IBN HALDUN UNIVERSITY
SCHOOL OF GRADUATE STUDIES
DEPARTMENT OF PSYCHOLOGY

MASTER THESIS

THE ROLE OF HUMOR IN BULDING RESILIENCE AMONG SYRIAN REFUGEE ADOLESCENTS

FATMA ESMA TÜZGEN

THESIS SUPERVISOR: ASST. PROF. BURCU UYSAL

ISTANBUL, 2020

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THE ROLE OF HUMOR IN BULDING RESILIENCE AMONG SYRIAN REFUGEE ADOLESCENTS

by

FATMA ESMA TÜZGEN

A thesis submitted to the School of Graduate Studies in partial fulfillment of the requirements for the degree of Master of Arts in Clinical Psychology

THESIS SUPERVISOR: ASST. PROF. BURCU UYSAL

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APPROVAL PAGE

This is to certify that we have read this thesis and that in our opinion it is fully adequate, in scope and quality, as a thesis for the degree of Master of Arts in Clinical Psychology.

Thesis Jury Members

Title - Name Surname	Opinion	Signature
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This is to confirm that this thesis complies with all the standards set by the School of Graduate Studies of Ibn Haldun University.

Date of Submission Seal/Signature

ACADEMIC HONESTY ATTESTATION

I hereby declare that all information in this document has been obtained and presented in accordance with academic rules and ethical conduct. I also declare that, as required by these rules and conduct, I have fully cited and referenced all material and results that are not original to this work.

Name Surname: Fatma Esma TÜZGEN

Signature: 

ÖZ

SURİYELİ MÜLTECİ ERGENLERDE PSİKOLOJİK SAĞLAMLIĞIN GELİŞİMİNDE MİZAHIN ROLÜ

Yazar Tüzgen, Fatma Esma
Klinik Psikoloji Yüksek Lisans Programı
Tez Danışmanı: Dr. Öğretim Üyesi Burcu Uysal
Ağustos 2020, 106 sayfa

Mülteci ruh sağlığı uzun zamandır problem-odaklı yaklaşımla psikopatoloji semptomlarının varlığı ya da yokluğu üzerinden değerlendirilmektedir. Oysa ki, psikolojik sağlamlık çerçevesi, risk altındaki bireylerin ruh sağlığı konusunda güçlü-yönlere odaklanarak bir paradigma değişikliği önermektedir. Bu sebeple, bu araştırmanın temel amacı Suriyeli mülteci ergenlerin ruh sağlığını anlamak için psikopatoloji ve psikolojik sağlamlığı bir arada incelemek ve mizahın bu ilişkideki rolünü bulmaktır. Alanda yapılmış çalışmalara binaen, bu araştırmada da mizahın olumlu ve olumsuz yönlerini bir arada ele alan mizah tarzları modeli tercih edilmiş ve bu modelin psikolojik sağlamlık ve psikopatoloji problemleri üzerindeki uzantıları incelenmiştir. Mizah tarzları modeli, mizahı olumluluk/olumsuzluk ve kendine/diğerlerine yönelik olma üzerinden sınıflandırmaktadır. Bu çalışma kapsamında İstanbul'daki devlet okulları ve geçici eğitim merkezlerinde öğrenim gören 506 Suriyeli mülteci ergene mizah, psikolojik sağlamlık ve psikopatoloji semptomlarını ölçen bir set uygulanmıştır. Revize Edilmiş Çocuk Olayların Etkisi Ölçeği (CRIES-8), Depresyon-Anksiyete-Stres Skalası (DASS-21), Mizah Tarzları Ölçeği (MTÖ) ve Revize Edilmiş Çocuk ve Genç Psikolojik Sağlamlık Ölçeği (ÇGPSÖ-R) bu araştırmada kullanılan öz bildirime dayalı ölçeklerdir. Travma ile ilişkili psikopatolojilerin belirleyicilerini bulmak için tanımlayıcı istatistik, tek yönlü çok değişkenli varyans analizi, Pearson korelasyon analizi, kısmi korelasyon ve hiyerarşik çok değişkenli regresyon analizi sonuçlarından faydalanılmıştır. Araştırma sonuçlarına göre yaşın psikopatoloji semptomlarını belirleme üzerinde anlamlı bir etkisi vardır, fakat cinsiyete göre bir fark gözlemlenmemiştir. Aynı zamanda düşük olumsuz mizahın ve yüksek psikolojik sağlamlığın düşük psikopatoloji semptomlarını

tahmin ettiği gözlemlenmiştir. Bu araştırma mülteci ruh sağlığını anlamak için psikolojik sağlamlık çerçevesinin özgün bir bakış açısı sunduğunu öneren çalışmaları desteklemektedir. Buna ek olarak, çok boyutlu bir yapısı olan mizahın da hem psikolojik sağlamlık hem de psikopatoloji ile etkileşimde olduğu önerisi desteklenmiştir. Özellikle mizah tarzları ölçeğinde kültüre bağlı farklılıkları olduğu gözlemlendiğinden, bu alanda kültür odaklı çalışılması önerilmektedir.

Anahtar Kelimeler: Anksiyete, Depresyon, Mizah, Mülteci, Psikolojik Sağlamlık, TSSB

ABSTRACT

THE ROLE OF HUMOR IN BUILDING RESILIENCE AMONG SYRIAN REFUGEE ADOLESCENTS

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Research on refugee mental health have long been assessed by absence or presence of psychopathology symptoms, with a deficit-based approach. However, the resilience framework offers a paradigm shift towards a strengths-based approach for understanding at-risk individuals' mental health. Therefore, the main objective of this study is to explore Syrian refugee adolescents' mental health by incorporating psychopathology and resilience and determine the role of humor in this relationship. Building on the previous work, this paper highlights the importance of humor style perspective which accounts for both positive and negative functions of humor and considers its implications on resilience and psychopathology problems of intrusion, aversion, depression, anxiety and stress. Humor style model claims that humor needs to be examined based on positivity/negativity and being towards the self/others. To measure humor, resilience and psychopathology; 506 Syrian refugee adolescents were administered a questionnaire set in public schools and temporary education centers in Istanbul. The Children's Revised Impact of Event Scale (CRIES-8), Depression, Anxiety and Stress Scale (DASS-21), Humor Style Questionnaire (HSQ) and Child and Youth Resilience Measure Revised (CYRM-R) were the self-report instruments utilized in the study. Descriptive statistics, multivariate analysis of variance, Pearson's correlation, partial correlation and hierarchical multiple regression were used to reveal the predictors of trauma-related psychopathology problems. The findings of the study revealed a significant change in the psychopathology symptoms due to age but not sex. Moreover, lower negative humor and higher resilience predicted lower psychopathology symptoms. The present study adds to the growing body of research which argues that resilience framework offers a unique way of assessing refugee

mental health. Moreover humor as a multidimensional construct interacted with resilience and psychopathology in the current study. Culture-specific differences have been observed specifically in HSQ which requires further inspection.

Keywords: Anxiety, Depression, Humor, Refugee, Resilience, PTSD

DEDICATION

to my dearest family…

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Writing a thesis is a difficult and challenging process that needs support and assistance. When your responsibility is not only towards academy but also to your family, *it takes a village to* fulfill all. In my case, I am deeply indebted to everyone in my *village* who helped me get this far.

First and foremost, I would like to express my sincere appreciation to my thesis supervisor Assist. Prof. Burcu Uysal for her support and patience. Her supervision helped me to get through every step of this process. I am also grateful to my thesis committee members Prof. Dr. Medaim Yanık and Assoc. Prof. Vahdet Görmez for their constructive feedback and valuable advice both for my thesis and clinical internship. I would also like to acknowledge the invaluable guidance that I received from Assist. Prof. Nilgün Öcal.

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Fatma Esma Tüzgen

ISTANBUL, 2020

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CHAPTER I

INTRODUCTION

1.1. Background of the Study

Every year, millions of people are exposed to war, terrorism and prolonged violent conflicts. Some of the most common experiences that refugees encounter are bombings, torture, starvation, displacement, persecution, and the death of a family member (Masten, Narayan, Silverman, & Osofsky, 2015). According to the United Nations Refugee Agency (UNHCR), as of August 2020, there are 79.5 million people worldwide who were forcibly-displaced, and 26-millions of them are refugees (UNHCR, 2020b). The Syrian war creating one of the biggest refugee crises, caused around 5.6 million Syrians to seek refuge. Among those Syrian refugees, 3.6 million are currently residing in Turkey and are under age 18 (UNHCR, 2020a). Although Turkey grants "temporary protection" rather than refugee status, this study will use the term 'refugee' to define Syrian adolescents who were forced to flee their homeland due to fears of violence, death and persecution.

The impact of the Syrian War is tremendous not just because millions of Syrians have become refugees, but because it has dire consequences in every aspect of life including mental health and well-being. That being said, children and adolescents are at much higher risk due to being in a sensitive developmental period (Erickson & Feldstein, 2007; Gadeberg, Montgomery, Frederiksen, & Norredam, 2017; Panter-Brick et al., 2017). It has been reported that children and adolescents with war-related traumatic experiences are at a greater risk for PTSD and other mental health problems much more than the general population (Attanayake et al., 2009).

Despite the distressing numbers mental health issues among refugee youth, a significant number of them overcome risk and adversity; and show better developmental outcomes (Zolkoski & Bullock, 2012). Rather than focusing solely on traumatic symptoms, it is much more revealing to focus also on protective and promotive factors that support resilience as an intervention and prevention strategy. Although resilience lacks a unified definition, it is simply described as the capacity to adapt positively against risk and adversity (Masten, 2001, 2018; Sharma, Fine, Brennan, & Betancourt, 2017; Zwi et al., 2017). Resilience is distributed across different interacting systems of individual, family, relational and community factors that help individuals withstand adversity (Masten, 2016; Panter-Brick et al., 2017). In the pursuit of understanding this systemic relationship, ordinary rather than exceptional factors were identified as building blocks of resilience (Masten, 2001). Humor has been named as one of those ordinary magical factors that influences resilience of individuals (Kuiper, 2012).

Humor has been positively associated with resilience and various other mental health dimensions like well-being, happiness, life-satisfaction, adjustment and stress regulation; and listed as a buffer against developing anxiety, depressive and post-traumatic symptoms in case of traumatic stressors (Cameron, Fox, Anderson, & Cameron, 2010; Cann & Collette, 2014; Dyck & Holtzman, 2013; Kuiper, 2012; Sliter, Kale, & Yuan, 2014). Since navigating through puberty and adversity together in adolescence is a difficult task, the role of humor increases for this specific population (Cameron et al., 2010; Erickson & Feldstein, 2007; Kuiper, 2012; Masten, 2001). Although various ways of defining and classifying humor has been developed, humor style perspective offers a unique way by differentiating adaptive and maladaptive uses of humor and therefore offers a more revealing way of understanding its relationship to resilience and trauma-related psychopathology symptoms (Martin, 2007; Martin, Puhlik-Doris, Larsen, Gray, & Weir, 2003).

1.2. Purpose of the Study

Therefore, in order to shed light on the mechanisms underlying refugee youth's mental health and well-being, this study was set out with the goal of assessing Syrian refugee adolescents' experiences within a resilience framework. An initial goal of the study

was to explore the relationship between trauma-related psychopathology symptoms and resilience. Although it has been claimed that resilience and psychopathology can coexist, the most common understanding has been that they are almost the opposite of each other (Southwick, Bonanno, Masten, Panter-Brick, & Yehuda, 2014) The second objective of this study was to assess the role of humor in resilience and trauma-related psychopathology symptoms. In this examination, the final aim was to understand how the degree of resilience in Syrian adolescents was affected by humor and therefore having an effect on trauma-related psychopathology symptoms. It is expected that Syrian refugee adolescents who display better resilience will show lower levels of psychopathology symptoms and positive humor will contribute to resilience while negative humor will decrease resilience and increase the likelihood of expressing psychopathology symptoms.

1.3. Significance of the Study

The importance of this study comes from its emphasis on resilience of Syrian refugee adolescents in order to understand their mental health and well-being. The existing literature consists of many findings with a deficit-based approach mainly focusing on risks and maladaptive pathways. Yet there is only one study targeting resilience as the core factor in this population in Turkey (Oppedal, Özer, & Şirin, 2018) That is why the present study chose to work on resilience and psychopathology simultaneously and offered a unique perspective. In the meantime, humor was chosen as the factor that is of interest in this resilience study since it has mostly been left out of refugee studies. Although resilience and humor, resilience and trauma-related psychopathology or humor and trauma-related psychopathology has been studied to some extent, there is no study to date that looks at humor, resilience and trauma-related psychopathology all together in a refugee population. In order to actualize this goal, humor styles model was adopted which offers a very-well suited perspective by presenting both adaptive and maladaptive patterns of humor at the same time. Moreover, adolescence has been claimed to offer a unique window of opportunity to study humor and resilience by shedding light on how individuals in this period navigate through challenges of puberty (Cameron et al., 2010; Masten et al., 2004).

1.4. Limitations of the Study

Although this study promises a different approach to the topic, it has several limitations that bounds its generalizability. The main weakness of this study was the lack of longitudinal data and therefore its disallowance of causal inferences. An additional uncontrolled factor was lack of measurements related to the post-migration living difficulties. Socio-economic status, number of siblings and time since displacement were examined as related issues but topics like discrimination and prejudice were not included. Thirdly the study evaluated resilience based on a scale rather than competence or age-salient developmental tasks. Considering resilience has been conceptualized as a dynamic capacity changing over time and context, it is debatable how

CHAPTER II

LITERATURE REVIEW

2.1. Trauma-Related Psychopathology

War and migration bring about tremendous load of adverse life circumstances on children and adolescents. Considering the traumatic nature of war and migration-related adversities, a common reaction in the field of psychology for understanding refugee experience has been investigating the risks and related mental health outcomes (Yaylaci, 2018). The risk focused research has been conducted with a deficit-based approach which focuses on negative outcomes observed after adverse life experiences like PTSD, depression and anxiety (Masten, 2001).

Studies that have explored the effect of war and migration on the mental health of child and adolescent refugees showed that the rates of trauma-related psychopathologies and behavioral and emotional difficulties was significantly high among this population (Attanayake et al., 2009; Fazel, Reed, Panter-Brick, & Stein, 2012; Lustig et al., 2004; Reed, Fazel, Jones, Panter-Brick, & Stein, 2012). The most common reported mental health outcome was PTSD, followed by depression and anxiety (Attanayake et al., 2009; Reavell & Fazil, 2017). In addition to the reported trauma-related psychopathologies in war affected children and adolescents, other emotional and behavioral problems were observed as well (Lustig et al., 2004). This can be observed in the studies which were looking at the prevalence rates of self-harm behavior, somatization, traumatic grief, criminal activity, insomnia, hyperarousal, intrusive thoughts and post-traumatic emotional numbing (Attanayake et al., 2009; Betancourt et al., 2012; Lustig et al., 2004). The outcome of traumatic experiences was further exemplified in the studies which were looking into the problems in emotional and behavioral areas, academic performances and social functioning (Attanayake et al., 2009; Betancourt et al., 2012).

Comparing and contrasting studies looking beyond trauma-related psychopathologies was very difficult because there were only a very few of them. Therefore it is much more informative and practical to look at the rates of PTSD, anxiety and depression reported from the refugee youth studies since it is much more abundant (Fazel et al., 2012; Reed et al., 2012).

2.1.1. Prevalence of Mental-Health Disorders

In a meta-analysis, PTSD as the most commonly observed psychopathology was estimated to be around 47 % for refugee children and adolescents aged 5-17 (Attanayake et al., 2009). Although the pooled estimate for PTSD was nearly 50 %, it ranged from 5% to 83%, suggesting a very heterogeneous picture. The wide range of the outcomes referred in the meta-analysis was reported to depend on issues like the conflict zone, study location, measurement preferences, time since displacement, ethnic background and cultural differences (Attanayake et al., 2009; Fazel et al., 2012). In a study conducted in London about mental health of resettled refugees aged 8-16 demonstrated that 63 % of all refugee minors scored high enough for a diagnosis of PTSD (Heptinstall, Sethna, & Taylor, 2004). In a more recent study, 52.7 % of unaccompanied refugee youth had scores above the cut-off point required for PTSD (Vervliet et al., 2014).

Another example for a high incidence of PTSD among war exposed refugee children and adolescents in the U.S. indicates 30.4 % prevalence rate with a comorbid diagnosis (Betancourt et al., 2012). The high incidence of PTSD was further exemplified in studies all around the world with different refugee children and adolescent groups (Berthold, 2000; McGregor, Melvin, & Newman, 2015; Vervliet et al., 2014).

Looking at the PTSD prevalence rates among refugee youth in contrast to the general population even further emphasizes the importance of studying refugee mental health. It has been suggested that the rate of PTSD was 5 % among U.S. youth, (Merikangas et al., 2010), 7.8 % at youth in England and Wales (Lewis et al., 2019) and 4.7 % in a representative sample of U.S. adolescents (McLaughlin et al., 2013). Comparing the

rates of PTSD in refugee youth and general population across the world highlights the importance of understanding refugee mental health.

While PTSD was the most commonly reported psychopathology among refugee youth, a number of studies indicate that depression was significantly high among refugee children and adolescents as well (Attanayake et al., 2009; Fazel et al., 2012; Reavell & Fazil, 2017; Reed et al., 2012). Although there isn't a large number of studies aiming depression as the primary outcome, the existing literature has shown some insight into the prevalence rates of depression and interrelated factors. Attanayake et al. (2009) reviewed the literature on refugee mental health and found some evidence that depression scores were significantly high among refugees from age 5 to 17, stating an overall pooled estimate of 43 %. The rate of depression is not consistent across studies with similar reasons behind the heterogeneous rates of PTSD among refugee youth. From methodological differences to varied cultural and ethnic backgrounds, the rates of depression in child and adolescent refugees ranged from 25 to 50 % (Attanayake et al., 2009).

