-2 supposed to measure. Finally, item 43 (It is hard for me to keep my mind on my schoolwork) it could be associated with attention or hyperactivity rather than anxiety.

After eliminating those items from the RCMAS-2 measurement model the modification indices index in AMOS suggested some modifications to improve the proposed model. Making covariances between the errors of items (5) and (15) in PHY, between errors of items (4) and (28) in SOC, between errors of items (23) and (37) in SOC, between item (7) in PHY and item (18) in WOR, between item (25) in PHY and item (41) in SOC, and between item (4) in WOR and item (18) in WOR.

Therefore, the researcher followed these modifications since all items belong to the anxiety scale and these modifications based on statistical justification. When the researcher checked the subscales' correlation coefficients matrix, all of the coefficients were high and significantly positively correlated ($r_{PHY \text{ and } WOR} = 0.762$, $p < 0.01$, $r_{PHY \text{ and } SOC} = 0.815$, $p < 0.01$, and $r_{WOR \text{ and } SOC} = 0.821$, $p < 0.01$). Accordingly, covariances between the errors of the aforementioned items are logical because they belonged to a correlated subscales and formed one major construct namely anxiety.

CFA was conducted after the previous modifications; on the 37 items of the RCMAS-2 using the ML estimation method with the AMOS 22. The goodness-of-fit indicators for the RCMAS-2 provided good evidences to accept the proposed model where CFI = 0.904, IFI = 0.906, AGFI = 0.807, RMSEA = 0.042, and RMR = 0.014. Thus, we can conclude that the modified RCMAS-2 in the Palestinian context has sufficient evidence to be valid on their (37) items and the researcher suggested a new name for the modified scale to be the PRCMAS-2.

All items path coefficients were significant (p-value < 0.05) and ranged between 0.212-0.621 for PHY, ranged between 0.348-0.700 for WOR, and ranged between 0.420-0.712 for SOC. To assess the internal consistency of the PRCMAS-2; cronbach's alphas were calculated for subscales and total scale. Cronbach's alpha for each of the subscales and total scale were PHY = 0.763, WOR = 0.846, SOC = 0.864, and the PRCMAS-2 = 0.910. Overall, there is additional evidence of the validation of the PRCMAS-2 .

In the current study, the results confirmed the stability of factor structure, validity, and internal consistency of PRCMAS-2 for measuring anxiety among Palestinian children. These findings are consistent with the relevant previous studies, which have supposed that RCMAS-2 is a good measurement tool to identify anxiety among children and adolescents. Also this study asserted that RCMAS-2 has a three-factor solution and the items loaded as supposed on their corresponding subscales including Physiological Anxiety, Worry, and Social Anxiety (Ahmad & Mansoor, 2011; Ang et al.,

2011; Lowe & Ang, 2016; McGovern, 2016; Raad, 2013; Reynolds & Richmond, 2008; Wu et al., 2016).

5.2 Discussion of the Second Question's Results

This question interested in testing impacts of gender, age, and place of residence on anxiety level among the Palestinian children 6-19 years old in Nablus governorate. In order to answer this question multiple linear regression by stepwise method was used to test the effects of the demographic variables on the anxiety level. Furthermore, the current study checked the most powerful predictor that can predict the total score of the PRCMAS-2. Consequently, multiple linear regression analysis was performed using a stepwise method. The regression model showed that; place of residence significantly contributes to anxiety. Meanwhile, gender and age could not predict anxiety.

Adjusted R^2 value of the regression model was ($R^2 = 0.066$) indicated that 6.6% of the variance in the score for the anxiety was due to place of residence. ANOVA result showed that there is a significant relationship, ($F_{(1, 199)} = 15.14$, $p < 0.000$) between the place of residence and the anxiety. The standardized beta coefficient of place of residence was positively significant ($\beta = 0.266$, $p < 0.000$) which indicates that children from camps (Mean = 21.54, SD = 8.54) are more anxious comparing with those from Nablus city (Mean = 14.88, SD = 8.05) and its villages (Mean = 14.98, SD = 9.49). Palestinian children in refugee camps suffer from poor quality of life; they live in very narrow homes and places, with lack of stadiums and recreational