In a study, which set out to determine the relationship between mental health of refugee minors with pre- and post-migration experiences, found that 31.3 % of refugee minors aged 8-16 had significantly high scores for depression (Heptinstall et al., 2004). The study by Vervliet (2014) offers additional information by linking unaccompanied refugee status with depression, by reporting 44.1 % rate in refugee minors.

The prevalence rates of depressive symptoms of refugee adolescents and adolescents from the general population across the world differs considerably (Gormez et al., 2018). According to a national survey in the US, 13.3 % of individuals aged 12-17 had suffered from major depressive episode at least once in a lifetime (McCance-Katz, 2018). In several investigations into the prevalence rates of depressive symptoms in adolescents, only 15 % had severe symptoms among 12-17 year-old Jordanians (Dardas, Silva, Smoski, Noonan, & Simmons, 2018), 12.5 % among 10-20 year-old Turks (Toros et al., 2004), 12.3 % in 16-17 year-old Swedish high school students (Olsson & Knorring, 2007) and 18.4 % in Indian teenagers (Bansal, Goyal, & Srivastava, 2009)

Researchers also attempted to examine the prevalence of anxiety disorders in addition to PTSD and depression and wanted to identify related factors in refugee children and adolescents (Attanayake et al., 2009; Fazel et al., 2012; Reed et al., 2012). In a 2009 review article, it was concluded that although there was much less research on anxiety than PTSD among refugee minors, the existing ones were enough to report a pooled estimate of 27 % for elevated diagnosis of anxiety disorders (Attanayake et al., 2009). In another study, it was reported that there was a high prevalence of anxiety disorder (24 %) and even higher rates of PTSD (59 %) among children aged 9-18 living under ongoing violence at Gaza Strip (Thabet, Tawahina, El Sarraj, & Vostanis, 2008). In war-effected refugee children resettled in the U.S., generalized anxiety was observed among 26.8 % of all participants by clinical evaluations (Betancourt et al., 2012). Sujoldžić (2006) investigated mental health of immigrant adolescents aged 15-18 from Bosnia and Herzegovina and stated that anxiety was commonly observed among Bosnians in Bosnia and Herzegovina and Bosnians in Croatia which stresses the importance of immigration status. Being girl, being exposed to peer violence and being exposed to life-long adult violence was predictive of the observed outcome among Bosnian adolescents.

Looking at the rates of anxiety among adolescents in general population and refugee adolescents has the potential to highlight the risk associated with the refugee status. Lifetime prevalence rates of generalized anxiety disorder among US adolescents was 3 % (Burstein, Beesdo-Baum, He, & Merikangas, 2014). The prevalence rates of anxiety across the world for Indian and Vietnamese adolescents were 14.4 % and 22.8 %, respectively (Nair et al., 2013; Nguyen, Dedding, Pham, Wright, & Bunders, 2013). Mild anxiety symptoms was commonly observed among Turkish high school students as well (Bilgel & Bayram, 2014).

2.1.2. Mental Health among Syrian Refugee Adolescents

There is a relatively small body of literature which is interested in the mental health of Syrian refugee children and adolescents. Within that small body of literature, research investigating the factors associated with refugee minors' mental health mostly focused

on development on psychopathologies with a focus on risk and adversity (Yaylaci, 2018).

In an investigation into the mental health of Syrian refugee children and adolescents in Turkey, posttraumatic symptom reactions, anxiety-related disorders and psychological distress were assessed among 9-15 year-old Syrians in Temporary Education Centers (TECs) in Istanbul (Gormez et al., 2018). Detailed examination by Gormez et al. (2018) showed that among 218 children, moderate to severe PTSD among 44.2 %, probable anxiety disorders among 69.0 % and clinical level of distress among 23.1 % was observed. In another recent study in Southeast Turkey, posttraumatic stress reactions, depression and anxiety rates were assessed among 1115 refugee children aged 9-15 among hospital patients (Yayan, Düken, Özdemir, & Çelebioğlu, 2019). The results of this study suggested that among all participants 60.6 % had posttraumatic stress reactions, 54.1 had depression and 47.6 % had anxiety disorders (Yayan et al., 2019). To determine the rates of depression and anxiety, Kandemir et al. (2018) studied Syrian refugee children studying at 6^{th}-9^{th} grades living in Urfa, Turkey outside of camps and reported that 47.9 % scored above the cut-off points for depressive symptoms and 53.2 % scored above the cut-off point for anxiety disorder.

Further research was conducted in Turkey with a deficit-based approach, yet related factors to mental health were also investigated (Ataç et al., 2018; Eruyar, Maltby, & Vostanis, 2018, 2020). A total of 286 Syrian refugee and 277 local adolescents studying at two state-run schools and a TEC were compared in terms of their depressive symptoms and perceived social support (Ataç et al., 2018). 30.4 % of refugee adolescents and 17.3 % of local adolescents had depressive symptoms. When the participants were compared according to the school type they were attending; 34.1% of TEC students and 19.5 % of state-run school students displayed depressive symptoms (Ataç et al., 2018).

Syrian refugee mental health became a topic of interest in Jordon, since Jordon has been another top Syrian refugee hosting country (Beni Yonis et al., 2019). Therefore, Jordon became a convenient place for gathering information regarding Syrian refugee minors. A large-scale study conducted in Jordanian schools in four different cities

assessed PTSD symptoms in 1773 Syrian refugee adolescents aged 12-18 and showed that 31 % of the adolescents displayed PTSD symptoms (Beni Yonis et al., 2019). A similar study was conducted in a refugee camp in Jordon with the objective of identifying the rates of depression and anxiety in Syrian children aged 7-12 (Jabbar & Zaza, 2014). A key advantage of the study was having two comparison groups to Syrian refugees in Jordan which were Jordanian children living across the Syrian border and Jordanian children living far away from the Syrian border. The result of the study indicated that Syrian refugee children at the camp scored significantly higher than other groups in terms of depression but scored in similar rates to Jordanians at the border in terms of anxiety (Jabbar & Zaza, 2014). In another study which set out to discover the relationship between war-related trauma, mental health and smoking among Syrian refugee adolescents in Jordon aged 12-17, collected data from 418 participants (Kheirallah et al., 2019). More than 40 % of the participants reported high levels of PTSD scores; girls were reporting more depressive symptoms (M = 7.4, SD = 4.1) than boys (M = 5.8, SD = 9.0) while boys were reporting more PTSD symptoms (M=43.6, SD=9.9) than girls (M=40.7, SD=9.0 (Kheirallah et al., 2019). The study on physical and mental health of Syrian refugee children in urban areas and camps in Jordon aged 9 to 14 was another example of a risk focused research (Hamdan-Mansour, Abdel Razeq, AbdulHaq, Arabiat, & Khalil, 2017). One thing that set this study apart from refugee mental health studies was its additional assessment of coping efficacy which was discussed as a factor linked to resilience levels. On the question of mental health, this study found out that almost one-fourth (24 %) of participants reported depressive symptoms.

Syrian refugee children and adolescents in Lebanon also became a focus for mental health research (Kalaf & Plante, 2019; Karam et al., 2019; Sim, Fazel, Bowes, & Gardner, 2018). Adverse childhood experiences and sensitivity were investigated as factors influencing PTSD in 549 Syrian children and adolescents aged 7-17 (Karam et al., 2019). While 31.5 % scored within the range of mild PTSD, 17.8 % reported moderate to high levels (Karam et al., 2019). In another recent cross-sectional study conducted in German refugee reception camps, 33 % of 54 children aged 7-14 suffered from PTSD (Soykoek, Mall, Nehring, Henningsen, & Aberl, 2017).

To this date, to our knowledge, only one study reported from inside of Syria with regard to refugee mental health (Perkins, Ajeeb, Fadel, & Saleh, 2018). The study investigated mental health in 492 Syrian children aged 8-15 living in Damascus and Latakia and found out that the percentage of participants who scored above the threshold for PTSD was 35.1, for depression 32.0 and for anxiety 29.5 with high comorbidity rates.

2.2. Risk and Resilience

The prevailing models built for understanding war and migration-related experiences had a focus on risk and maladaptation with a deficit-based approach (Masten, 2011). While risk was defined as a factor associated with negative outcomes like stress or trauma, cumulative risk posited a much greater threat against the individual by including multiple risk factors or a factor with increased severity (Wright, Masten, & Narayan, 2013). This risk-oriented research provided valuable information regarding the adverse experiences and negative outcomes observed among refugees. According to several studies conducted with an emphasis on deficits, forcibly displaced persons like refugees were considered at risk of developing trauma-related psychopathology symptoms and other mental health issues like attentional problems, sleep problems, irritability, emotional and somatic symptoms (Giacaman, Shannon, Saab, Arya, & Boyce, 2007), and behavioral problems (Lustig et al., 2004; Reed et al., 2012; Ugurlu, Akca, & Acarturk, 2016).

While the consequences of war, conflict and migration is devastating on everyone, child and adolescent refugees are especially vulnerable due to being in a critical period of life (Lustig et al., 2004; Perkins et al., 2018; Reed et al., 2012; Şirin & Aber, 2018). The war related adverse experiences and stressful conditions impinge upon refugee children and adolescents' developmental trajectory and interfere with their psychosocial wellbeing (Attanayake et al., 2009; Fernando, Miller, & Berger, 2010; Özer, Oppedal, Şirin, & Ergün, 2018). Certain developmental periods are considered sensitive since can be particularly vulnerable or they can also be windows for opportunity when the plasticity is high, change is welcomed and systems are in

transition (Masten, 2016). Adolescence has been considered as one of the windows for opportunity within a resilience framework (Masten et al., 2004).

Although deficit-based approach provided valuable information for understanding trauma and mental health, it ignored the majority of individuals who did well despite the risk and adversity they had experienced. The inadequateness of deficit-based studies for understating trauma required reframing research goals and theoretical perspectives. The paradigm shift brought with the resilience framework had a transformative effect on the field by putting emphasis on the positive factors, processes and outcomes which were missing in all the previous risk research without discrediting the significant role of risk and adversity on resilience of individuals (Masten, 2011).

2.2.1. What is Resilience?

In order to define resilience, an enduring discussion in the field of resilience has to be addressed first. Although there is no evidence for the argument that resilience is a trait, not a capacity or a process, the debate still finds an audience (Masten & Cicchetti, 2016). Scholars who consider resilience as a trait, ignore the overwhelming evidence that adaptation is dynamic and changes over time and context. So far, there has been no trait like characteristic which was defined as resilience and many factors associated with resilience are actually outside of the individual as well, like family or cultural factors (Wright & Masten, 2015). Much of the available literature prefers to define resilience as an "inferred capacity" which is distributed across multiple levels (Masten, 2018).

Several definitions of resilience have been proposed, yet to date there is no consensus about what resilience means. Researchers who came forward with their line of work on resilience contributed to the field and provided definitions of resilience with different perspectives (Bonanno, Westphal, & Mancini, 2011; Kapucu, Hawkins, & Rivera, 2011; Masten & Cicchetti, 2016; Panter-Brick & Leckman, 2013; Southwick et al., 2014; Yehuda & Flory, 2007).

According to the APA, resilience is conceptualized as "the process of adapting well in the face of adversity, trauma, tragedy, threats or even significant sources of stress" (American Psychological Association, 2020). Yet it has been criticized for not portraying the complexity of resilience (Southwick et al., 2014). While some researchers defined resilience as a trait-like concept, others considered resilience as a process, a capacity or a pattern as a response to risk or adversity (Masten, 2018). According to Bonanno (2010; 2007) resilience is determined by continuous functioning despite a brief disruption after an adverse event and was defined as "a stable trajectory of healthy functioning after a highly adverse event" (Southwick et al., 2014, p. 2). Yehuda (2007) highlighted adaptive functioning as the determinant of resilience and defined it as "a reintegration of self that includes a conscious effort to move forward in an insightful integrated positive manner as a result of lessons learned from an adverse experience" (Southwick et al., 2014, p. 3). In addition to this definition, Yehuda (2007) also poses a problem by emphasizing the possibility of co-occurrence of PTSD with resilience although they have been traditionally considered as opposite terms (Southwick et al., 2014). Another definition was made by Masten and Cicchetti (2016, p. 5) as the following: "the potential or manifested capacity of an individual to adapt successfully through multiple processes to challenges that threaten the function, survival, or positive development". This definition considers a developmental perspective and systems framework. Lastly resilience was defined as "a process to harness resources to sustain well-being" and the role of culture was stressed as a relevant source for well-being (Panter-Brick & Leckman, 2013, p. 4; Southwick et al., 2014). Together these definitions provide important insight to the field of resilience and research by recognizing the role of culture, systems perspective, possibility of co-occurrence of PTSD and resilience and different patterns of adaptation.

Understanding and defining resilience requires consideration of its two key components; risk and adaptation (Masten & Cicchetti, 2016). The "risk" component, which has also been the focus of the deficit-based research on refugee mental health, involves threats to healthy development, disturbances confronting the system, or adversity of any kind (Masten & Cicchetti, 2016; Wright et al., 2013). In other words, for an individual to be resilient, there has to be a risk factor, a significant adverse life experience or a threat against healthy adaptation. Individuals who are competent or

successful without ever experiencing a risk or an adversity are not considered resilient. Major incidences that have been referred as risk factors for children and adolescents are trauma, neglect, poverty, war and natural disasters (Sangalang & Vang, 2017; Vervliet et al., 2014) . In order to make inferences of resilience, an adaptation component has to be defined as well. Resilience, as a strength-based approach, requires positive adaptation despite the risk or threats against the system (Wright & Masten, 2015). The criteria of positive adaptation have varied across studies. Lack of psychopathology symptoms has been a traditional way of assessing positive adaptation, yet it has been criticized since absence of psychopathology does not necessarily imply healthy functioning in daily life and resilience framework requires a positive way of measurement (Masten, 2018). Moreover, Yehuda (2007) argues that co-occurrence of PTSD and resilience has been observed in various studies which implies that individuals with trauma-related psychopathology symptoms can also be resilient. However due to severe nature of war and migration related trauma, "lack of psychopathology symptoms" criteria could be considered more notable than observing positive adaptation (Masten, 2018). Competence in age-salient tasks and self-reported well-being instruments are also among the ways of assessing resilience in children and adolescence (Wright & Masten, 2015). Well-being, competence, adjustment and coping has also been among the terms used as an indication of resilience (Masten & Obradović, 2006; Yates, Tyrell, & Masten, 2015).

While risk posited threat against positive adaptation, promotive and protective factors supported resilience. Promotive factors act upon all levels of risk and adversity and can be considered assets under almost all circumstances while protective factors are fundamental when the adversity is high and the system is challenged.

2.2.2. Theoretical Background

While there are many ways of understanding and defining refugee experience, resilience framework offers a unique perspective by emphasizing positive adaptation without discounting the influence of adverse experiences and negative outcomes (Masten & Narayan, 2012). Resilience in early studies was simply defined as doing okay in spite of the risk, yet its definition evolved in concert with the prevailing

systems theory and eventually rooted within the relational developmental systems framework. One of the main implications of this shift was redefining resilience with an emphasis on functionality of the systems: “the capacity for successful adaptation to disturbances that threaten system function, viability, or development” (Masten, 2016, p. 2).

Relational developmental systems framework is supported with multiple theoretical perspectives, among which are Bronfenbrenner’s ecological theory (Bronfenbrenner, 1979), general systems theory, family systems theory and developmental psychopathology (Masten, 2018).

Concomitant with this profound shift towards systems thinking, resilience is considered as a dynamic capacity that changes across time and context. It is distributed across systems which are interacting with each other and shape the course of adaptation. This interaction of multiple systems leads to diverse pathways of adaptation. As a result, systems are considered interdependent and cascading influences are observed within the process. All of the central ideas that stem from the systems framework contribute to the idea that resilience is not a trait, but rather a dynamic capacity (Masten & Cicchetti, 2016).

A major organizing theory for understanding refugee experience is grounded on Bronfenbrenner’s Ecological Model (Bronfenbrenner, 1979). According to this model, individuals develop in multiple nested systems; all of which are interacting with the individual and each other (Halevi, Djalovski, Vengrober, & Feldman, 2016; Villanueva O’Driscoll, Serneels, & Imeraj, 2017). This dynamic interaction process consists of the following five systems; microsystem (immediate environment like family or school), mesosystem (connections between microsystems), exosystem (indirectly influencing systems like society), macrosystem (cultural environment) and chronosystem (changes over the life-span) (Cummings, Merrilees, Taylor, & Mondi, 2017; Lustig et al., 2004; Reed et al., 2012; Saile, Ertl, Neuner, & Catani, 2016). This model provides a useful framework by exploring multiple interacting systems for understanding refugee mental health at different contexts including times of war and migration. Considering all relevant research on adolescent refugee experience, a

promising understanding appears through the lens of ecological systems theory (Fazel et al., 2012; Reed et al., 2012).

Since the current study adopts the current understanding of resilience which is defined under relational developmental systems framework we mainly utilized systems theory and ecological model (individual, family, religious and social factors). These models consider resilience as a result of interacting systems which influence each other dynamically. In the present study; humor, individual resilience, caregiver resilience and psychopathology are considered to be interacting with each other at multiple levels as well.

Different methods have been used to conduct resilience research in children and adolescents: person-focused, variable-focused and hybrid approaches (Wright & Masten, 2015). A person-focused approach focuses on individuals as the primary unit of analysis and become an inspiration to researchers. A classic example of person-focused approach is case studies, with individuals as the primary unit of analysis (Masten & Cicchetti, 2016). While this approach provides heuristic value, generalizability has been addressed as a major drawback (Wright & Masten, 2015). A variable-focused approach on the other hand investigate patterns, how variables change over time and connected to each other, whether those variables are risks or resources, mediators or moderators (Masten & Cicchetti, 2016). Multivariate statistics are used to understand variance in variable-focused approaches to resilience. Mixed approaches can also be preferred, combining person-focused and variable-focused models, if a researcher considers such analysis appropriate for their investigation.

In the context of war and migration, various factors and processes converge around the individual and the interacting systems. Adverse traumatic experiences, risk factors within and outside of the individual, and protective and promotive factors all of which come together and create multiple pathways of adaptation and maladaptation (Masten & Cicchetti, 2016; Masten & Narayan, 2012; Masten et al., 2015). Four pathways have been frequently observed in response to acute-onset trauma; “stress resistance” “disturbance with recovery”, “breakdown without recovery” and “posttraumatic growth” (Masten et al., 2015). Individuals whose functionality remain in an adaptive zone after an acute-trauma are called stress-resistant. When individuals grow from

average functioning to a higher optimal functioning as a response to trauma, post-traumatic growth is observed. In some cases, traumatic experiences affect individuals so deeply that a breakdown occurs without an observed recovery. The fourth pathway is called “breakdown with recovery” and a brief disruption after an acute trauma is followed by recovery and individual goes back to the adaptive zone again. The three patterns except the “disturbance without recovery” are considered different versions of resilience (Masten & Narayan, 2012).

Chronic-onset trauma on the other hand implies an experience of a prolonged adversity and a longer period of time to get back to a healthy functioning situation. Individuals after a continuous period of adversity and maladaptive functioning may manifest a normal adaptive functioning only after conditions improve. Instead of adaptive functioning and recovery, maladaptive functioning may be noted for others as well (Masten & Narayan, 2012). Individuals who regain their adaptive functioning circumstances after a prolonged adversity are considered resilient whereas others who were not able to function adaptively are not acknowledged as resilient.

2.2.3. Risk and Resilience Factors

What constitutes as a risk factor for children and adolescent refugees leading to mental health issues has gained the considerable attention of risk researchers (Masten & Cicchetti, 2016). Various risk factors and traumatic experiences were acknowledged which makes child and adolescent refugees suffer tremendously due to war and migration (Betancourt et al., 2012; Reed et al., 2012; Werner, 2012). Researchers who were adopting a deficit based approach also expanded the field by providing valuable information regarding outcomes of maladaptation and mental illness (Masten & Narayan, 2012). However, such studies remained narrow due to their sole focus to the negative side of the experience. The investigations of resilience researchers differed from risk researchers by their consideration of risk and adaptation factors as a whole yet with a stringer focus on positive side of the equation.

Risk researchers and resilience researchers enriched the field by shedding light on the dynamic factors contributing to the manifestation of various pathways. In the current

literature, psychopathology and resilience of refugee children and adolescents have been affiliated with various risk and resilience factors (Fazel et al., 2012; Reed et al., 2012; Wright & Masten, 2015; Wright et al., 2013). Individual, family, community and societal/cultural factors during pre- and post-migration periods has been listed by multiple researchers (Attanayake et al., 2009; Betancourt et al., 2012; Fazel et al., 2012; Lustig et al., 2004; Luthar & Cicchetti, 2000; Masten & Cicchetti, 2016; Reed et al., 2012; Ungar, 2013; Wright & Masten, 2015; Wright et al., 2013). While the range of the traumatic experiences is large in the context of war and migration, a number of them pose a much more significant threat to the well-being of this population than the others. Yet adaptive functioning, the most common response to risk and adversity, has been associated with many ordinary promotive and protective systems more often than the risk factors (Masten & Cicchetti, 2016).

2.2.3.1. Individual Factors

In terms of individual risk factors leading to maladaptive pathways, direct exposure to violence stand out among others for the subsequent psychological problems (Fazel et al., 2012; Reed et al., 2012).

Duration of time after displacement has been shown to have an impact on refugee well-being by interacting with the conditions in the host-country (Reed et al., 2012). Age and gender have been found to have a complex relationship with psychological disturbances in this population. In the most broad terms, older minors were more likely to display depressive symptoms than younger minors without gender taken into account (Reavell & Fazil, 2017). In a review article adolescents older than 12, were displaying more trauma related symptoms, especially in terms of depression (Reed et al., 2012). However, the picture is still not clear, since opposite or insignificant results have been reported as well (Fazel et al., 2012; Reed et al., 2012). In terms of gender; depressive symptoms were observed more in girls than boys, while PTSD symptoms and externalizing problems were more prevalent in boys than girls (Reavell & Fazil, 2017; Reed et al., 2012). While such generalizations have been made, it should be carefully noted that age and length of exposure to different types of events, age of migration, gender, and other factors like family support are all interacting with each

other, making it very difficult to create specific conclusions regarding age and gender (Safi Keykaleh, Jahangiri, & Tabatabaie, 2017).

Over the years, certain individual factors within the child have been associated with resilience consistently. Some of which are promotive and some are protective factors, yet all are defined as among the factors fundamental to resilience of children and adolescents. An adaptive temperament, improved cognitive functioning like executive functioning abilities, strong peer relationships, good self-regulation and emotion regulation capacity, optimism and positivity towards future, faith, genetic make-up, inflammation system, stress-regulation capacity, motivation and characteristics like a humorous view of life that has both adaptive influence on the self and the relationships (Wright & Masten, 2015; Wright et al., 2013).

Humor has been addressed as an individual factor influencing refugee adolescents' well-being (Erickson & Feldstein, 2007; Kuiper, 2012). There are several different approaches in humor studies, all of which evaluate different types of humor. Dark humor, coping humor, situational or relational humor are some of the terms that stand out in the humor literature (De Koning & Weiss, 2002; José, Parreira, Thorson, & Allwardt, 2007; Martin, 1996). Recently humor styles model has been developed as a new system of classification of humor (Martin & Lefcourt, 1983); both adaptive and maladaptive. Injurious/negative humor has been associated with positive adaptation and resilience, whereas benign/positive humor is a factor contributing to resilience (Kuiper, 2012). Since one of the main variables of this research is humor, further detailed information will be given in the following parts of this literature review.

2.2.3.2. Family Factors

For the purpose of investigating family-based risk factors, studies conducted in high-income countries point out the influence of parental exposure to violence during war as a significant risk factor for developing psychopathology symptoms (Fazel et al., 2012; Montgomery & Foldspang, 2006). Yet context and the regional and cultural variables were critical in terms of symptom production (Montgomery & Foldspang, 2006).

Socioeconomic status of refugee families has been investigated in both low-, middle-ang high income countries. Pre-migration SES, post-migration SES and parental unemployment were mostly studied with the aim of understanding the effect of SES on family functioning and psychological well-being of children and adolescent refugees (Fazel et al., 2012; Reed et al., 2012). While some of the researchers argued that low socioeconomic status was predicting low psychological well-being for children and adolescent refugees (Sujoldžić et al., 2006), others examining pre-migration socioeconomic status and well-being had inconclusive results in their investigation of southeast Asian children (Rousseau, Drapeau, & Corin, 1998). Congolese adolescent girls who were in a socioeconomically disadvantaged position after displacement reported psychological distress (Mels, Derluyn, Broekaert, & Rosseel, 2010). On the other hand, parental unemployment and unstable socioeconomic conditions was not predicting behavioral and emotional disturbances in Cambodian refugee adolescents (Rousseau, Drapeau, & Platt, 2000). In order to draw a more clear causal pathway, further research is needed for understanding the association between socioeconomic status and psychological disturbances. Family dynamics, parental loss and composition within the household were among the risk factors associated with maladaptive functioning in refugee minors (Fazel et al., 2012; Reed et al., 2012). Low education levels of parents, parents' previous diagnosed mental health problems were also investigated as risk factors.

Family systems and parenting has been a central theme in resilience research and many interventions targeting children at-risk included elements regarding parenting into their research design for improving resilience (Masten, 2018). Since children and adolescents depend on their parents unlike adults, the role of parents for positive adaptation cannot be stressed enough. Resilience researchers who were interested in family factors that account for some of the variation of adaptation in children and adolescents composed a shortlist (Wright & Masten, 2015; Wright et al., 2013).

Home, the first environment where children socialize, has been named as one of the most essential family factors for developing resilience among at-risk children and adolescents. Unlike chaotic environments, stable and nurturing homes play a critical role for positive adaptation of children against risk and adversity. Optimal conditions include a positive relationship between parents, secure attachment patterns,

authoritative parenting, parents with adaptive personal qualities, sensitive parenting, higher levels of education of parents, better socioeconomic status, family's religious commitment, better connections with extended family members, following family routines and a supportive and nurturing family structure according to resilience researchers (Wright & Masten, 2015; Wright et al., 2013). The roles and functions of families even become more critical in times of risk (Masten, 2018). Positive humor as an individual resilience building factor is also a characteristic that is valued in relationships which can contribute to a positive family environment as well.

2.2.3.3. Community and Societal Factors

Having discussed individual and familial risk factors for mental health problems, it is also essential to address the literature on community, societal and cultural factors. Low social support, perceived discrimination, low school belongingness, weak neighborhood networks, unsuccessful acculturation and lack of language proficiency in the official language of the migrated-country were listed among the community risk factors (Fazel et al., 2012). Societal risk factors were also described, some of which are; duration after migration, ideological beliefs, religious beliefs, pre-migration neighborhood environment, post-migratory residence, cultural dissimilarity and difference, ethnic background and in general cultural context (Fazel et al., 2012; Reed et al., 2012). Perceived discrimination, dissatisfaction with the living conditions in the host country, residency in refugee camps are among the other related factors that can become a risk for refugee children and adolescents (Fazel et al., 2012; Reed et al., 2012).

Certain characteristics of communities and cultures support resilience and contribute to the positive adaptation of the individual. The characteristics of the neighborhoods like safety, low degrees of violence, stable housing opportunities, being in a good school district, having recreational centers, access to good health care and well-designed policies for children and adolescents, lack of political violence and emphasis on the importance of education (Wright & Masten, 2015; Wright et al., 2013).

2.2.4. Risk and Resilience Research in Syrian Refugee Adolescents

The number of research conducted on the impact of war and migration on refugee minors with the resilience framework has been very limited. Despite the growing interest, most studies adopted a deficit-based approach, with a dominant focus on pre-migration experiences as potentially traumatic events (Hadfield, Ostrowski, & Ungar, 2017; Yaylaci, 2018). Additionally, parenting as a core factor in individual and family resilience, post-migration factors like discrimination, developmental perspective and role of culture in theory and research and most importantly resilience framework hasn't been emphasized in the current literature. Considerably more work is needed with an emphasis on resilience, culture and development that includes a strong theoretical background (Yaylaci, 2018).

What we know about resilience of Syrian refugee children and adolescents in Turkey is based on one empirical study directly addressing resilience (Oppedal et al., 2018). There are also two other empirical studies making resilience related inferences based on their results but do not address resilience as a direct point of interest (Eruyar et al., 2020; Özer et al., 2018). Although the need for the risk and resilience framework has been stressed by many researchers, relevant studies regarding Syrian minors has been very limited. Most of the ones that stress the importance of resilience or provide interventions, the main focus of them were mental health and maladaptation.

Parenting among all resilience promoting factors has been suggested as central to linking child and family resilience (Masten, 2018). In order to inform evidence-based interventions, a recent study explored the link between mental health, parenting styles and attachment in Syrian refugee minors residing in İstanbul, outside of camps (Eruyar et al., 2020). Although resilience was not addressed as a central theme in the research, the findings indicated that parental secure attachment had a significant role in predicting lower levels of PTSD. Moreover, parental emotional warmth, rejection and overprotection significantly contributed to decreasing the rates of conduct problems.

"Bahçeşehir Study of Syrian refugee children" carried out a detailed examination of Syrian refugee children in refugee camps within Turkey in order to increase understanding for their mental health needs (Özer, Şirin, & Oppedal, 2016). It was

suggested that cumulative risk predicted higher numbers of depressive symptoms, yet emotional support was given to children who had more traumatic experiences and as a result support was identified as a resilience promoting factor by decreasing depressive symptoms (Oppedal et al., 2018). This result is in accordance with the work in other studies linking supportive relationships to well-being as argued by the researchers. Another examination under the same study revealed that war exposure had the most critical role in influencing children's understanding of war and peace, even more than the age of the child (Özer et al., 2018). Overall the Bahçeşehir Study for Syrian refugee children highlight the need for further studies with risk and resilience framework.

Ameliorating negative outcomes for Syrian refugee children aged 10-15 was a primary goal of a recent group Cognitive Behavior Therapy (CBT) intervention in Istanbul, Turkey (Gormez et al., 2017). With a culturally sensitive approach, intervention was implemented at a Temporary Education Center (TEC) and effectiveness was measured with SCAS for anxiety and PCPTS-RI for traumatic symptoms; both of which proved that this intervention program was very effective in decreasing trauma-related psychopathology symptoms. There was no focus on the resilience framework.

The study of an art therapy intervention was carried out by Uğurlu et al. (2016) with the purpose of determining the rates of depression, anxiety and PTS and testing the effectiveness of the proposed intervention in terms of reducing trauma-related psychopathology symptoms. Just over 60 % of respondents had high risk of presenting PTSD symptoms, 23.4 % had PTSD symptoms, 17.6 % had depressive symptoms, 14.4 % had severe state-anxiety symptoms and 31 % had trait-anxiety symptoms. The art therapy intervention was therefore suggested as an effective intervention in decreasing all but state-anxiety symptoms. However, there was no overt acknowledgement of the significance of resilience, yet the goal was increasing the well-being of Syrian children. So, this study was another example of an intervention targeting alleviation of negative symptoms rather than focusing on increasing positive adaptation and building resilience.

A study for promoting resilience-building intervention was carried out in Greek refugee camps with Syrian refugee children aged 7-14 (Foka, Hadfield, Pluess, &

Mareschal, 2019). The program was found highly effective by improving both depressive symptoms and well-being, self-esteem and optimism.

A qualitative study conducted in Lebanon with 39 parents and 15 children aged 8 to 12 examined the effect of war and migration on parenting and child adaptation (Sim et al., 2018). The main goal of the research was to work on factors that could promote resilience and parenting was chosen as the focus since it was considered significantly related to resilience building. Deficit-based results indicated that economic difficulties, parental stress and residential insecurity were risk factors individually for relationship impairing adaptation strategies, harsh and overcontrolling parenting. On the other hand, strength-based results revealed that higher socioeconomic status and social support were predictive of positive parenting style and its preservation.

Further qualitative analysis was made by Kalaf and Plante (2019) by implementing an expressive art workshop for Syrian refugee adolescents living in Lebanon aged 12-16. The uniqueness of the study came from its action-research model which allows revealing resilience sources and fostering resilience simultaneously with an ecological framework. Positive affect, positive relationships, meaning and purpose, community engagement and empowerment were named as the factors contributing to building resilience.

In a study investigating validity of a resilience measure, a group of researchers tested Child and Youth Resilience Measure (CYRM) in Jordan with Jordanian and Syrian refugee adolescents in a collaboration with Mercy Corps, a humanitarian organization (Panter-Brick et al., 2017). It set out with the aim of creating a resilience measure that would assess resilience in individuals from conflict areas and they validated CYRM-12 and concluded that it was a useful measure.

More collaboration was made between Mercy Corps and researchers in the same setting with different but close intentions with the aim of determining if resilience was moderating the relationship between various stressors and executive function. An analysis was conducted, and it was suggested that resilience was not moderating the relationship (A. Chen et al., 2019). In another study, it was also examined if resilience would change the impact of an intervention but no significant results were found

(Dajani, Hadfield, van Uum, Greff, & Panter-Brick, 2018). In another study with the same cohort, investigators incorporated genetic and psychosocial factors and investigated their effect on psychosocial stress and found out resilience was associated with psychosocial stress above and beyond other protective factors (Clukay, Dajani, et al., 2019). Furthermore, the same groups of researchers tested certain genes' interaction psychosocial stress and found no significant result yet resilience was a central theme in the research (Clukay, Matarazzo, et al., 2019). This collaboration between Mercy Corps and the group of researchers was quite important due to their emphasis of resilience as a core factor and preference of integrating social, psychological and genetic factors.

2.3. Humor

'Sense of humor' is a term used to describe a trait-like characteristic that has an effect on individuals' mental health (Martin et al., 2003). Traditionally it has been considered as a cognitive feature, a coping mechanism, an aesthetic view, a tendency, an emotional trait, temperament or a perspective on life (Martin, 2013). What all these approaches stress is the multidimensional nature of the term that needs to be studied extensively.

2.3.1. The Conceptual Framework of Humor Style Model

Although it has many definitions, humor has been investigated and defined recently as the following:

> "Humor is a broad, multifaceted term that represents anything that people say or do that others perceive as funny and tends to make them laugh, as well as the mental processes that go into both creating and perceiving such an amusing stimulus, and also the emotional response of mirth involved in the enjoyment of it" (Martin & Ford, 2018, p. 16).

Early humor researchers contributed vastly to understanding and forming the definition of humor, yet they were mostly considering it as a positive attribute that fostered mental health and well-being (Kuiper, 2012). Situational Humor Response Questionnaire (SHRQ), Coping Humor Scale (CHS), Sense of Humor Questionnaire (SHQ) and Multidimensional Sense of Humor Scale (MSHS) were among the measures that have been used to assess the impact of a humorous perspective on daily

life (Martin, 2013). However all the previously mentioned questionnaires suffered from a serious limitation: their inability to differentiate adaptive and maladaptive uses of humor (Kuiper, Grimshaw, Leite, & Kirsh, 2004). The recent theoretical advances and empirical evidence in humor research has been pointing out the importance of differentiating positive and negative functions of humor towards the self and towards the other.

Martin et al. (2003) proposed the Humor Style Model that incorporated benign and injurious uses of humor both of which includes intrapsychic and interpersonal functions separately (Besser, Weinberg, Zeigler-Hill, Ataria, & Neria, 2015). A benign humor reflects positive humor style while injurious humor reflects negative humor style (G. H. Chen & Martin, 2007). In this 2x2 model of humor functions, positive (benign, adaptive) humor consists of affiliative and self-enhancing humor, negative (injurious, maladaptive) humor is separated as aggressive and self-defeating humor.

Affiliative humor as a benign form of joking around with interpersonal function is used to enhance relationships, contribute to other people's well-being and maintain adjustment (Cheung & Yue, 2012; Martin et al., 2003). It has been negatively associated with depression, anxiety, and positively associated with agreeableness, self-esteem and competence (Cheung & Yue, 2012; Erickson & Feldstein, 2007).