facilities. They have a sense of uncertainty about their future and feel insecure, distressed, and frustrated due to their political, social, psychological, and economic situations; therefore, they tend to show more anger and nervousness compared to children living in cities and villages. Consequently, Palestinian refugees' children more likely to develop anxiety symptoms, whereas children from cities or villages are more likely to feel secure and comfortable since they live in better conditions in terms of social, psychological, and economic environments. The current findings supported previous research regarding mental health status among Palestinian refugees' children and consistent with relevant studies (Mahamid, 2020; Marshall, 2014; van Heemstra, Scholte, Ehring, & Boelen, 2020).

5.3 Discussion of the Third Question's Results

This question interested in producing normative values on the PRCMAS-2 among the Palestinian children across place of residence. Despite the RCMAS-2 manual contains tables of T-scores that were derived from non-local samples. Therefore, the researcher preferred to establish local criteria to assess anxiety in the Palestinian context across place of residence. The findings revealed that Z-scores of anxiety for children from villages ranged between -1.61 - 2.27 and T-scores ranged between 33.94 - 72.65. The 60th percentile of the anxiety of children from villages is 47.68 T-score, which means children from villages who obtained above the value of 47.68 T-score are considered moderately problematic in anxiety. Those children represent (38%) of children from villages (18 respondents out of 47).

Meanwhile, Z-scores of anxiety for children from Nablus city ranged between -1.86 - 2.14 and T-scores ranged between 31.44 - 71.40. The 60th percentile of the anxiety of children from Nablus city is 50.17 T-score, which means children from Nablus city who obtained above the value of 50.17 T-score are considered moderately problematic in anxiety. Those children represent (39%) of children from Nablus city (39 respondents out of 101).

On the other hand, Z-scores of anxiety for children from camps ranged between -1.73 - 2.27 and T-scores ranged between 32.69 - 72.65. The 60th percentile of the anxiety of children from camps is 59.41 T-score, which means children from camps who obtained above the value of 59.41 T-score are considered moderately problematic in anxiety. Those children represented (40%) of children from camps (21 respondents out of 53).

The level of total anxiety scores among the Palestinian sample (Mean = 16.66, SD = 8.97) was greater than those had been reported in several studies. Dong et al. (1994) found the anxiety level among Chinese adolescents was slight (Mean = 9.09, SD = 5.27). Planck et al. (2013) reported it was mild among adolescents in Trinidad and Tobago in Central America (Mean = 12.54, SD = 5.92), in Australia (Mean = 10.73, SD = 5.81, Boyd et al., 2000), and in the United States (Mean = 11.70, SD = 6.21; Reynolds & Richmond, 2000). Meanwhile, the anxiety level in the Palestinian sample in the current study is slightly lower than the Jordanian sample (Mean = 18.66, SD = 5.97; AL Jabery & Arabiat, 2011).

Furthermore, about 39% of the Palestinian children exhibited clinically significant levels of anxiety; a finding is upper the range of anxiety prevalence rates founded in different studies from other nations (Boyd et al., 2000; Dong et al., 1994; Pela & Reynolds, 1982; Planck et al., 2013; Reynolds & Richmond, 2000).

Based on the current findings, it seems that Palestinian society is characterized by a high level of anxiety based on the normative and mean values that were higher than what was reported in previous studies. Consequently, the findings indicate difficulties experienced by Palestinians, insecurity, and repeated exposure to harsh and traumatic events, especially among children and adolescents. Palestine is a war and conflict zone. Where Palestinian people including children and adolescents have complicated, difficult, and miserable conditions; accordingly, they face many threats. The most important and critical threat is the political challenge represented in the chronic Israeli military occupation, its violence against the Palestinian people since 1948, and apartheid policy. According to B'Tselem (2020) the period between 19 January 2009 and 31 December 2020, Israeli forces killed 3,570 in the Palestinian territories and just in 2019, about 15 thousand Palestinians were injured, and at least 36% of them were children. Palestinian children and adolescents are exposed to Israeli violence directly and indirectly. For example, those who live in villages commonly face arrest, detention, violence, and harassment at the hands of Israeli soldiers and settlers during going to their schools.