Self-enhancing humor as the second form of adaptive humor is adopted to enhance the self that is understanding of others and live well with a humorous view especially against adverse experiences (Cheung & Yue, 2012; Martin et al., 2003). It builds resilience by decreasing anxiety and depression, associated with self-esteem, competence, intimacy, extraversion and coping (Cheung & Yue, 2012; Erickson & Feldstein, 2007; Martin et al., 2003).

The first negative and injurious type of humor, aggressive humor, is used to enhance the self like affiliative humor but very differently in a way that is detrimental to the others through sarcasms, hostility, excessive teasing and ridiculing (Besser et al., 2015; Cheung & Yue, 2012). Impaired adjustment, disrupted resilience, aggression, social incompetence, relationship conflicts arise out of its excessive use (Besser et al., 2015; Cheung & Yue, 2012; Martin et al., 2003).

Self-defeating humor can be defined as a negative form of humor that refers to enhancement of relationships that is detrimental to the self and well-being by excessive self-disparaging and teasing the self (Cheung & Yue, 2012; Martin et al., 2003). The goal of using self-defeating humor has been associated with a desire for acceptance, disruptions to resilience, increase in the rates of depression and anxiety, aggressive outlook, hostility (Cheung & Yue, 2012; Martin et al., 2003).

Using this multifaceted approach, researchers have been able to conduct research examining the exact role of humor in mental health which was not clear in the earlier studies (Kuiper, 2012). Therefore with the construction of a humor style model, a strong relationship between mental health and humor has been reported in the literature; better mental health is associated with positive humor whereas mental health problems are associated with negative humor (Martin et al., 2003). Moreover humor style model was underscoring the importance of negative humor which can be quite central to understanding mental health issues (Kuiper, 2012).

There has been a an increasing amount of literature on mental health and well-being within a resilience framework (Masten, 2001). As it was reviewed in this chapter, the resilience framework has drawn considerable attention to protective and promotive mechanisms with a strengths-based approach yet without discounting risks and deficits completely (Masten & Narayan, 2012). The concordance between a resilience framework and humor style model offers an intriguing opportunity since they both consider negative and positive aspects (Kuiper, 2012). Among the contributions of humor on resilience; avoidance of stress, providing a mental shift from maladaptive to adaptive patterns of thinking and utilization of emotion regulation capacities were identified so far (Kuiper, 2012).

It can thus be suggested the humor style model which is one of the core frameworks that lay the foundation of the present study has a strong theoretical background, extensive empirical data, clear terminology and parallel understanding with resilience (Kuiper, 2012). This system of classification of humor as a multidimensional construct offers a unique perspective for understanding its relationship to mental health and resilience by differentiating different functions of humor.

2.3.2. Humor in Adolescence

The period of adolescence is quite unique in terms of the challenging nature of puberty and the ubiquitous stress accompanying it (Erickson & Feldstein, 2007). The rapid bodily changes in height, weight and hormones and the cognitive development leading to more abstract and critical thinking require a sensitive navigation (Cameron et al., 2010; Martin, 2007). In order to bear on this challenging period and navigate into the adulthood, adolescents usually employ various strategies from individual factors like humor to more relational factors like enhancing peer relationships (Erickson & Feldstein, 2007; Martin et al., 2003). Humor has been considered as a coping strategy through navigating the challenging period of adolescence and even it has even been considered important for at-risk youth (Cameron et al., 2010). As the adolescents grow up from childhood to adulthood, humorous perspective was employed more prominently, pointing out to the role of cognitive development inherent in this period (Führ, 2002). In another study, increased use of coping humor was correlated with decreased rates of depression and anxiety among hospitalized adolescents (Freiheit, Overholser, & Lehnert, 1998). Further goals of using humor among adolescents were listed as solving difficult situations and enhancing relationships (Führ, 2001).

Together these studies provide insight for future research on the development and role of humor in the unique period of adolescence. Since the period is both challenging and full of resources, it becomes a crucial period to invest in the mental health and well-being of adolescents.

2.4. Humor and Trauma-Related Psychopathology

The relationship between humor and trauma related psychopathology has been examined by various researchers (Besser et al., 2015; Dyck & Holtzman, 2013; Kuiper, 2012; Sliter et al., 2014). While some put emphasis on the role of coping humor as a mediating factor between traumatic stressors and mental health (Sliter et al., 2014), others focused on individual differences in humor styles (Besser et al., 2015; Dyck & Holtzman, 2013). In a study, lower depressive symptoms and greater resilience were predicted by increased use of coping humor (Ong, Bergeman, & Bisconti, 2004). They

found out that coping humor acted as a buffer against traumatic stressors, and protected individuals from developing PTSD and burnout among older adults.

Sliter et al. (2014) explored the role of humor as a coping mechanism against PTSD, burnout and absenteeism in firefighters experiencing workplace stress. The findings indicated that coping humor acted as a protective factor in individuals with previous traumatic experiences against PTSD and burnout. It is therefore suggested that individuals who used coping humor experienced less negativity due to traumatic experiences than individuals who do not use coping humor.

Besser et al. (2015) reported that benign humor was predicting lower levels of depression, anxiety and PTSD symptoms in adult couples, though injurious humor was not linked with any level of trauma-related symptoms at all. Another study revealed a similar pattern by showing that higher degrees of life satisfaction and lower degrees of depressive symptoms were predicted by utilization of affiliative humor and self-enhancing among university students (Dyck & Holtzman, 2013).

The mechanism under which humor operates as a buffering factor in developing trauma-related psychopathology has been studied to some degree as well. Results revealed that, the association between humor use and mental health has been associated with affect regulation, stress regulation, happiness, reappraising threats, managing stress, maintaining interpersonal relationships, relationship satisfaction, conflict management, social bonding, perceived availability of social support and increasing resilience (Besser et al., 2015; Dyck & Holtzman, 2013; Sliter et al., 2014).

The current literature on humor and trauma-related psychopathology symptoms are promising but it is rather scarce. The paucity of this literature undermines researchers' ability to understand the complex relationship between traumatic experiences, humor and mental health. The existing literature sheds some light on this complex relationship only to a certain degree. Therefore, more research which takes various factors into account is needed.

2.5. Resilience and Trauma-Related Psychopathology

Understanding the relationship between resilience and trauma-related psychopathology has been a primary interest for some researchers. Among many at-risk groups, war veterans' rates of PTSD, depression and anxiety were investigated in order to understand how resilience was fitting into the picture (T. R. Elliott et al., 2015). This study confirmed that higher levels of resilience was predicting lower levels of PTSD, depression and anxiety through social interactions, flexibility and coping.
In another study, social support predicted lower PTSD symptoms among police officers only when resilience and life-satisfaction mediated this association (McCanlies, Gu, Andrew, Burchfiel, & Violanti, 2017). Another study which confirmed the mediating role of resilience and hope in the association of social support and PTSD, indicated that targeting resilience and social support has the promise of reducing PTSD (Liu, Zhang, Jiang, & Wu, 2017). Researchers also examined the association of physical exercise with depressive symptoms and showed that resilience and social support mediated this relationship (Yoshikawa, Nishi, & Matsuoka, 2016).

In their review on mental health and resilience of refugee minors at conflict zones, Tol, Song and Jordans (2013) identified resilience fostering factors and resilience markers in this population. One major drawback of the study was their criteria for resilience which was observation of low levels of symptoms in most cases. As it was discussed in the resilience literature, a positive adaptation is expected as a resilience indicator, yet many studies preferred absence of symptoms (Masten, 2018). Therefore the resilience criteria can be considered controversial, yet they ground their decision on the lack of qualified studies with positive adaptation criteria (Tol et al., 2013). The findings of this study indicate that PTSD and depression were commonly assessed as an outcome for trauma exposure, and various factors were related to lower levels of depression like higher social acceptance and lower levels of PTS symptoms including better social support, stable parenting and creativity.

A number of studies have attempted to evaluate resilience among adolescents with traumatic experiences and its relationship to trauma-related psychopathology (Hébert, Lavoie, & Blais, 2014; Heetkamp & De Terte, 2015; Hodes, Jagdev, Chandra, & Cunniff, 2008). In New Zealand, resilience was indicated as a moderator in the

association between fear and PTS symptoms in adolescent who experienced earthquakes (Heetkamp & De Terte, 2015). Among sexual-abuse victims, protective factors like support from mothers and peers ameliorated levels of PTS symptoms in Quebec (Hébert et al., 2014). Another important finding regarding unaccompanied asylum seekers in the UK with significantly high levels of PTS symptoms was that increased levels of support was linked to decreased levels of PTS symptoms (Hodes et al., 2008). In accordance with the resilience literature; being male, better problem-solving skills, better parent-child relationship and benefiting from recreation activities were indicative of lower trauma-related symptomatology in refugee adolescents in Lebanon (Hodes et al., 2008).

The literature on resilience as a mediator for trauma-related psychopathologies is promising but requires further investigation for the critical role of protective factors in adaptive pathways among at-risk groups and particularly refugee adolescents.

2.6. Humor and Resilience

Humor has been listed as an individual factor interacting with family and community level factors that contributes building resilience among all age groups including adolescents with traumatic experiences (Kuiper, 2012). While much research was conducted to understand this relationship; adjustment, life-satisfaction, well-being, coping, competence or direct resilience scales were chosen as an indicator of resilience depending on the study (Cheung & Yue, 2012; Erickson & Feldstein, 2007; Jovanovic, 2011; Leist & Müller, 2013; Lund, 2011; Masten, 1986).

In one study that adopted the humor style model (Martin et al., 2003), self-enhancing humor was associated with post-traumatic growth in adults, and therefore benign humor was defined as an important coping factor against traumatic experiences (Boerner, Joseph, & Murphy, 2017). Another study examined the relationship between humor styles and resilience in adults and found that stable positive affect mediated the relationship between humor style and resilience (Cann & Collette, 2014). It was further argued that positive humor improved mental-health by contributing to resilience and well-being. In another study, resilience was defined as “adjustment under acculturative

stress" and measured by life-satisfaction and absence of depressed mood among university students (Cheung & Yue, 2012, p. 353). Affiliative humor and self-enhancing humor were associated with life-satisfaction in individuals with stress while self-defeating humor had the converse relationship with life-satisfaction (Cheung & Yue, 2012). Other researchers also argued that benign humor as an internal resource has a crucial role in promoting resilience and regulating stress (Fonagy, Steele, Steele, Higgitt, & Target, 1992; Vaillant, 2000). Affiliative humor was also consistently related to resilience and lower PTSD symptoms (Agaibi & Wilson, 2005).

There are only a handful of studies that explored the relationship between humor and resilience (Cameron et al., 2010; Erickson & Feldstein, 2007; Louise Fox, Christopher Hunter, & Jones, 2016; Wu, Lin, & Chen, 2016). The literature on this issue is rather sparse. Researchers claimed that humor use had social and emotional functions for adaptation among resilient adolescents (Cameron et al., 2010). Adaptive humor styles were predictive of resilience among adolescents which was indicated by lower levels of depression and better adaption (Erickson & Feldstein, 2007). In a research concerned with adjustment, affiliative humor was linked to increased self-esteem and self-defeating humor was linked with depressive symptoms (Louise Fox et al., 2016).

The existing literature that investigated the role of humor in building resilience is sparse. To the best of our knowledge there is no study investigating the role of humor in building resilience among refugee minors to this date. Overall; existing studies indicate a need for further examination of this link between humor and resilience in general, and among refugees in particular.

2.7. The Present Study

Studies on the effect of war and migration on children and adolescents has a long history with a deficit-based approach, focusing on the traumatic experiences and trauma-related psychopathology symptoms. However, the field is maturing with a paradigm shift towards the 'risk and resilience' framework which is considering both the adaptive and maladaptive refugee experiences and related outcomes simultaneously. For this study, therefore it was of interest to investigate the impact of

Syrian refugee adolescents' war related experiences and how an individual factor 'humor' would contribute to related outcomes with a risk and resilience framework.

As it was detailed in the literature, previous research has shown that, benign humor predicted lower levels of trauma related psychopathology and higher resilience (Besser et al., 2015; Boerner et al., 2017). In addition, it was also concluded that higher resilience also predicted lower levels of trauma-related psychopathology. Humor has been named as an effective factor for decreasing PTSD, depression and anxiety through the mediating effect of resilience in individuals with traumatic experiences. Therefore the existing literature provided support separately for three main relationships in this model which are humor and trauma-related psychopathology (Besser et al., 2015; Boerner et al., 2017; Sliter et al., 2014), resilience and trauma-related psychopathology (T. R. Elliott et al., 2015; Liu et al., 2017; McCanlies et al., 2017; Rees, Breen, Cusack, & Hegney, 2015; Yoshikawa et al., 2016) and humor and resilience (Cann & Collette, 2014; Cheung & Yue, 2012; Dyck & Holtzman, 2013; Kuiper, 2012). What has not been investigated in this the three-legged proposed model was consideration of all three relationships at the same time in a refugee adolescent population with previous traumatic experiences.

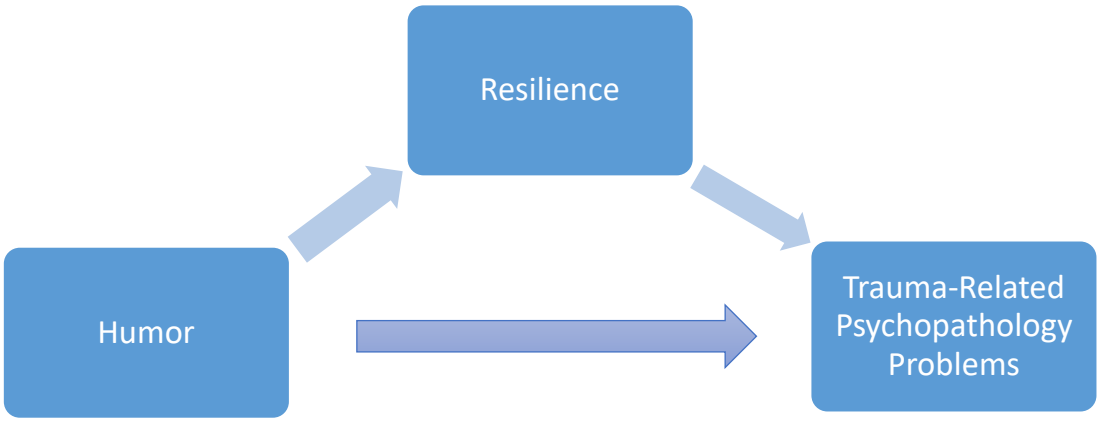

Figure 2.1 The proposed model for the current study

2.7.1. Research Questions and the Hypotheses

Based on the reviewed literature and the model of the study above, this thesis addresses the following research questions:

1. How does age or sex influence the likelihood of displaying trauma-related psychopathology problems (intrusion, aversion, depression, anxiety and stress) among Syrian refugee adolescents?
2. What is the relationship between age, sex, humor, resilience and trauma-related psychopathology problems (intrusion, aversion, depression, anxiety and stress)?
3. How does humor predict the rate of trauma-related psychopathology problems (intrusion, aversion, depression, anxiety and stress)?
4. How does resilience and humor predict trauma-related psychopathology problems (intrusion, aversion, depression, anxiety and stress)?

The hypotheses for the current study are the following:

1. It is expected that there will be a significant difference between boys and girls in terms of trauma-related psychopathology problems (intrusion, aversion, depression, anxiety and stress). While depression and anxiety is expected to be more prevalent in girls, PTSD is expected to be more commonly observed in boys.
2. It is expected that there will be a significant difference between age groups in terms of trauma-related psychopathology problems (intrusion, aversion, depression, anxiety and stress). Trauma-related psychopathology symptoms are expected to be less severe in younger adolescents than older ones.
3. It is expected that there will be a significant association between age, sex, humor, resilience and trauma-related psychopathology symptoms. Negative relationship is expected between resilience and trauma-related psychopathology problems, positive humor and trauma-related psychopathology problems, negative humor and resilience. Positive relationship is expected between age and trauma-related

psychopathology problems, negative humor and trauma-related psychopathology problems.

4. It is expected that trauma-related psychopathology problems will be significantly predicted by age, gender, humor and resilience. Moreover, being girl will predict higher degrees of depression and anxiety and being boy will predict higher degrees of PTS. It is also expected that younger age will predict lower levels of trauma-related psychopathology symptoms. It is expected that lower trauma-related psychopathology problems will be significantly predicted by higher positive humor, lower negative humor and higher individual and caregiver resilience.

CHAPTER III

METHOD

This chapter is comprised of information regarding the participants, procedure and the materials.

3.1. Participants

The participants were 506 Syrian adolescents residing in İstanbul, Turkey whose parents agreed to their children's participation. All adolescents were recruited from various middle schools, high schools and TECs in İstanbul. Primary inclusion criteria were receiving formal education at the time of assessment, being born in Syria, being present in Syria during the war and age range of 12-18. Thirty-seven adolescents were excluded from the study due to their place of birth being anywhere other than Syria. Seventeen adolescents were also excluded because they had left Syria before 2011. Fourteen adolescents who had missing values more than 30 % in any scale were excluded from the study. Lastly five participants were excluded from the study on the basis of being outliers. In total, exclusion criteria disqualified seventy-three adolescents from inclusion to the data

The mean age for the remaining 433 participants after exclusion was 15.51 (*SD* = 1.77). 43.0 % of the adolescents were boys (*n* = 186) and 57.0 % of the adolescents were girls (*n* = 247). No significant difference was found between boys (*M* = 15.50, *SD* = 1.81) and girls (*M* = 15.51, *SD* = 1.74) in terms of mean age (*F* (1,431) = 0.01, *p* = 0.934) (see Table 3.1).

The most frequent number of siblings reported by the adolescents was three (27.4 %), two (20.5 %) and four (20.3 %). Only 12.3 % of the adolescent (*n* = 54) had more than five siblings.