On the other hand, violence among Palestinian is widespread, and one location is schools, which violence spreads between students themselves and between students and their teachers. In addition, domestic violence is common in Palestinian society and families suffer economic difficulties, especially during the COVID-19 pandemic. Therefore, all of these factors lead to feeling insecure and developing anxiety symptoms among children and adolescents.

5.4 Discussion of the Fourth Question's Results

This question interested in assessing the convergent validity of PRCMAS by using the DSM-5 Level 2 of Anxiety-Parent/Guardian of child age 6-17 scale. The Pearson correlation coefficient was calculated for the two scales. Finding revealed that, the two scales were highly correlated ($r = 0.735$, $P < 0.01$). Therefore, the result of this study emphasized that The PRCMAS-2 has convergent validity and suitable as a research tool among the Palestinian children population and meets the anxiety criteria according to DSM-5. The given association ($r = 0.735$, $p < .001$) can be interpreted based on the items' content in the both scales where similarities were found.

5.5 Discussion of the Fifth Question's Results

This question interested in investigating the optimal cut-off value for PRCMAS-2. To answer this question ROC method was used based on the DSM-5 Level 2 of Anxiety-Parent/Guardian scores as a golden standard.

The findings revealed that 40 out of 161 (25%) participants were considered to have mild anxiety. A cutoff point of ≥ 21 (percentile: 65th) based on ROC analysis revealed a significant predictive power of the PRCMAS-2 scale for the DSM-5 Level 2 of Anxiety-Parent/Guardian scale. The area under the curve [AUC] equals .89 ($p < .001$, 95% CI = .84-.94), sensitivity .80, and specificity .80. A positive predictive value equals 84.6% where among those who had positive results on the PRCMAS-2 and the DSM-5 Level 2 of Anxiety-Parent/Guardian scales, the probability of mild anxiety was about 85%. On the other hand, a negative predictive value equals 74.3%, where among those who had negative results on both scales; the probability of having a normal anxiety was 74%. Thus, the PRCMAS-2 proved to be a good measure to identify cases of pathological anxiety among Palestinian children with acceptable accuracy.

To date -as far as the researcher knows- no measurement tool related to anxiety with sufficient psychometric evidence is available in the Palestinian context and the need for this kind of scales is urgent.

In comparison to previous studies, several authors have recommended minimum sensitivity and specificity values of .75 or .80 in clinical settings (Carter, Briggs-Gowan, & Davis, 2004; Glover & Albers, 2007; Gredler, 2000). In the current study, scores with .80 for sensitivity and specificity values were yielded and considered as the optimal cut-score on a ROC curve. In this regard, Kong (2017) aimed to specify appropriate cutoff scores for RCMAS-2. The AUCs for the total scale and subscales ranged between .82

and .87, where sensitivity was .89 and specificity was 0.82. In light of the previous studies and the current research findings, PRCMAS-2 seems to be promising tool in clinical setting in Palestine.

5.6 Limitations

Despite the current study provided empirical support for PRCMAS-2, the sample size is relatively small to generalize findings to a greater population because data collection was through online survey and just from Nablus area, which limits the number of respondents. It is possible that the parents' respondents in this study have technical experiences, social media accounts, smart phones, internet connections, and interested filling out the online survey for the scientific purposes and those who did not participate in the current study might have had different conditions.

5.7 Recommendations and Suggestions

A. The study recommends replicating this research with larger and representative samples.

B. The study encourages revalidating the PRCMAS-2 structure across gender, age groups, and place of residence.

C. The study encourages using PRCMAS-2 in clinical settings in Palestine because the findings revealed good psychometric evidence.

D. Mental health care should be delivered by applying individual and group psychotherapy techniques and activities for anxious children and

adolescents to prevent symptoms of anxiety from getting worse especially among those who live in refugee camps.

E. Protective factors such as resilience and sumud should be developed among Palestinian children and adolescents in order to reduce anxiety levels among them.

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Annexes

Annex (1)

Parent Approval

Dear Parent,

The An Najah Child Institute is currently validating a new test for childhood anxiety disorder for use in Palestine.

The Revised Manifest Childhood Anxiety Scale 2(RMCAS2)is an internationally standardized test that has been in use for over 20 years with the most recent version being updated in 2011. The Revised Manifest Childhood Anxiety Scale 2 is available in English and used to measure childhood anxiety from ages 6 to 14.years of age. AnNajah Child Institute has been granted permission from the RMCAS 2 creator to produce and validate the first official version of the RMCAS2 in Arabic (RMCAS2-A).

If you choose to participate you and your child will participate in one session using the RMCAS2-A and a clinical interview based on the DSM5 Symptom list for anxiety. In addition, you may be asked questions about your child's behavior and developmental history

After the evaluation you will be entitled to a session with a mental health professional, employed by An Najah Child Institute, in order to review the findings of the tests completed and to hear any recommendations that might occur from the findings.

If you are interested in participating in this study please call the An Najah Child Institute at 235-2570 and ask to speak to the research department

Much Thanks for your interest!

Annex (2)

Approval from the company design the test

REV 9/08

Office of the Institutional Review Board

PLEASE BE SURE TO COMPLETE ALL SECTIONS

Current Date of Submission: 08/06/2016

IRB office use only: Date received in IRB office (stamp)_____

If this is a revision in response to an IRB Report of Action (ROA)-approval pending, indicate the date of the ROA: _____

Title of Research: Validation of the Revised Manifest Childhood Anxiety Scale (RCMAS) in Arabic within a Palestinian Context

Principal Investigator: Dr**.** Denise ZiyaBerte PhD

Department/School: An Najah Child Institute/ Department of Clinical Psychology

Room # where mail can be sent: ACI

Phone 059 572 7944 **E-mail** denise.berte@najah.edu

Other Investigator: Dr. Zaher Nazzal MD, ABMC

Department/School: Faculty of Medicine and Health Sciences

Room # where mail can be sent ACI

Phone 059 234 5113 **E-mail:** znazzal@najah.edu

Type of Research (please check):

Dissertation _____ (PLEASE NOTE: IRB review of dissertation research requires prior successful proposal defense.)

PhD Defense Date: _____

Master's Thesis

Class project _____

all other projects x (ACI sponsored research project)

** If the primary investigator is a student, check here to indicate that your faculty sponsor has read the entire application, including cover letters, informed consents, and data collection instruments, and asserts that this application is accurate and complete.

Dates Human Subjects Portion of Research Scheduled: from: 01/07/2016 to 01/01/2017.

Site(s) of Human Subject Data Collection: An Najah Child Institute

(*NOTE: If sites are administratively separate from the University, please submit approval letters, or indicate when they will be forthcoming.)*

Funding Agency (if applicable): None at present

I. NATURE OF THE RESEARCH

In the judgment of the Principal Investigator, this research qualifies for which of the following types of review:

Review Type: exempt (category) ___x__expedited (category) full Board[1]

[1] All research that is either externally funded or greater than minimal risk must be reviewed by the full Board

II. PURPOSE OF RESEARCH

Briefly describe the objective(s) of the research (please keep description jargon free and use 100 words or less; the IRB will file this information in our descriptions of approved projects).

The objectives of this study are to validate a translated version of the Revised Manifest Childhood Anxiety Scale (RMCAS-Arabic Version) and insure that questions are culturally relevant, predictive and equivalent to the results of both clinical observation and a second measure of anxiety (Symptoms of the DSM5) on children between the ages of 6 to 12 years of age. Participants will be a mixed group of children (30) from a normalized setting.

III. METHODS

Approximate number of subjects: 32

Subjects will be (check only if applicable):

_x_ minors (under 18)

involuntarily institutionalized

mentally handicapped

Describe <u>in detail</u> how the subjects will be selected and recruited: Children from selected partner organizations (elementary schools) related to the ACI,whose age is within the age of 4 to 12 will be solicited for participation in the study. Parents whose children fit the research criteria will be given information about the

study including an approved Consent for Participation Form. Those agreeing will be included in the study.