For this study, one of the inclusion criteria was leaving Syria in 2011 or after. Since data was collected in 2019, the number of years since participants left Syria was expected to be from 0 to 8 and therefore they were included. Eight participants who reported leaving Syria 9 or 10 years ago also reported being exposed to war. Therefore, they were also included into the initial number of 506 participants at the beginning of the study. After all of the exclusion criteria have been applied, among the remaining 433 adolescents the majority of them had left Syria (76.9 %) (*n* = 333) from four to seven years ago.

Table 3.1 Demographic Statistics for Demographic Variables

Variable	N	M	SD	Min.	Max.
Age of adolescent	433	15.51	1.77	12	18
Number of siblings	424	3.72	2.08	0	24
Time since leaving Syria	430	5.34	1.75	0	10
Time in Turkey	430	4.77	1.70	0	10
Maternal Education [a]	420	2.93	1.44	1	6
Paternal Education [a]	420	3.24	1.50	1	6
Household Income (1=low, 6=high)	406	2.94	1.39	1	6

[a]: Education: 1: no formal education finished 2: primary and/or middle school 3: high school 4: junior college 5: undergraduate 6: other

Descriptive statistics showed that 9.7 % of the fathers (*n* = 42) had no formal education while 51.7 % had formal education (*n* = 224) including primary, middle or high school.

Only 29.7 % of fathers (*n* = 129) graduated from university or junior college. Descriptive statistics regarding maternal education displayed that 12.5 % (*n* = 54) had no formal education, while 58.8 % (*n* = 255) had graduated either from primary, middle or high school. It was reported that 19.8 % of the mothers (*n* = 86) had received undergraduate or junior college education.

Monthly household income was below 2499 TL for 66.2 % of families (*n* = 287), while 12.9 % of the adolescents (*n* = 56) reported having income less than 1000 TL.

3.2. Procedure

In this section, information about the translation of materials and data collection process is presented.

3.2.1. Translation Process

The materials that have gone through the translation process consisted of consent form, socio-demographic form and five different scales. The consent and the socio-demographic forms were designed by the researchers in Turkish and translated to Arabic by multi-lingual research assistants. Translation-back-translation model was utilized for the process. The remaining five scales were originally created in English and had previous translations to Arabic and Turkish. However, since colloquial dialect varies depending on the Arab countries, having an existing translation was not considered as a sufficient criterion. In order to have a conceptually equivalent version of all forms and scales in both Arabic and Turkish, further linguistic corrections and cultural adaptation was performed.

The Arabic translation and back-translation process were completed by five different multilingual translators and was supervised by two graduate assistants in three steps. The existing Turkish translations were validated and newly translated forms were finalized by the graduate assistants as well.

3.2.2. Ethical Approval

After the translations were finalized, ethical approval was gained through the Internal Review Board (IRB) of Ibn Haldun University. Istanbul Directorate General of Migration Management, the responsible institution that grants approvals for refugee research approved the current study after ethical approval from the University. In order to collect data from public schools, permissions from the Istanbul Provincial Directorate of National Education Ministry of Education of Turkey was received as well.

3.2.3. Data Collection

In the first phase of data collection, public middle schools, public high schools and Non-Governmental Organizations (NGOs) working with Syrians were informed about the study and meetings were arranged in order to pursue further steps. School principals received copies of ethical approvals, required legal permissions and an exemplary consent form in Turkish. Once school administrations agreed to participation, consent letters were sent to parents of adolescents through a teacher assigned for the study (Appendix A). In the present study around 2445 adolescents received the consent form, yet the turn out rate was quite low which was 20.7 %. After consent forms were received appropriate times were selected for data collection at schools. All of the consent forms distributed to the parents were in Arabic and about a week was given for returns. On obtaining written informed consent forms, data collection process began for a pilot study with 11 Syrian adolescents. The first respondents to consent forms, including students from a middle school, a high school and a TEC were administered the questionnaire set. After the pilot study, no problems were detected in the questionnaire that required a change.

The participants for the study were recruited from different schools in various districts of Istanbul. The following districts were chosen; Fatih as a district with a high number of Syrian residents mostly from low socio-economic backgrounds, Başakşehir as a district with high Syrian density mostly from middle to high socio- economic backgrounds which is also close to the Ibn Haldun University, and Bağcılar, Esenler,

Eyüp and Bahçelievler as districts with certain schools that have a high number of Syrian adolescent students. Recruited participants were studying at eight public middle schools, nine public high schools, one NGO and two TECs.

Data was collected from May 2019 to December 2019, excluding the summer break in between. During this time, four Turkish graduate assistants supervised the data collection process. Three undergraduate Arabic students and two bilinguals of Arabic and Turkish accompanied the graduate students as translators for the Syrian participants.

Each session was carried out in a classroom by one graduate assistant and one or more Arabic assistants depending on the size of the class. Prior to the administration of the questionnaire set, the participants received an explanation of the study and a presentation of various questions with different styles. They were informed that they could leave any time without penalty or consequences. Each session lasted about an hour and a half which included informing the participants about the research, its ethics, and the questionnaires. During the data collection, assistants provided explanation to the participants about their questions.

When participants were asked if they would prefer to answer the questionnaire set in Arabic or Turkish 87.5 % (n = 379) preferred the Arabic version, while 12.5 % (n = 54) chose the Turkish form.

Each participant returned the questionnaire set as soon as they finished and left the session individually. Once the completed questionnaire set was received, the questionnaire was put into an envelope and sealed. The enclosed envelopes were then transferred to the university for data entry and storage. No compensation was given to the participants.

The final stage of the study comprised data entry process. Different assistants entered the data twice in order to ensure the accuracy of the results.

3.3. Materials

In the current study, Arabic and Turkish versions of Humor Style Questionnaire (HSQ), Child Youth Resilience Measure Revised (CYRM-R), Children's' Revised Impact of Events Sscale-8 (CRIES-8) and Depression Anxiety Stress Sscale-21 (DASS-21 were utilized. The existing translations were compared with the original English version and with each other by multilingual and bilingual individuals separately. Problematic semantic differences and differences related to the Syrian Arabic dialect regarding the items were corrected. Socio-demographic form was translated and linguistically and culturally adapted HSQ, CYRM-R, CRIES-8 and DASS-21 were administered.

3.3.1. Socio-Demographic Form

The participants completed a socio-demographic form that yields information about themselves, their families and several other critical issues. The related questions to the current study were age and gender. Age was grouped as 12-13, 14-16 and 17-18-year-old adolescents.

3.3.2. Humor

In the current study, the HSQ (Martin et al., 2003) was the preferred instrument for assessing sense of humor in daily life of Syrian adolescents (Appendix B). According to Martin et al. (2003), the strength of the scale comes from its inclusion of both positive and negative uses of humor. It was designed as a 32-item self-report questionnaire with a 7-point Likert scale which ranges from 1 (totally disagree) to 7 (totally agree). The total score is calculated by summing the eight items of the relevant subscale and it ranges from 8 to 56. Higher scores of the referred subscale indicated more prevalent use of the particular humor style.

The HSQ involves four subscales and each subscale includes eight items (Table 3.2). Self-enhancing humor subscale assesses positive humor style that enhances the self (e.g., "Even when I'm by myself, I'm often amused by the absurdities of life").

Affiliative humor subscale examines a positive humor style than enhances the relationships (e.g., “I laugh and joke a lot with my closest friends”). Self-defeating humor subscale consists of items that taps a negative humor style detrimental to the self (e.g., “I often try to make people like or accept me more by saying something funny about my own weaknesses, blunders, or faults”). The fourth and the last humor subscale for aggressive humor measures the negative humor style that is detrimental to the relationships (e.g., “If someone makes a mistake, I will often tease them about it”) (Dyck & Holtzman, 2013). Internal consistency of HSQ measured by Cronbach’s alpha was 81 for self-enhancing humor, .80 for affiliative humor, .80 for self-defeating humor and .77 for aggressive humor (Martin et al., 2003).

The questionnaire was translated into Turkish by Yerlikaya (2003). Reliability analysis revealed that Cronbach’s alpha for the Turkish version was .78 for self-enhancing humor, .74 for affiliative humor, .67 for self-defeating humor and .69 for aggressive humor. HSQ was translated into Arabic and validated in a Lebanese sample (Taher, Kazarian, & Martin, 2008). Cronbach alpha was .70 for self-enhancing humor, .67 for affiliative humor, .76 for self-defeating humor and .55 for aggressive humor in the Arabic translation.

In the study sample, the Cronbach’s alpha was .80 for the total HSQ score. The reliability analysis also revealed that 8 items (1,4,15,16,17, 22, 23 and 25) were below .25 as indicated by the corrected item-total correlation values and therefore removed from the scale. In order to test the factor structure of the HSQ without the removed items, an exploratory factor analysis with a maximum likelihood method through a varimax rotation was used and revealed an 8-factor model with 5 factors above eigen-values of 1 (from 3.48 to 1.05) explaining the 34.35 % of total variance. Five items were then removed (items 3,11,13,21 and 30) based on two criteria: removing an item if it loaded on two factors with a difference less than .100; and if a factor was loaded by less than three items, then removing those two items under that factor (Costello & Osborne, 2005; Karaman, 2017; Karaman, Atar, & Çobanoğlu Aktan, 2017). A second round of the exploratory factor analysis required removing the item 28. The third round of the factor analysis revealed a three-factor model with a KMO value of .87 (Bartlett’s Chi-square =1420.01, p = .00) with two factors above the eigen value of 1 (3.74 and 1.75) explaining the 34.80 of total variance. The first factor which is now called

Positive Individual Humor included items 2,6,10,18 and 26 all of which fell under the original self-enhancing humor style. The second factor that is now named after the factor analysis as Negative Humor included the original self-defeating humor items 8, 12, 20, 24 and 32; affiliative humor items 9 and 29; and aggressive humor items 19, 27). The third factor which is named as Positive Relational Humor included the original self-enhancing humor item 14, aggressive humor items 7 and 31; and affiliative humor item 5. The final reliability analysis indicated that the Cronbach's alpha was .81 for total score, .80 for the first factor (Positive Individual Humor), .77 for the second factor (Negative Humor) and .57 for the third factor (Positive Relational Humor) (Table 3.3).

Table 3.2 Humor Style Model

	Positive	*Negative*
Enhancing the Self	Self-Enhancing Humor (Benign – Towards Self)	Self-Defeating Humor (Injurious – Towards Self)
Enhancing the Relationships	Affiliative Humor (Benign – Towards Other)	Aggressive Humor (Injurious–Towards Other)

Table 3.3 Humor Style Model Revised in Accordance with the Current Study

	Positive	*Negative*
Enhancing the Self	Positive Individual Humor	Negative Humor
Enhancing the Relationships	Positive Relational Humor	

3.3.3. Resilience

CYRM-R (Jefferies, McGarrigle, & Ungar, 2019) was developed to assess social-ecological resilience in children and youth (Appendix C). It is a self-report measure

that is employed to evaluate individuals from age 12 to 23. It is a Rash validated instrument that has 17-items with a 5-point Likert scale, ranging from 1 (not at all), 2 (a little), 3 (somewhat), 4 (quite a bit), to 5 (a lot). While the lowest total score calculated by summing the responses for general resilience is 28, the highest is 140 and it indicates high resilience in the studied group.

There are two domains within the scale: personal and caregiver resilience (Panter-Brick et al., 2017). For the purpose of assessing personal resilience, ten items in the scale tap into intrapersonal and interpersonal aspects (e.g., "Getting an education is important to me", "I feel supported by my friends"). The remaining seven items were designed to elicit caregiver resilience that stresses the role of relationships (e.g., "I feel safe when I am with my family/caregiver(s)") (Resilience Research Centre, 2018). The subscales were calculated by summing the answers of relevant items. For personal resilience, the scores range from 10 to 50, and for caregiver resilience it is from 7 to 35.

Findings regarding the internal consistency of CYRM-R, Cronbach's alpha of personal resilience subscale was .82 and caregiver resilience subscale .82 in a Canadian youth population (Jefferies et al., 2019). CYRM was translated and validated in Arabic, and used frequently with Arabic and Syrian youth (Panter-Brick et al., 2017), however no reliability and validity study was conducted in the most recent revised 17-item version that is also preferred in the current study. The reliability of Turkish CYRM-12 has yielded Cronbach's alpha of .91, yet again CYRM-R was not validated in Turkish as well.

In the study sample, the Cronbach's alpha was .85 for the total scale. There was no item below .25 for Cronbach's alpha. In order to test the factor structure of CYRM-R an exploratory factor analysis was utilized with a maximum likelihood method through varimax rotation. The first round of the factor analysis indicated that six items (2, 3, 6, 7, 8, 17) were below .25 according to the corrected item-total correlation values and therefore omitted from the scale. The second round of the factor analysis detected that items 1, 14 and 16 were below the required degree as well and therefore omitted from the scale. The final round the analysis provided a two-factor model with a KMO value of .77 (Bartlett's Chi-square =1100.49, p = .00). The factors with eigen values of 2.77

and 1.17 explained the 42.21 % of the total variance. The first factor included items 4,5,11 and 15 all of which fell under the original individual resilience subscale. The second factor consisted of items 9,10,12,13 and they were originally listed under caregiver resilience subscale. The internal consistency was .79 for the total of remaining items, .81 for individual resilience and .74 for the caregiver resilience subscale. The two factors were named in order as individual resilience and caregiver resilience.

3.3.4. Post-Traumatic Stress

CRIES is a self-report measure that evaluates children and youth's PTS symptoms who are at least 8 years old (Özer et al., 2016; Yule & Williams, 1990) (Appendix D). It was derived from the original Horowitz Impact of Event Scale (Horowitz, Wilner, & Alvarez, 1979).

CRIES-8 involves 8 items, 4 of which measures intrusion and the remaining 4 measures avoidance for PTSD in children and youth (Perrin, Meiser-Stedman, & Smith, 2005). The items were rated with a 4-point Likert scale based on how frequently they have been experienced over the last seven days (None=0, rarely=1, sometimes=3, and a lot=5). The range of scores was from 0 to 40 with a cut-off score of 17 indicating high PTS symptoms. All items were answered considering how frequently they were experienced by the participant over the last seven days (e.g., "Do you try not to think about it").

The Arabic version was developed with the translation-back-translation method and administered to Palestinians in Gaza (Thabet et al., 2008). CRIES-8 was also administered to Syrian refugee adolescent populations in Syria and Jordon (Clukay, Dajani, et al., 2019; Clukay, Matarazzo, et al., 2019; Dajani et al., 2018; Panter-Brick et al., 2018; Perkins et al., 2018). Turkish version was formed with the translation-back-translation method (Iz, Ceri, Layik, & Ay, 2019). Internal consistency for CRIES-8 in Turkish was .89 as measured by the Cronbach alpha.

For the present study, internal consistency was assessed with a Cronbach's alpha which was .82 for total score, .77 for intrusion and .76 for aversion. In order to investigate the factor structure of CRIES-8 among Syrian refugee adolescents, an exploratory factor analysis was conducted through the method of maximum likelihood with a varimax rotation. The results revealed the KMO as .85 (Bartlett's Chi-square =967.59, p = .00). The 45.02 % of total variance was explained by the 2-factor model in this study with eigen values of 3.57 and 1.17. All items loaded to their original factors of CRIES-8.

3.3.5. Depression, Anxiety & Stress

In order to measure symptoms commonly observed in depression, anxiety and stress, Lovibond and Lovibond (1995) designed a self-report questionnaire, DASS, with three subscales and 42 items in total (Appendix E). In DASS-42, all three subscales have 14 items with a 4-point Likert scale assessing the severity of symptoms over the past week.

A shorter 21-item version which includes 7 items in all three subscales was developed with a 4-point-Likert scale ranging from 0 (did not apply to me at all over the last week) to 3 (applied to me very much or most of the time) (Cann & Collette, 2014). The subscales are descriptive of depression (e.g., "I couldn't seem to experience any positive feeling at all"), anxiety (e.g., "I was worried about situations in which I might panic and make a fool of myself") and stress (e.g., "I felt that I was rather touchy"). Scores for the subscales of DASS-21 is calculated by summing all seven items and multiplying the summed scores by two (x2) for each subscale. As a result, the range of scores for every subscale is from 0 to 42. Since DASS is a dimensional instrument, interpretations of scores based on categories or labels is not advised. Yet for practical reasons, DASS scores were grouped as normal, mild, moderate, severe and extremely severe in order to describe the range of frequency ("Depression Anxiety Stress Scales - DASS," 2018). The range of scores based on severity was described in Table 3.4. DASS has been administered to youth as young as 14, yet it was stated that it could be used down to 12 year-olds ("Depression Anxiety Stress Scales - DASS," 2018).

Table 3.4 Cut-off scores for DASS-21

	Normal	Mild	Moderate	Severe	Ext.Severe
Depression	0-9	10-13	14-20	21-27	28+
Anxiety	0-7	8-9	10-14	15-19	20+
Stress	0-14	15-18	19-25	26-33	34+

In order to understand the factor structure of DASS-21 in young adolescents in Australia, Szabó (2010) measured the internal consistency of the scale and reported Cronbach's alpha as .87 for depression, .79 for anxiety and .83 for stress.

In an attempt to make DASS available for Arabic speaking populations, the DASS-42 version was generated via translation-back-translation method in an adult sample and its psychometric properties were analyzed (Moussa, Lovibond, Laube, & Megahead, 2017). Reliability analysis revealed that internal consistency values for the subscales were .93 for depression, .90 for anxiety and .93 for stress (Moussa et al., 2017). The reliability of Arabic DASS-21 was also demonstrated with a Cronbach's alpha of .88 for total score, .81 for depression, .76 for anxiety and .67 for stress among Egyptian adults (Ali et al., 2017). The scale was further utilized by researchers in studies conducted with Syrians; including adults (Sim et al., 2018), university students (Al Saadi, Zaher Addeen, Turk, Abbas, & Alkhatib, 2017) and adolescents (Kheirallah et al., 2019). The Turkish version of DASS-21 was shown to be a reliable measure, with a Cronbach's alpha of .89 for depression, .87 for anxiety and .90 for stress for adults (Yıldırım, Boysan, & Kefeli, 2018). Further psychometric validation was provided in another recent study with high Cronbach's alphas ranging from .75 to .82 (Yılmaz, Boz, & Arslan, 2017).