All participants will be assured that the services from the partner organization will not be affected in any manner due to their participation with this program. The first 15 female and 15 male volunteer participants will form the first group.

Describe exactly what will be done to subjects once they have agreed to participate in the project:

All children and parents that agree to be included in the study will then participate in one evaluation session (completing the RCMAS, clinical interview and DSM5 criteria for anxiety. At least one caretaker and the identified child will attend. Child will complete all measures and information will be verified with caretaker. Each session will last no more than two hours (mean time for completion is 1 hour).

Upon completion each parent will receive one session explaining the results and any service recommendations with appropriate referral for the control group.

What incentives will be offered, if any? The RCMAS (Arabic Version) and clinical interview will be given to all 30children free of charge (a value of approximately 300 shekels

IV. RISKS/BENEFITS TO PARTICIPANTS

Identify possible risks to subjects:

(NOTE: These may be of a physical, psychological, social or legal nature. If subjects are vulnerable populations, or if risks are more than minimal, please describe what additional safeguards will be taken.)

There are few risks to the participants in the study.

There will be mental health professionals available for each session.

If emotional reactions to the questionnaires or interviews are noted or further individual support requested participants will be given immediate support and then referred to an appropriate mental health provider as the ACI does not provide services to adults.

What are the benefits and how will they be optimized?

The potential benefits to the children and families are significant. Early identification of childhood anxiety is crucial in obtaining appropriate services to reduce long term risks of childhood anxiety.

Do benefits outweigh risks in your opinion? Yes X No

Are there potential legal risks to the Principal Investigator or University? Yes No X

V. INFORMED CONSENT

Describe how participants will be informed about the research before they give their consent. Be sure to submit with this protocol a copy of the informed consent/assent letter(s) you will use. Please prepare your informed consent letter at the 8th grade reading level or lower as dictated by the needs of the subjects. (See IRB website for required elements of an informed consent.)

Parents will receive written information and if requested a verbal explanation of the RCMAS Arabic Version, as well as methods of interviewing for clinical survey related to the DSM-5.

Participants will receive information verbally about the benefits and potential risks to their participation.

Lastly before participating in the evaluation session parents will sign a written consent form that will be verbally reviewed by the evaluator.

VI. PRIVACY/CONFIDENTIALITY

Please describe whether the research would involve observation or intrusion in situations where subjects have a reasonable expectation of privacy. If existing records are to be examined, has appropriate permission been sought; i.e. from institutions, subjects, physicians? What specific provisions have been made to protect the confidentiality of sensitive information about individuals?

Each participant will be given a numeric code, held by the principle investigator in a locked file throughout the research. All data collected will be coded and any identifying information removed.

No information will be given to any outside entity without the written consent of the parent

I, _____, parent of

_____

am voluntarily registering as a part of the Revised Manifest Childhood Anxiety. Scale Arabic Version (RCMASA) Validation Study.

I am aware of the following:

1. This study includes an internationally standardized measure of childhood anxiety that has been translated into Arabic and that is used to measure a child's level of anxiety related to biological sensations, social situations, worry, or life events. The study is to determine if the RCMASA is a useful tool in the Palestinian context

2. My participation is voluntary and will not affect the services that my child receives from the An Najah Child Institute or partner agency in any way.
3. I will participate in one evaluation sessions with my child (no more than two hours) and will be invited to attend a session to have the results presented to me by a mental health specialist, employed by An Najah Child Institute.
4. I will receive the RMCASA and clinical interview free of charge.
5. During the sessions I will be asked questions about my child's feelings and behaviors. I may be asked some questions about their developmental history as well.
6. All written and published materials will look at results as a whole and provide no information about me, my child, or my family as an individual
7. All questionnaires will be coded numerically and my name , my child's name and my family name will not be included
8. All materials will be held in a safe and secure area and only examined by members of the staff related to the project

The expected benefits of my participation are the following:

1. Increased information about Childhood Anxiety
2. Increased knowledge about the feelings and possible levels of anxiety for my child
3. Referral information if any areas of concern for my child are noted.

There are no expected negative out comes from participation in this study.

1. If any individual decides that they cannot continue with their commitment to participate they will be discharged from the study without repercussions.
2. If any individual feels uncomfortable or becomes distressed due to participation they will be provided immediate support from a mental health

professional and a recommendation for continuing community mental health services as appropriate

I am aware of the previous points and am agreeing voluntarily to participate in the RMCASA Validation Study. I can withdraw my agreement at any time.

Name: _____

Signature: _____

Date: ____

_____

Annex (3)

The test

تحية طيبة وبعد:

يقوم الطالب بأجراء دراسة للتحقق من صلاحية النسخة العربية لمقياس قلق الطفولة (Validation of the Arabic Revised Manifest Childhood Anxiety Scale–RCMAS– in the Palestinian Context) في السياق الفلسطيني يستهدف الطالب الأطفال في محافظة نابلس ، وذلك استكمالاً لمتطلبات الحصول على درجة الماجستير في علم النفس الإكلينيكي ، لذا يرجى التكرم بالإجابة على فقرات هذا الاختبار بكل شفافية وموضوعية، فهذا يخدم أغراض البحث العلمي، وسيتم التعامل مع البيانات بمنتهى السرية، و المتابعة المهنية لمن يكتشف إن لدية القلق .

الطالب: محمد مبسلط
جامعة النجاح الوطنية

القسم الأول: البيانات الشخصية:

يرجى وضع دائرة حول الاجابة التي تناسبك فيما يلي:

الجنس: 1. ذكر 2. أنثى.

العمر: .....

الصف الدراسي :.....

مكان السكن: 1. مدينة 2. قرية 3. مخيم.

ضع دائرة حول جواب واحد لكل جملة.
اضغط بقوة عند رسمك للدائرة حول الإجابة.

الرقم	السؤال	نعم	لا
1	كثيرا ما أشعر بألم في معدتي		
2	إنا شخص عصبي		
3	عادة ما أخاف أن يحصل لي شيء سيء		
4	أخاف أن يسخر مني زملائي في الصف		
5	كثيرا ما يصيبني الصداع		
6	أخاف أن لا يحبني الاخرين		
7	أستيقظ من النوم مع شعور بالخوف أحيانا		
8	أشعر بالتوتر عند تواجدي مع الناس		
9	أشعر بأن هنالك من سيقول لي أن طريقة فعلي للأشياء خاطئة		
10	أشعر بأن الاخرين سيسخرون مني		

أكمل البند 11 وما بعده إلا إذا طلب منك أن تتوقف هنا			
11	من الصعب علي اتخاذ القرارات في الامور		
12	أتوتر عندما لا تسير أموري بشكل صحيح		
13	يبدو أن الاخرين يقومون بالأمور بسهولة أكثر مني		
14	أحب كل الأشخاص الذين أعرفهم		
15	كثيرا من الأحيان لا أستطيع التقاط أنفاسي		
16	أشعر بالقلق كثيرا من الاوقات		
17	أتضايق عندما يهزأ مني الاخرين		
18	أخاف من الكثير من الأشياء		
19	أنا لطيف دائما		
20	أشعر بالغضب بسرعة		
21	بالقلق حيال الأشياء التي سيقولها والدي لي		
22	أشعر بأن الاخرين لا يحبون كيفية عملي للأشياء		
23	أخاف من التكلم أمام طلاب صفي		
24	أنا دائما مؤدب		
25	من الصعب علي النوم خلال الليل		
26	أقلق حول رأي الناس عني		
27	أشعر بالوحدة حتى عندما يكون هنالك أشخاص معي		
28	يسخر مني الاخرين في المدرسة		
29	أنا دائما جيد		
30	إن مشاعري تجرح بسهولة		
31	إن يداي كثيرة التعرق		
32	أخاف أن أرتكب أخطاء أمام الاخرين		
33	إن تعاملي جيد مع الجميع دائما		
34	انا دائما متعب		
35	أشعر بالقلق حول الأشياء التي سوف تحصل		
36	إن غيري من الناس أسعد مني		
37	أخاف أن اتكلم عندما أكون ضمن مجموعة		
38	أقول الحقيقة دائم		
39	أحلم أحلاما مزعجة		
40	أشعر بالغضب أحيانا		
41	أشعر بالخوف من أن يسألني المدرس في الصف		
42	أشعر بالقلق عندما أنام في السرير خلال الليل		
43	من الصعب علي أن أركز في دراستي		
44	أحيانا أقول أشياء لا يجدر بي قولها		
45	أشعر بالخوف من أن يضربني احد ما		
46	كثيرا ما أتحرك خلال جلوسي في مقعدي		
47	إن كثيرا من الناس لديهم موقف معاد لي		
48	لقد سبق أن كذبت		
49	أشعر بالقلق خوفا من أن أقول شيئا غبيا		