In the study sample, the Cronbach's alpha was .92 for DASS-21, .81 for stress, .80 for anxiety and .81 for depression subscales.

CHAPTER IV

RESULTS

4.1. Preliminary Analysis

This section presents the result of this study. The goal of conducting this research was to explore the relationship between humor, resilience and trauma-related psychopathology which are PTS, depression, anxiety and stress. In order to carry through this investigation, statistical analysis was conducted through SPSS (Version 23.0). As a first step, missing value analysis and outlier analysis were performed for the preliminary analysis of this study. Then normality was tested for all the study variables. After that the first main statistical analysis assessed the variation in trauma-related psychopathology symptoms and documented the outcome variables via demographic variables including sex, age, household income and parental education levels. After that, bivariate correlations among humor, resilience and trauma-related psychopathologies were examined. Lastly regression analysis was performed. Therefore, this chapter presents the findings of preliminary analysis, descriptive analysis, correlational analysis and regression analysis.

4.1.1. Missing Value Analysis

In order to rule out any complications regarding the results of the study, missing value analysis per item was conducted as the first step of preliminary analysis. Each item in every scale was checked if the number of missing values in that item was more than 5 % of the total values. The results indicated that there was no item containing missing values more than 5 % of the total cells, as a result none was omitted from the study.

Moreover, missing values per case for each scale was analyzed separately as well. There were 14 cases with missing values more than 30 % of the values in each scale. Therefore, they were omitted from the scale as well.

4.1.2. Outlier Analysis

Detecting outliers was the second step of the preliminary analysis of this study. To identify univariate outliers, standardized z-scores were calculated and values exceeding ±3.00 were regarded as outliers per scale. Five cases were omitted from the study due to exceeding the required range and therefore 433 cases were utilized for further analysis.

4.1.3. Normality

The distributions of intrusion, aversion, depression, anxiety, stress, individual resilience, caregiver resilience, positive individual humor, negative humor and positive relational humor were examined via normality testing. All the variables showed non-normal distributors based on the Kolmogorov-Simirnov normality test ($p < .05$). Although the violation of normality is generally a problem, it will be ignored since the number of participants ($n = 433$) in the current study is high enough ($n > 30$) for disregarding the normality assumption (Altman, n.d.; A. Elliott & Woodward, 2011; Field, 2013; Ghasemi & Zahediasl, 2012; Pallant, 2013). Therefore, the following statistical analyses will be conducted with parametric tests.

4.2. Descriptive Statistics

Descriptive statistics regarding humor, resilience and trauma-related psychopathologies including PTSS, depression, anxiety and stress are computed with means, standard deviations, and minimum and maximum values. The statistical information regarding PTSS, depression, anxiety and stress are shown in Table 4.1, those for resilience in Table 4.2 and those for humor in Table 4.3.

Table 4.1 Demographic Statistics for PTSS, depression, anxiety and stress

Variable	N	M	SD	Min.	Max.
PTSS –					
Intrusion	433	9.09	5.76	0	20
Aversion	433	9.80	6.08	0	20
Total	433	18.89	10.26	0	40
Depression	433	7.28	9.83	0	42
Anxiety	433	13.38	9.90	0	42
Stress	433	15.84	9.70	0	42

In addition to the descriptive statistics, the frequencies of psychopathology problems were also calculated for 433 participants. Absence of PTS according to CRIES-8 was observed among 37.2 % (*n* = 161) while presence was detected at the 62.8 % (*n* = 272) of participants. In terms of depression normal and mild symptoms were observed in 48.7% (*n* = 211), moderate symptoms were encountered in 28.2 % (*n* = 122) and severe and extremely severe symptoms were detected in 23.1 % (*n* =100) in the total sample. The distribution for anxiety was analyzed; normal and mild symptoms were observed in 39.3% (*n* = 170), moderate symptoms were encountered in 20.8 % (*n* = 90) and severe and extremely severe symptoms were detected in 39.9 % (*n* = 173) in the total sample. The frequency of stress was also examined, normal and mild stress symptoms were observed in 64.7 % (*n* = 280), moderate symptoms were encountered in 16.6 % (*n* = 72) severe and extremely severe symptoms were detected in the 18.7 % (*n* = 81) in the total sample.

Table 4.2 Demographic Statistics for Resilience

Variable	N	M	SD	Min.	Max.
Individual Resilience	433	16.88	3.43	4	20
Caregiver Resilience	433	12.89	3.78	4	20
Total Resilience	433	29.76	6.02	11	40

Table 4.3 Demographic Statistics for Humor Styles

Variable	N	M	SD	Min.	Max.
Positive Individual Humor	433	21.28	7.37	4	35
Negative Humor	433	28.46	7.49	10	50
Positive Relational Humor	433	14.69	3.77	3	25

4.3. Variation in Trauma-Related Psychopathology Symptoms

In this section, variation in PTSS, depression, anxiety and stress were examined with regard to demographic variables of sex and age groups.

In order to understand how symptoms of PTS (intrusion and aversion), depression, anxiety and stress changes according to the sex of the participants, a one-way *MANOVA* was conducted. *MANOVA* results (Table 4.4) revealed that there was no

significant effect of sex on either of the psychopathology symptoms (*Wilk's Λ* = .98, F (1, 431) = 1.73, p =.13; partial η^2 =.02).

Table 4.4 MANOVA results for intrusion, aversion, depression, anxiety and stress for boys (*n* = 186) and girls (*n* = 247)

	Girls		Boys					
Variable	M	SD	M	SD	df	F	p	η^2
Intrusion	9.53	5.87	8.51	5.56	1	3.32	.69	.01
Aversion	10.03	6.20	9.49	5.93	1	.83	.36	.00
Depression	14.62	10.14	14.48	9.45	1	.02	.88	.00
Anxiety	14.21	10.68	12.27	8.65	1	4.11	.04	.01
Stress	16.27	9.67	15.27	9.32	1	1.13	.29	.00

A one-way *MANOVA* was also performed to reveal the variation in symptoms of PTS, depression, anxiety and stress among the participants via age groups. *MANOVA* results (Table 4.5) revealed that there was a significant difference between age groups of the participants on PTS, depression, stress and anxiety symptoms (*Wilk's Λ* = .94, F (2, 430) = 2.80, $p < .05$; *partial* η^2 =.03). Results further revealed that age groups had a significant impact on symptoms of intrusion (F (2,430) = 7.70; $p < .05$; partial η^2 = .04), aversion (F (2,430) = 3.79; $p < .05$; partial η^2 = .02), depression (F (2,430) = 3.80; $p < .05$; partial η^2 = .02), anxiety (F (2,430) = 3.31; $p < .05$; partial η^2 = .02), and stress (F (2,430) = 10.17; $p < .05$; partial η^2 = .05). Post-hoc analysis showed that 12-13-year-old participants had significantly lower levels of intrusion, aversion, depression and anxiety ($p < .05$) symptoms and stress symptoms ($p < .000$) than 14-16-year-olds. Moreover 12-13-year-old participants scored significantly less than 17-18-year-old participants on intrusion and stress ($p < .000$) and aversion, depression and anxiety ($p < .05$). There was no significant difference between 14-16-year-old and 17-18-year-old participants.

Table 4.5 MANOVA results for intrusion, aversion, depression, anxiety and stress for 12-13-year-old (n = 73), 14-16 (n = 208) and 17-18 (n=152) year old adolescent participants.

	12-13 y.		14-16 y.		17-18 y.					
Variable	M	SD	M	SD	M	SD	df	F	p	η^2
Intrusion	6.74	5.80	9.42	5.82	9.76	5.38	2	7.71	<.05	.04
Aversion	8.12	6.06	9.88	5.86	10.48	6.28	2	3.79	<.05	.02
Depression	11.75	9.18	14.87	10.16	15.49	9.51	2	3.80	<.05	.02
Anxiety	10.68	9.54	14.03	10.24	13.78	9.42	2	3.31	<.05	.02
Stress	11.29	8.40	16.59	9.87	17.00	9.49	2	10.17	<.000	.05

Therefore, only age was significantly contributing to the variation in trauma-related psychopathology symptoms, therefore age was utilized for further analysis of bivariate correlation and regression. Higher age indicated higher trauma-related psychopathology symptoms,

4.4. Correlation

The relationship among age, humor styles, resilience (individual and caregiver) and trauma-related psychopathology symptoms (PTS (aversion and intrusion), depression, anxiety and stress) were tested using bivariate correlational analysis. The results of the correlational analysis are presented in Table 4.6.

The result of the bivariate correlation analysis indicated that age was significantly related to many of the study variables (Table 4.6). Age was significantly and positively correlated with intrusion (r (433) = .153, p < .05), aversion (r (433) = .123, p < .05), depression (r (433) = .116, p < .05) and stress (r (433) = .174, p < .000). Furthermore, it was significantly and negatively correlated with individual resilience (r (433) = -.15, p < .05) and caregiver resilience (r (433) = -.105, p < .05).

The correlation between the outcome variables was also examined via a bivariate correlational analysis. What stands out among the results is that all psychopathology outcome variables; intrusion, aversion, depression, anxiety and stress were positively and significantly correlated with each other. Intrusion and aversion (r (433) = .50, p < .000), intrusion and depression (r (433) = .47, p < .000), intrusion and anxiety (r (433) = .45, p < .000), intrusion and stress (r (433) = .52, p < .000), aversion and depression (r (433) = .21, p < .000), aversion and anxiety (r (433) = .23, p < .000), aversion and stress (r (433) = .26, p < .000), depression and anxiety (r (433) = .65, p < .000), depression and stress (r (433) = .77, p < .000), and anxiety and stress were positively and significantly correlated.

The relationship between humor and resilience was also examined through bivariate correlational analysis. A significant positive correlation was observed between individual and caregiver resilience (r (433) = .39, p < .000), individual positive humor and negative humor (r (433) = .15, p < .05), individual positive humor and relational positive humor (r (433) = .13, p < .05). Furthermore, there was a significant positive correlation among individual positive humor and individual resilience (r (433) = .28, p < .000), individual positive humor and caregiver resilience (r (433) = .33, p < .000), relational positive humor and individual resilience (r (433) = .14, p < .05) and relational positive humor and caregiver resilience (r (433) = .13, p < .05). A significant negative correlation was also found between negative humor and individual resilience (r (433) = -.10, p < .05).

With regard to the relationship between humor styles and trauma-related psychopathology symptoms, several significant relationships were found between the variables. There was a significant negative relationship between stress and individual positive humor (r (433) = -.12, p < .05), and between depression and positive individual humor (r (433) = -.20, p < .000). A significant positive correlation was also found between negative humor with depression (r (433) = .16, p < .01) and anxiety (r (433) = .13, p < .01). Furthermore, there was another significant negative relationship between relational positive humor and aversion as expected (r (433) = -.10, p < .05).
A partial correlation analysis was run to investigate the relationship between humor styles and trauma-related psychopathology symptoms by controlling individual and caregiver resilience. Although there was no significant relationship (r (431) = .09, p =

.05) in the zero-order correlation among aversion and individual positive humor, there was a significant positive partial correlation between individual positive humor with aversion (r (429) = .12, p < .05). In the meantime, no partial correlation was reported between individual positive humor with depression (r (429) = -.05, p = .32) and stress (r (429) = .02, p = .76) which were previously (r (431) = -.20, p < .000; r (431) = -.12, p < .05) significant in the zero-order correlation analysis.

Moreover, there was a statistically significant relationship between negative humor with depression (r (431) = .16, p < .01) and anxiety (r (431) = .13, p < .01) in the zero-order correlation; yet partial correlation analysis revealed significant positive correlation between negative humor with depression (r (429) = .18, p < .000), anxiety (r (429) = .14, p < .01) and also stress (r (429) = .11, p < .05). The relationship between stress and negative humor was not significant in the zero-order correlation (r (431) = .09, p = .06). These results imply that resilience was weakening the relationship between negative humor and stress, but in terms of depression and anxiety it did not have a mediator effect. Lastly, although there was a significant relationship between relational positive humor with only aversion in the zero-order correlation (r (431) = -.10, p < .05), there was no significant correlation between any psychopathology variables with the relational positive humor in the partial correlation.

Overall, the results indicated that while resilience had influence on the correlational analysis, controlling resilience did not eliminate many of the significant correlations and particularly negative humor was significantly related to psychopathology variables. The correlational analysis does not reveal a direction; they only provide information regarding the relations between the study variables. Therefore, regression analysis was further utilized for a more detailed analysis.

Table 4.6 Significant Bivariate Correlations of Age with PTS, Depression, Anxiety, Stress, Resilience and Humor (N = 433)

Variable	Age	1	2	3	4	5	6	7	8	9	10
1 Intrusion	.20**		.50**	.47**	.45**	.52**	-.11[a]	-.11[a]			
2 Aversion	.14*	.50**		.21**	.23**	.26**					-.10[a]
3 Depression	.16*	.47**	.21**		.65**	.77**	-.33**	-.38**	-.20**	.16*	
4 Anxiety		.45**	.23**	.65**		.69**	-.18**	-.22**		.13[a]	
5 Stress	.21**	.52**	.26**	.77**	.69**		-.26**	-.32**	-.12[a]		
6 Individual Resilience	-.17**	-.11[a]		-.33**	-.18**	-.26**		.39**	.28**	-.10[a]	.14[a]
7 Caregiver Resilience	-.13*	-.11[a]		-.38**	-.22**	-.32**	.39**		.33**		.13[a]
8 Individual Posit. Humor				-.20**		-.12[a]	.28**	.33**		.14[a]	.13[a]
9 Negative Humor	-.11*			.16[a]	.13*		-.10[a]		.14[a]		
10 Relational Posit. Humor			-.10[a]				.14[a]	.13[a]	.13[a]		

[a]p < .05, *p<.01, **p < .000

4.5. Regression

Regression analysis was conducted to make predictions regarding the associations of the study variables of humor styles, resilience (individual and caregiver) and trauma-related psychopathology symptoms (PTS (intrusion and aversion), depression, anxiety and stress). Hierarchical multiple regression analyses were used for investigating the role of predictive variables of age and their relationship. As it was indicated in Table 4.4, sex had no significant effect on trauma-related psychopathology symptoms and therefore was not utilized for further analysis in correlation (*Wilk's Λ* = .98, *F* (1, 431) = 1.73, p =.13; partial η^2 =.02). In Step 1, age as a demographic variable was entered in the analysis in order to understand if age was predicting the trauma related psychopathology symptoms (PTS, depression, anxiety and stress) when demographic variables are controlled. In Step 2, humors styles were entered into the equation. In Step 3, resilience was entered into the analysis to reveal if it had any predictive power above and beyond humor and demographic variables.

The first hierarchical multiple regression analysis was performed in order to identify predictors of intrusion (Table 4.7). In Step 1, age was entered into the equation and significantly predicted the outcome variable (R^2 = .04, *F* (1, 431) = 17.44, $p < .000$). In step 2, humor styles did not significantly contribute predicting intrusion and age remained the only significant factor predicting intrusion (R^2 =.04, *F* (4, 428) = 4.74, $p < .001$). In the third and final step, individual and caregiver resilience were added but did not contribute to the prediction of intrusion and as age again was the sole predictor of intrusion (R^2 =.05, *F* (6, 426) = 3.77, $p < .001$). The results of the hierarchical multiple regression analysis suggested that as adolescents got older, they reported higher levels of intrusion symptoms above and beyond humor and resilience.

Table 4.7 Hierarchical Regression Analysis for Intrusion which was Predicted from Age, Humor and Resilience (N = 433).

Outcome						
Intrusion	Predictors	R	R^2	Adj. R^2	Beta	B
Step 1	Age	.20	.04	.04	.20	.64**
Step 2	Age				.20	.66**
	Positive Individual Humor				-.04	-.03
	Negative Humor				.05	.04
	Positive Relational Humor	.21	.04	.03	-.01	-.02
Step 3	Age				.19	.60*
	Positive Individual Humor				.01	.01
	Negative Humor				.05	.03
	Positive Relational Humor				-.00	-.00
	Individual Resilience				-.04	-.08
	Caregiver Resilience	.23	.05	.04	-.07	-.11

[a]p < .05. *p < .01. **p < 001.

In order to reveal the predictors in aversion symptoms, another hierarchical multiple regression analysis was run (Table 4.8). In the first step, age was entered into the equation and reported as a significant predictor of aversion (R^2 = .02, F (1, 431) = 9.00, p < .05). In the second step, humor styles were tested as predictors of aversion. Individual positive humor and relational positive humor significantly contributed predicting aversion in addition to age; as adolescents preferred individual positive humor more and relational positive humor less, their aversion symptoms increased (R^2 = .04, F (4, 428) = 4.19, p < .05). In the final step, individual and caregiver resilience failed to contribute to the prediction of aversion but age and positive individual humor

remained as significant predictors (R^2 =.04, F (6, 426) = 2.98, p < .05). Overall these results indicate that younger adolescents, who prefer less individual positive humor presented lower levels of aversion.

Table 4.8 Hierarchical Regression Analysis for Aversion which was Predicted from Age, Humor and Resilience (N = 433).

Outcome						
Aversion	Predictors	R	R^2	Adj. R^2	Beta	B
Step 1	Age	.14	.02	.02	.14	.49
Step 2	Age				.13	.44[a]
	Positive Individual Humor				.10	.09[a]
	Negative Humor				-.02	-.02
	Positive Relational Humor	.19	.04	.03	-.10	-.16 [a]
Step 3	Age				.12	.41[a]
	Positive Individual Humor				.12	.10 [a]
	Negative Humor				.-.02	-.02
	Positive Relational Humor				-.09	-.15
	Individual Resilience				-.02	-.03
	Caregiver Resilience	.20	.04	.03	-.05	-.08

[a]p < .05. *p < .01. **p < 001.