المستوى 2 - القلق - الوالد / الوصي على الطفل في سن 6-17*

*مقتبس من PROMIS للاضطراب العاطفي - القلق – مصدر العنصر الرئيسي

اسم الطفل: _____ العمر: _____ الجنس: ذكر أنثى

التاريخ:

ما هي علاقتك بالطفل الذي يتلقى الرعاية؟

_____

إرشادات للوالد / الوصي: خلال الأسبوعين الماضيين، انزعج طفلك الذي يتلقى الرعاية من "الشعور بالتوتر أو القلق أو خائفًا "و / أو" عدم القدرة على التوقف عن القلق "و / أو" لا يمكنه فعل الأشياء التي أرادها أو كان ينبغي فعلها بسبب جعلوه يشعر بالتوتر "بدرجة شدة خفيفة أو أعلى.

الأسئلة أدناه تسأل عن هذه المشاعر في مزيد من التفاصيل وخاصة عدد المرات التي أزعج فيها طفلك الذي يتلقى الرعاية

قائمة من الأعراض خلال الأسبوع الماضي

7 أيام. يرجى الرد على كل عنصر بوضع علامة (أو x) على مربع واحد في كل صف

							الاستخدام الاكلينيكي
	في السبعة (7) أيام الماضية ، قال طفلي إنه ...						**العلامة**
		ابدا	**تقريبا ابدا**	**بعض الأحيان**	**غالبا**	**تقريبا دائما**	
1	شعرت أن شيئًا فظيعًا قد يحدث	1	2	3	4	5	
2	شعور بالتوتر.	1	2	3	4	5	
3	شعور بالخوف	1	2	3	4	5	
4	شعور بالقلق	1	2	3	4	5	
5	يقلق بشأن ما يمكن أن يحدث له / لها	1	2	3	4	5	
6	يقلق عند ذهابه إلى الفراش ليلاً.	1	2	3	4	5	
7	بفزع او يخاف بسهولة	1	2	3	4	5	
8	كان خائفا من الذهاب إلى المدرسة	1	2	3	4	5	
9	قلق عندما كان في المنزل	1	2	3	4	5	
10	قلق عندما يكون خارج المنزل	1	2	3	4	5	
	المجموع / الدرجة الخام الجزئية						
	إجمالي النقاط الأولية التناسبية:						
	درجة T:						

جامعة النجاح الوطنية
كلية الدراسات العليا

التحقق من صلاحية النسخة العربية لمقياس قلق الطفولة (RCMAS) في السياق الفلسطيني

إعداد
محمد خورشيد مبسلط

إشراف
د. فاخر نبيل الخليلي

قُدمت هذه الأطروحة استكمالًا لمتطلبات الحصول على درجة الماجستير في علم النفس الإكلينيكي بكلية الدراسات العليا في جامعة النجاح الوطنية في نابلس، فلسطين.