Hierarchical multiple regression analysis was also used to estimate the association between age, humor, resilience and depression (Table 4.9). Variables were entered in the same order as above. Age contributed significantly to the prediction of depression; as adolescents got older, they reported higher levels of depressive symptoms (R^2 = .02, F (1, 431) = 10.54, p < .001). In the second step, there was a significant increase in R^2

with the addition of humor (R^2 = .11, F (4, 428) = 13.62, p < .000). As adolescents used more individual positive humor and less negative humor, they reported fewer depressive symptoms. The addition of individual and caregiver resilience in the final step caused a significant increase in explained variance as well (R^2 =.23, F (6, 426) = 21.25, p < .000). The results indicate that adolescents who are younger, who use more individual positive humor and less negative humor and who are more resilient both from the individual and caregiver aspects display lesser degrees of depression.

Table 4.9 Hierarchical Regression Analysis for Depression which was Predicted from Age, Humor and Resilience (N = 433).

Outcome						
Depression	Predictors	R	R^2	Adj. R^2	Beta	B
Step 1	Age	.16	.02	.02	.15	.86**
Step 2	Age				.19	1.04**
	Positive Individual Humor				-.24	-.32**
	Negative Humor				.22	.29**
	Positive Relational Humor	.34	.11	.11	-.04	-.10
Step 3	Age				.12	.65[a]
	Positive Individual Humor				-.10	-.13[a]
	Negative Humor				.20	.26**
	Positive Relational Humor				-.00	-.01
	Individual Resilience				-.15	-.42[a]
	Caregiver Resilience	.48	.23	.22	-.30	-.77**

[a]p < .05. *p < .01. **p < 001.

In order to answer the question whether anxiety was predicted by age, humor and resilience, another multiple regression analysis was done (Table 4.10). In the first step age failed to predict levels of anxiety among Syrian refugee adolescents (R^2 = .01, F (1, 431) = 3.43, ns). In the second step, humor was entered into the equation and significantly increased the R^2 with age (R^2 = .04, F (4, 428) = 3.90, p < .05). Addition of humor affected the relationship between age and anxiety which was not a significant predictor in the first step. According to the results of the second step in the regression analysis; adolescents who were younger and preferred less negative humor were more likely to report fewer symptoms of anxiety. In the final step, with the addition of resilience there was a significant change in R^2 (R^2 =.08, F (6, 426) = 6.44, p < .000) due to negative humor and caregiver resilience. With the entrance of resilience into the equation, age no longer predicted anxiety and the only contributing factors became negative humor and caregiver resilience. These results show that adolescents who used less negative humor and have higher caregiver resilience presented lower degrees of anxiety.

Table 4.10 Hierarchical Regression Analysis for Anxiety which was Predicted from Age, Humor and Resilience (N = 433).

Outcome						
Anxiety	Predictors	R	R^2	Adj. R^2	Beta	B
Step 1	Age	.09	.01	.01	.09	.50
Step 2	Age				.11	.63[a]
	Positive Individual Humor				-.09	-.12
	Negative Humor				.15	.20[a]
	Positive Relational Humor	.19	.04	.03	.04	.11
Step 3	Age				.07	.39
	Positive Individual Humor				.00	.00
	Negative Humor				.14	.18[a]
	Positive Relational Humor				.06	.16
	Individual Resilience				-.08	-.24
	Caregiver Resilience	.29	.08	.07	-.20	-.52**

[a]p < .05. *p < .01. **p < 001.

The last regression analysis was performed to test the association of age, humor and resilience with stress (Table 4.11). When age was entered into the equation, it was observed that it significantly contributed to the prediction of stress (R^2 = .04, F (1, 431) = 19.66, p < .000). Addition of humor styles into the equation increased the variation in R^2 (R^2 = .08, F (4, 428) = 9.37, p < .000). As adolescents got younger, used more positive individual humor less negative humor, they were less likely to report stress. In the final step, resilience was added to regression and it increased the R^2 significantly (R^2 =.17, F (6, 426) = 14.20, p < .000). These results suggest that being younger, using less negative humor, displaying more individual and caregiver humor predicts lower degrees of stress.

Table 4.11 Hierarchical Regression Analysis for Stress which was Predicted from Age, Humor and Resilience (N = 433).

Outcome						
Stress	Predictors	R	R^2	Adj. R^2	Beta	B
Step 1	Age	.21	.04	.04	.21	1.15**
Step 2	Age				.24	1.29**
	Positive Individual Humor				-.16	-.20*
	Negative Humor				.14	.18*
	Positive Relational Humor	.28	.08	.07	.04	.11
Step 3	Age				.18	.97**
	Positive Individual Humor				-.04	-.05
	Negative Humor				.12	.16[a]
	Positive Relational Humor				.07	.19
	Individual Resilience				-.11	-.31[a]
	Caregiver Resilience	.41	.17	.16	-.26	-.68**

[a]p < .05. *p < .01. **p < 001.

4.6. Hypothesis Evaluation

The results in this chapter revealed significant findings with regard to the hypotheses formulated in the third chapter. First of all, it was hypothesized that there would be a significant difference in trauma-related psychopathology problems between boys and girls. Yet this hypothesis was not supported by the findings of the current study. The results of this study provided further support for the second hypothesis which was an expectation that there would be a significant difference between 12-13, 14-16- and 17-18-year-old Syrian adolescents in terms of trauma-related psychopathology problems. The findings suggested that 12-13-year-old adolescents were significantly different in

terms of trauma-related psychopathology symptoms than 14-16 and 17-18-year-old adolescents by displaying fewer symptoms. No difference was observed between 14-16- and 17-18-year-old participants.

In terms of the third hypothesis various statistically significant relationship were observed between the study variables. According to these data, we can infer that the third hypothesis was mostly confirmed except just one unexpected finding. There was a positive significant correlation between all of the trauma-related psychopathology problems. Moreover, individual and caregiver resilience, individual positive humor and relational positive humor, individual positive humor and individual resilience, individual positive humor and caregiver resilience, relational positive humor and individual resilience, relational positive humor and caregiver resilience were positively and significantly correlated while negative humor and individual resilience were significantly and negatively correlated as expected. The only unexpected finding was the significant positive correlation between individual positive humor and negative humor.

Lastly it was hypothesized that lower trauma-related psychopathology problems would be predicted with younger age, higher positive humor, lower negative humor and higher resilience. The predictions about trauma-related psychopathology problems in the fourth hypothesis were partially confirmed. Lower intrusion was predicted only by lower age. Lower aversion symptoms were predicted by lower age and lower positive individual humor. Lower depressive symptoms were predicted by lower age, higher positive individual humor, higher negative humor, higher individual resilience and higher caregiver resilience. Lower anxiety was predicted by lower negative humor and higher caregiver resilience. And lastly fewer stress symptoms were predicted by lower age, lower negative humor, higher individual resilience and higher caregiver resilience. The findings with regard to the last hypothesis revealed that resilience was a predictive factor for depression, anxiety and stress.

4.7. Conclusion

For this study, statistical analysis was performed by SPSS 23.0 and its results were reported in multiple steps. The main goal was to understand the association between

humor, resilience and trauma-related psychopathology symptoms. As a first step missing value and outlier analysis were performed and the following steps were based on the results of this preliminary analysis of outliers and missing values. Then descriptive results for the study variables were examined. In the third step correlational analysis by Pearson's correlation and partial correlation were utilized for understanding the association between the study variables. Finally, as the last step a hierarchical multiple regression analyses was used for identifying predictors of lower levels of trauma-related psychopathology symptoms.

The results of the present study indicated that age had a significant positive relationship with aversion, intrusion, depression and stress; while a significant negative relationship with individual and caregiver resilience based on correlation analysis. Another expected finding was the observed correlations between trauma-related psychopathology variables and it was confirmed that each psychopathology symptom correlated positively and significantly with each other. The partial correlation analysis revealed significant results between humor and psychopathology symptoms when resilience was controlled. In terms of the correlation between individual positive humor with psychopathology variables, resilience had a significant impact on some of the relationships. The results revealed that aversion was more related to individual positive humor than resilience since it became significant in partial correlation. Depression and stress became non-significant when resilience was controlled in the relationship with individual positive humor.

Further partial correlation analysis with regard to negative humor and psychopathology variables showed that resilience did not have a significant impact on the relationship between negative humor with depression and anxiety since controlling resilience did almost not change the results. However the relationship between negative humor and stress changed significantly when resilience was controlled. Lastly; in terms of relational positive humor and psychopathology variables, aversion was significant when resilience was not controlled but non-significant when it was controlled.

The results of this chapter indicated that intrusion as a PTS symptom cluster was single-handedly predicted by age. Higher age predicted higher intrusion symptoms and

explained 5.3 % of total variance (Table 4.7). Aversion, another PTS symptom cluster was explained by age and positive individual humor. The explained variance was 4.0 % for aversion (Table 4.8). Lower age and lower positive individual humor predicted lower aversion symptoms. Depression was also analyzed and lower age, lower negative humor, higher positive individual humor, higher individual resilience and higher caregiver resilience were indicated as predictors of lower depressive symptoms. The variables that predicted depression explained the 23.0 % of total variance (Table 4.9). Anxiety was also examined and lower negative humor and higher caregiver resilience were named as predictors of lower anxiety symptoms by explaining the 8.4 % of total variance (Table 4.10). Finally stress as the last dependent variable of this study was analyzed and lower age, lower negative humor, higher individual resilience and higher caregiver resilience were indicated to predict lower stress symptoms. The predictive variables explained the 16.7 % of variance in stress (Table 4.11). Among all the outcome variables, depression and stress had the highest variance which was followed by anxiety.

Overall, the results of the present study revealed that as adolescents got older, they reported higher psychopathology symptoms, while sex did not relate to the levels of symptoms as age. Moreover, lower negative humor and higher resilience were the most commonly observed predictors of lower trauma-related psychopathology symptoms. This result confirms the role of resilience in the mental health and well-being of refugee adolescents. In addition, it highlights the role of positive individual humor and negative humor in psychopathology symptoms. Yet one must be careful regarding the cultural differences in the understanding of humor styles. The next chapter, therefore, moves on to discussions of the results of this study.

CHAPTER V

DISCUSSION

5.1. Summary of the Findings and Implications

In this investigation, the primary goal was to investigate Syrian refugee adolescents' mental health and well-being within a resilience framework and understand how humor styles would fit in this relationship. The turbulent nature of adolescence increases the importance of resilience building factors such as humor for a healthier transition to adulthood (Erickson & Feldstein, 2007; Panter-Brick et al., 2017). In the meantime, prior studies have noted the role of humor in the period of adolescence as a significant factor influencing mental health and well-being (Cameron et al., 2010; Masten et al., 2004). Therefore, investigation of humor, a multi-dimensional construct, offered a unique way to understand resilience and trauma-related psychopathology symptoms simultaneously in this developmental period. Humor style perspective was preferred because it includes both negative and positive aspect of humor while considering its individual and relational aspects at the same time.

The first research question was about the role of age and sex in trauma-related psychopathology problems. Although there is no consensus on whether girls or boys present different symptoms, several studies have reported sex differences in the matter (Fazel et al., 2012; Reed et al., 2012). Some of the prior studies have also noted that depression and anxiety were more prevalent in girls than boys, while PTSD was more prevalent in boys than girls (Fazel et al., 2012; Lustig et al., 2004; Reed et al., 2012). Based on these findings, in the present study it was expected that there would be a sex difference in trauma-related psychopathology problems, but the results were not in accord with the expectation. Briefly the results of this study revealed that sex had no effect on presentation of either of the trauma-related psychopathology symptoms;

intrusion, aversion, depression, anxiety and stress. Rather this study strengthens the idea that sex is not always contributing to mental health and well-being of Syrian refugee adolescents as indicated in many studies (Fazel et al., 2012; Reed et al., 2012), rather it is a complex factor and its effect is manifested in different ways.

The second major finding in this analysis was with regard to age groups. Age was divided into three groups as 12-13, 14-16 and 17-18-year-olds for statistical analysis and it caused a significant difference on reports of trauma-related psychopathology symptoms. The investigation of age groups revealed that as Syrian refugee adolescents got older, they reported higher levels of intrusion, aversion, depression, anxiety and stress. This observation is in line with our expectation. A possible explanation for this result is that older minors are more likely to be exposed to any kind of traumatic event in the host country including discrimination and more aware of the stressful events in their lives. This result may also be explained by the fact that younger participants in the current study were also younger during the war and displacement. Since younger age at traumatic events are associated with less exposure and awareness (Reavell & Fazil, 2017), the study findings confirmed our expectations. Moreover, age at the onset or trauma, age at displacement, age at arrival to the host country and age at any critical experience may affect the presentation of symptoms; therefore, further work needs to be done which looks at age in various different stages. The findings of this study therefore had expected results about age but not sex. Further work needs to be done which analyzes various other factors that are likely to interact with age and sex and so might explain the variance in the results in detail.

The relationships between the study variables were further examined via correlational and partial correlational analysis. Since sex did not reveal any significant relationship in the previous analysis, only age was further utilized in the correlation and regression analysis. The study findings confirmed that age significantly and positively correlated with all trauma-related psychopathology symptoms but anxiety. Since it was expected that younger age would be associated with lesser symptoms (Reavell & Fazil, 2017), this finding corroborate the findings of a great deal of the previous literature. Moreover, the results of this research also indicated that there was a positive significant correlation between all of the trauma-related psychopathology symptoms. This result matches the findings of earlier work and suggest that refugee minors are very likely to

experience multiple symptoms simultaneously from different but related disorders and comorbidity has been very common in this specific population (Betancourt et al., 2012).

Another finding which confirms the aim of CYRM-R was the positive significant correlation between individual and caregiver resilience. Since both scores measure different aspects of resilience, the positive correlation confirmed our expectation that they would be related positively (Jefferies et al., 2019).

Contrary to our expectations individual positive humor was significantly and positively correlated with both negative humor and relational positive humor. It was somewhat surprising to see that negative humor was positively correlated with both individual and relational positive humor. However as stated in previous literature there are culture-specific differences in the understanding and expression of humor styles (Taher et al., 2008). It was also concluded in the study that the type of humor used in enhancing well-being and resilience may chance from culture to culture; as a maladaptive humor in one culture may become adaptive in another. For instance self-defeating humor in the original HSQ was linked to adaptive patterns in Lebanese culture (Taher et al., 2008). Moreover, since the scale lost many items during the reliability and factor analysis in the present study, it may need further examination for a better understanding of its role in maintaining well-being.

On the other hand, as one would expect individual positive humor and relational positive humor significantly and positively correlated with both individual resilience and caregiver resilience while negative humor significantly and negatively correlated with individual resilience. In accordance with the previous work summarized in the literature review, positive humor associates positively with resilience (Cann & Collette, 2014; Cheung & Yue, 2012). In several studies; affiliative and self-enhancing humor styles were predicting better resilience (Besser et al., 2015; Cann & Collette, 2014). The results of the present study were in line with the existing literature.

In order to test the second hypothesis of the present study, correlation between resilience and trauma-related psychopathology symptoms were examined and the findings supported the idea that they would be negatively related (Southwick et al.,

2014). Both individual and caregiver resilience significantly and negatively correlated with all psychopathology symptoms. This finding indicates that resilience associates with lower rates of psychopathology symptoms (Besser et al., 2015). Although it has been claimed that trauma-related psychopathology and resilience can co-exist, the main line of research considers resilience and absence of psychopathology symptoms as positively related constructs which was supported by the present study as well.

One unanticipated finding was about the relationship between humor and trauma-related psychopathology symptoms. A conflicting result emerged from the correlational analysis. Positive individual humor and depression correlated with each other significantly and unexpectedly. Taher et al. (2008) reported that the factor analysis of Arabic HSQ revealed problematic results at which many items load on to unexpected factors. This was a problem in the Chinese translation as well. Therefore, it was claimed that the difference of the construct of 'self' in individualistic and collectivistic culture makes it harder for its populations to differentiate self- and other-directed items. Moreover, maladaptive humor styles were observed as adaptive and in various cultures as well (Kuiper, Kazarian, Sine, & Bassil, 2010). More specifically self-defeating humor a negative humor style revealed an adaptive role in Lebanese culture. These conclusions may also explain the unexpected association of positive individual humor and depression in the present study. On the other hand, negative humor correlated significantly and positively with depression and anxiety as expected. Moreover, positive relational humor correlated negatively with aversion as one would expect. With the exception of the relationship between individual positive humor and depression, the results confirm the third hypothesis by revealing a negative correlation between positive humor and psychopathology and a positive correlation between negative humor and psychopathology.

To see if the relationship between humor and psychopathology variables were still significant when resilience was controlled, partial correlation analysis was run and revealed important contributions to the discussion of the results. The significant relationship of negative humor with depression and anxiety in the correlation analysis did not change when resilience was controlled. This implies that resilience did not have a major influence in controlling this relationship. However the significance of the relationship between individual positive humor with aversion, depression and stress;

and between relational positive humor with aversion changed when resilience was controlled. This results implies that resilience had an influence in the relationship between humor and psychopathology variables as it was suggested in the literature (Besser et al., 2015; Cann & Collette, 2014; Cheung & Yue, 2012).

Overall the findings regarding the partial correlation analysis implied that resilience had different influence on the study variables' relationship with humor. Resilience was quite important in terms of balancing some of the relationships including individual positive humor with depression, stress and aversion; negative humor with stress; and relational positive humor with aversion (Besser et al., 2015). More specifically, controlling resilience revealed the negative impact of positive individual humor on aversion. Moreover, it can be suggested that resilience was significantly tied to depression and anxiety and individual positive humor did not have a major role in this relationship. In other words, more resilient adolescents displayed fewer depression and stress symptoms but having an individual positive humorous perspective was not related to the symptoms at all which requires further inspection. The current results may be tied to the features of this specific population studied in this research. In terms of the changes in the significance of the partial correlation analysis, it was observed that resilience was overshadowing the impact of negative humor on stress, but controlling it revealed its mediating role which was addressed in the previous literature (Kuiper, 2012). Lastly relational positive humor and psychopathology variables were linked in distinct ways. The only significant relationship of relational positive humor was with aversion, which implies that it was not related to any other psychopathology variables. Moreover due to controlling resilience the relationship between relational positive humor and aversion lost its significance. It can be suggested that resilience was influencing the impact of relational positive humor on aversion by balancing and mediating the relationship which was previously stressed in the literature (Kuiper, 2012; Martin, 2007). Since the existing literature on humor and aversion is scarce and there is no study directly addressing humor, resilience and trauma-related psychopathology simultaneously, the current study and the previous literature addresses the need for further inspection.