2021

التحقق من صلاحية النسخة العربية لمقياس قلق الطفولة (RCMAS) في السياق الفلسطيني

إعداد

محمد خورشيد مبسلط

إشراف

د. فاخر نبيل الخليلي

الملخص

سعت الدراسة الحالية الى الكشف عن الخصائص السيكومترية لمقياس القلق الظاهر المنقح للأطفال في السياق الفلسطيني، من خلال الكشف عن صدق المكوّن الفرضي وثباته، وذلك من خلال اختبار استقرار البنية العاملية للمقياس، كما هدفت الدراسة الى فحص تأثيرات بعض المتغيرات الديمغرافية المتمثلة بالجنس والعمر ومكان السكن في مستوى القلق لدى الأطفال الفلسطينيين الذين تتراوح أعمارهم بين 6–19 سنة في محافظة نابلس، كما قامت الدراسة بالتحقق من مدى ملاءمة مقياس القلق الظاهر المنقح للأطفال لمعايير تشخيص القلق في الدليل التشخيصي والإحصائي للاضطرابات النفسية الإصدار الخامس (DSM-5).

ولتحقيق هذه الأغراض تم استخدام المنهج الكمي الوصفي عبر أسلوب الدراسة المقطعية أو المستعرضة، إذ تم جمع البيانات باستخدام مقياس القلق الظاهر المنقح للأطفال من عينة بلغ حجمها (201) طفلاً منهم (109) ذكور و(92) أنثى ذلك من خلال أسلوب المعاينة العشوائية الطبقية لضمان تمثيل متغيري الجنس ومكان السكن في العينة، ولفحص الصدق التقاربي للمقياس وفحص مدى ملاءمته لمحكات تشخيص القلق الوادرة في (DSM-5)، تم الإستعانة بمقياس القلق المستخدم في (DSM-2) المستوى الثاني باعتباره محك ذهبي للتشخيص الإكلينيكي.

تم حساب معاملات الإرتباط والانحدار واستخدام نمذجة العلاقات البنائية (SEM) عبر أسلوب التحليل العاملي التوكيدي (CFA) للإجابة عن أسئلة الدراسة، وأسفرت الدراسة عن جملة من النتائج كان أهمها؛ أن مقياس القلق الظاهر المنقح للأطفال استطاع الاحتفاظ ببنيته العاملية في السياق الفلسطيني رغم حذف بعض الفقرات منه، وبالتالي يمكن الاعتماد عليه لقياس القلق بين أطفال

فلسطين، وأشارت مؤشرات جودة المطابقة الى سلامة النموذج القياسي لهذه الأداة، إذ بلغ هذه المؤشرات على التوالي: CFI = 0.904, IFI = 0.906, AGFI = 0.807, RMSEA = 0.042.، وبلغت معاملات الثبات بطريقة كرونباخ ألفا على التوالي: PHY = 0.763, WOR = 0.846, SOC = 0.864, RCMAS-2 = 0.910.

كما أظهرت نتائج الدراسة أن مقياس القلق الظاهر المنقح للأطفال يتمتع بالصدق التقاربي ويلائم معايير تشخيص القلق الواردة في (DSM-5)، كما أشارت النتائج الى أن ما نسبته (39%) من العينة يعانون من قلق مرضي، كما استطاع متغير مكان السكن تفسير ما نسبته (7%) تقريباً من تباينات القلق بين الأطفال الفلسطينيين ولصالح أطفال المخيمات.

وأشارت النتائج أن قيمة القطع التي يمكن اعتمادها للفصل بين الأطفال الذين يعانون من قلق مرضي وقلق طبيعي قد بلغت أكبر من أو يساوي (21) على مقياس القلق الظاهر المنقح للأطفال وهذا يناظر المئين (65)، ومن خلال استخدام مقياس القلق المستخدم في (DSM-2) المستوى الثاني باعتباره محك ذهبي، تبيّن أن معامل الحساسية لمقياس RCMAS-2 قد بلغ (80%) ومعامل التحديد قد بلغ (80%) كذلك، وفي ضوء هذه النتائج توصي الدراسة باستخدام مقياس القلق الظاهر المنقح للأطفال في السياق الفلسطيني.

الكلمات المفتاحية: مقياس القلق الظاهر المنقح للأطفال، القلق، الأطفال الفلسطينيين، الخصائص السيكومترية.