In order to test the predictors of intrusion, aversion, depression, anxiety and stress, data were analyzed in three steps based on age, humor styles and resilience. It was hypothesized that humor and resilience would influence trauma-related

psychopathology symptoms. In terms of intrusion, the results indicated that age was the sole predictor, which was surprising. Being younger predicted lower symptoms of intrusion. Age was identified as a strong factor influencing mental health and well-being in the existing literature (Fazel et al., 2012; Reed et al., 2012), but its role in intrusion in the present study was much stronger than in any other psychopathology problems. In terms of aversion, the findings revealed that the predictors of aversion were age and positive individual humor. Being younger and surprisingly using less positive individual humor predicted lower aversion symptoms. This finding was unexpected in that it suggests aversion may be related to positive humor in an opposite way. However considering the previous claims about the adaptive role of maladaptive humor styles in collectivistic cultures (Kuiper et al., 2010; Taher et al., 2008), one could explain such an opposite finding due to cultural differences and translational problems in the humor style questionnaire.

Depression was also analyzed and its predictors were more in line with our expectations. Younger age, more positive individual humor, less negative humor, more individual and caregiver resilience predicted lower levels of depressive symptoms. Age had no predictive power over anxiety, only more caregiver resilience and less negative humor predicted lower anxiety symptoms. Negative humor and caregiver resilience were again predictors as it was in depressive symptoms. In the existing literature, positive humor was associated with better mental health and lower depression and anxiety symptoms as supported by the present study as well (Kuiper et al., 2004; Martin et al., 2003). Lastly stress revealed four predictors; age, negative humor, individual resilience and caregiver resilience. Being younger, using less negative humor, and having more individual and caregiver features predicted lower levels of stress. Negative humor and caregiver resilience were again predictors of stress as they were in depression and anxiety. The results with regard to depression, anxiety and stress supported the existing literature on the facilitative role of positive humor (Erickson & Feldstein, 2007; Kuiper, 2012). Also, self-defeating humor was identified as a factor deteriorating mental health which was further supported in the present study.

The findings of the regression analyses suggested that positive humor and resilience were linked to fewer trauma-related psychopathology symptoms. Although which

humor style and resilience subtype associated with lesser symptoms changes from disorder to disorder, the general pattern is consistent in each psychopathology. Cultural differences were observed in the understanding of humor types, and it was considered that the differences might have affected the results.

In conclusion, one of the main contributions of the present study was its role in shedding light on the protective role of humor on trauma-related psychopathology problems which was not studied extensively before in any population (Boerner et al., 2017). Moreover, studying the facilitative role of humor in resilience in a conflict-affected group such as Syrian refugee adolescents also highlights the importance of this study (Kuiper, 2012; Windle, 2011).

5.2. Limitations and Suggestions for Future Studies

Although the current study contributes to the understanding of risk and resilience in general and humor styles in particular, it is limited by several factors. One of the limitations of this study is that it was a cross-sectional study and therefore no longitudinal data was involved. Analysis was based on correlation and regression which does not allow causality. Since also there is usually no baseline data from before war or before resettlement, this particular area of research lacks causal inferences as it did in the present study (Masten & Narayan, 2012). It was not possible to assess baseline data, therefore it is unknown whether the results are due to war-related traumatic experiences, migration or resettlement process.

Another source of weakness in this study which could have affected the measurement of humor and resilience in Syrian refugee adolescents was about the source of data. All of the participants were coming from either public schools or temporary education centers (TECs) which leaves out the majority of Syrian refugee adolescents who do not have access to education in formal institutions. Schooling has been named as an important resilience building factor in many studies, therefore it was a factor of which the importance of it has not been assessed in the present study (Demir & Ozgul, 2019).

An additional uncontrolled factor is the language competency of the Syrian refugee adolescents residing in Istanbul, Turkey. As mentioned in many other studies, Syrian

minors suffer due to their incompetency in Turkish (Bircan & Sunata, 2015; Uyan-Semerci & Erdoğan, 2018). However, since they do not receive formal education in Arabic, their understanding of Arabic may also be limited. In the present study, participants had the option of answering questions in Arabic or Turkish and most of them chose Arabic. Yet their competency in their selected language is unknown. It was possible that the questionnaire set was not clearly understood.

Another issue that was not addressed adequately in the present study was post-migration living difficulties. As addressed by various researchers, post-migration living difficulties including discrimination can be more severe than the war-trauma itself (Li, Liddell, & Nickerson, 2016; Zwi et al., 2017). We have included socio-economic status, number of siblings and time since displacement as important factor influencing living conditions yet issued like discrimination and prejudice were not included. Not including a major factor such as this creates a major limitation for understating refugee trauma and resilience.

Another limitation was the concern about the participants' lack of understanding of mental health. It was reported that in 2011, there were only 80 psychiatrists in Syria, no data was given on the number of psychologists, in a population of almost 22 million at the time (Eloul et al., 2013). Such an atmosphere has a possibility of hindering individuals' capacity of understanding what mental health is, how and why it is assessed and what are the ethical codes in designing a mental health study. This possible lack of understanding may explain the very low turn-out rate in the current study (≈ 20.0 %). Such reluctance for participation to a mental health study may be due to the fact mentioned above. Furthermore, it was possible that it not only affected participation, but also it could have affected the participants' willingness to respond correctly to the questions. Fear of deportation or persecution may cause them to withhold information on assessments (Yaylaci, 2018). Such an atmosphere has the potential to influence the study results.

As a final limitation, culture-bound interpretations and understandings were addressed as a possible problem in HSQ which blurs the boundaries between the humor styles (Kuiper et al., 2010). Further work needs to consider the difference between

collectivistic and individualistic cultures' interpretations of humor styles in a more detailed way.

Despite the fact that the study has several limitations, it sheds light on the field of risk and resilience and humor. For future studies several suggestions can be made. First of all, any study conducted to understand the dynamics of refugee mental health, can include post-migration living difficulties as an important factor contributing to the risk and resilience of refugee adolescents. Including issues as resettlement difficulties, discrimination, and stigmatization may help explaining the trauma and resilience observed in refugee populations. Moreover, stressing the role of the resettlement process may help in designing interventions that aim at improving refugee's living conditions.

Although resilience has been measured by a self-report scale in the current study, there are other ways of assessing the resilience of individuals including age-salient developmental tasks and competency measurements. Since resilience is a dynamic concept and highly sensitive to culture, age-salient culturally sensitive developmental tasks or competency measurements may further explain the role of resilience in refugee mental health. This study should be repeated with different ways of measuring resilience. Working with diverse groups in a longitudinal format that accounts for the language competency of Syrian adolescents may also provide more extensive and clear findings as well.

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APPENDIXES

APPENDIX A

CONSENT FORM

Ibn Haldun Üniversitesi
Psikoloji Bölümü

Adres: Ulubatlı Hasan Cd. No: 2
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Dr. Öğretim Üyesi Burcu Uysal

Istanbul Milli Eğitim Bakanlığı`na Bağlı Okulların Velileri

Istanbul, Eylül 2018

Istanbul`daki Suriye Kökenli Mülteci Ergenlerin Psikolojik Sağlamlığı Araştırması

Sevgili veliler,
Sevgili öğrenciler,

Suriye savaşı sebebiyle milyonlarca Suriyeli savaş ve sonrasındaki zorlukları aşarak ülkemize sığınmıştır. Bilhassa çocuklar ve ergenler için bu yaşanan zorlu koşullar sonraki hayatları açısından büyük öneme sahiptir.

Bu yazıyla idarem altında yürütülecek bu önemli araştırma projesi için desteğinizi rica ediyorum.

Araştırmamız hakkında kısaca bilgi verecek olursak:

Bu araştırmamızla gençlerin geleceklerinde belirleyici bir rol oynayan büyüme çağını araştırıyoruz. Karşılaştıkları zorluklara rağmen psikolojik sağlamlığı olan ergenler araştırılarak Suriye kökenli ergenlerle ilgili yapılan çalışmalara katkıda bulunmayı hedefliyoruz. Suriye kökenli ergenlerin göç öncesi, esnası ve sonrasında yaşadıkları zorluklar onları nasıl etkilemiştir? Psikolojik sağlamlıklarını koruyanlar bunu nasıl korumuştur? Hangi koşullar onların gelişimlerini olumlu veya olumsuz etkiliyor?

Araştırmamız sonucunda cevaplamak istediğimiz sorulardan birkaçı bunlardır. Biz çocukların ve gençlerin sadece bugünkü durumunu değil, bundan sonraki gelişim sürecini de takip etmek istiyoruz.

Araştırma süreci nasıl işleyecek?

Araştırmamız bu konuda özel eğitim görmüş üniversite çalışanları tarafından uygulanacak ve en fazla iki ders saati kadar sürecektir. Bunun için çocuğunuz olumlu yaşam şartlarına (örneğin arkadaşlık, mizah) ve ayrıca karşılaştığı muhtemel risk ve sıkıntılarına (savaş yüzünden Suriye`de, göç esnasında ve sonrasında) ve bunlardan nasıl etkilendiğine dair bir anket dolduracak. Cevapların içeriğini gizlemek için anket yazılı olarak, öğrenciler tarafından doldurularak kapalı bir zarf içinde çalışanlarımıza verilecektir. Öğretmenler anket doldurulurken sınıfta bulunmayacak ve cevapları görmeyeceklerdir. Bu konuda özel eğitim almış araştırmacılarımız sadece genel olarak organizasyona dair bilgi ve yardımda bulunacaklardır. Katılımcılar anketi isteklerine göre Arapça veya Türkçe doldurabileceklerdir.

Veri korunması nasıl sağlanacak?

Verilerin titizlikle korunmasına dikkat ediyor ve size en yüksek seviyede anonimlik sağlamayı garanti ediyoruz. Mevzuat gereğince katılımcıların kimlik bilgileri hiçbir şekilde ortaya çıkarılmayacak, araştırma sonuçlarının yayınlanmasında da kimlik bilgileri gizlenecektir. Araştırma grubumuza sadece anonim anketler teslim edilecek, bu yüzden hangi öğrencinin hangi cevabı verdiği bilinmeyecektir. Anketteki diğer bütün veriler de anonim kalacaktır. Çocuğunuzun okulu ve Istanbul İl Milli Eğitim Müdürlüğü uygulamamızı sakıncasız bularak onayladı. Ankete katılmak isteğe bağlıdır ve istediğiniz zaman herhangi bir yaptırım olmadan araştırmadan çekilebilirsiniz.

Siz ne yapmalısınız?

Lütfen ekteki izin belgesini doldurarak, çocuğunuzla okula gönderin. Sınıf öğretmenleri izin kağıtlarını bizim için toplayacaklar. Sorunuz olduğunda her zaman bizimle irtibata geçebilir, araştırmayla ilgili bilgilere ulaşabilirsiniz.

Çocuğunuz, çalışmaya katılarak araştırmanın başarısına büyük bir katkıda bulunabilir. Araştırmanın sonunda aileleri araştırma sonuçlarına dair bilgilendirmek için seminerler düzenlenecektir. Istanbul İl Milli Eğitim Müdürlüğü ve diğer resmi

kurumlar araştırma sonuçlarından haberdar edileceği için, siz ve çocuğunuz Suriyeli ergenlerin okul hayatının, günlük hayatlarının iyileştirilmesine doğrudan katkıda bulunabilirsiniz.

Katkılarınız için çok teşekkür eder, saygılarımı sunarım!

Dr. Öğretim Üyesi Burcu Uysal

.....
.....

Onam Formundaki tüm açıklamaları okudum. Yukarıda konusu ve amacı belirtilen Istanbul`daki Suriye Kökenli Mülteci Ergenlerin Psikolojik Sağlamlığı Araştırması`na gönüllü olarak katıldığımı, istediğim zaman gerekçeli veya gerekçesiz araştırmadan ayrılabileceğimi biliyorum.

Katılımcının Adı, Soyadı:

Velinin Adı, Soyadı:

Velinin İmzası:

Tarih:

APPENDIX B

MİZAH TARZLARI ÖLÇEĞİ (MTÖ) (HSQ)

“İnsanlar mizahı çok farklı biçimlerde yaşar ve dışa vururlar. Aşağıda mizahın yaşanabileceği farklı biçimleri ifade eden cümleler yer almaktadır. Lütfen her bir cümleyi dikkatle okuyarak o ifadeye ne ölçüde katıldığını ya da katılmadığını belirt. Lütfen mümkün olduğunca dürüst ve tarafsız olarak yanıtlamaya çalış. Yanıtların için aşağıdaki değerlendirme ölçeğini temel al.”

		Kesinlikle	**Katılmıyorum**	**Biraz katılmıyorum**	**Kararsızım**	**Biraz katılıyorum**	**Katılıyorum**	**Tamamen katılıyorum**
1	Genellikle çok fazla gülmem ya da başkalarıyla şakalaşmam.	1	2	3	4	5	6	7
2	Moralim bozuk olduğunda genellikle kendimi mizahla neşelendirebilirim.	1	2	3	4	5	6	7
3	Birisi hata yaptığında çoğunlukla onunla bu konuda dalga geçerim.	1	2	3	4	5	6	7
4	İnsanların benimle dalga geçmelerine ya da bana gülmelerine gereğinden fazla izin veriyorum.	1	2	3	4	5	6	7
5	İnsanları güldürmek için çok fazla uğraşmam gerekmez - doğuştan esprili bir insan gibiyimdir.	1	2	3	4	5	6	7

6	Tek başıma bile olsam çoğunlukla yaşamın gariplikleriyle eğlenirim.	1	2	3	4	5	6	7
7	İnsanlar asla benim mizah anlayışım yüzünden gücenmez ya da incinmezler.	1	2	3	4	5	6	7
8	Kendimi yermem ailemi ya da arkadaşlarımı güldürüyorsa eğer, çoğunlukla bu işi kendimden geçerek yaparım.	1	2	3	4	5	6	7
9	Başımdan geçen komik şeyleri anlatarak insanları pek güldürmem.	1	2	3	4	5	6	7
10	Üzgün ya da mutsuzsam, kendimi daha iyi hissetmek için genellikle o durumla ilgili gülünç bir şeyler düşünmeye çalışırım.	1	2	3	4	5	6	7
11	Espri yaparken ya da komik bir şey söylerken genellikle karşımdakilerin bunu nasıl kaldıracağını pek önemsemem.	1	2	3	4	5	6	7
12	Çoğunlukla kendi güçsüzlüklerim, gaflarım ya da hatalarımla ilgili gülünç şeylerden söz ederek, insanların beni daha çok sevmesini ya da kabul etmesini sağlamaya çalışırım.	1	2	3	4	5	6	7
13	Yakın arkadaşlarımla çok sık şakalaşır ve gülerim.	1	2	3	4	5	6	7
14	Yaşama karşı takındığım mizahi bakış açısı, benim olaylar karşısında aşırı derecede üzülmemi ya da kederlenmemi önler.	1	2	3	4	5	6	7

15	İnsanların, mizahı başkalarını eleştirmek ya da aşağılamak için kullanmalarından hoşlanmam.	1	2	3	4	5	6	7
16	Çoğunlukla kendi kendimi kötüleyen ya da alaya alan espriler yapmam.	1	2	3	4	5	6	7
17	Genellikle fıkra anlatmaktan ve insanları eğlendirmekten hoşlanmam.	1	2	3	4	5	6	7
18	Tek başınaysam ve mutsuzsam, kendimi neşelendirecek gülünç şeyler düşünmeye çalışırım.	1	2	3	4	5	6	7
19	Bazen öyle komik şeyler gelir ki aklıma bunlar insanları incitebilecek, yakışık almaz şeyler olsa bile, kendimi tutamam söylerim.	1	2	3	4	5	6	7
20	Espriler yaparken ya da komik olmaya çalışırken çoğunlukla kendimi gereğinden fazla eleştiririm.	1	2	3	4	5	6	7
21	İnsanları güldürmekten hoşlanırım.	1	2	3	4	5	6	7
22	Kederli ya da üzgünsem genellikle mizahi bakış açımı kaybederim.	1	2	3	4	5	6	7
23	Bütün arkadaşlarım bunu yapıyor olsa bile, bir başkasıyla alay edip ona gülerlerken asla onlara eşlik etmem.	1	2	3	4	5	6	7
24	Arkadaşlarımla ya da ailemle birlikteyken çoğunlukla hakkında espri yapılan ya da dalga geçilen kişi ben olurum.	1	2	3	4	5	6	7
25	Arkadaşlarımla çok sık şakalaşmam.	1	2	3	4	5	6	7

26	Tecrübelerime göre bir durumun eğlendirici yanlarını düşünmek, sorunlarla başa çıkmada çoğunlukla etkili bir yoldur.	1	2	3	4	5	6	7
27	Birinden hoşlanmazsam çoğunlukla onu küçük düşürmek için hakkında espri yapar ya da alay ederim.	1	2	3	4	5	6	7
28	Sorunlarım varsa ya da üzgünsem, çoğunlukla gerçek duygularımı, en yakın arkadaşlarım bile anlamasın diye, espriler yaparak gizlerim.	1	2	3	4	5	6	7
29	Başkalarıyla birlikteyken genellikle aklıma söyleyecek esprili şeyler gelmez.	1	2	3	4	5	6	7
30	Neşelenmek için başkalarıyla birlikte olmam gerekmez, genellikle tek başımayken bile gülecek şeyler bulabilirim.	1	2	3	4	5	6	7
31	Bir şey bana gerçekten gülünç gelse bile, birini gücendirecekse eğer, buna gülmem ya da bununla ilgili espri yapmam.	1	2	3	4	5	6	7
32	Başkalarının bana gülmesine izin vermek; benim, ailemi ve arkadaşlarımı neşelendirme tarzımdır.	1	2	3	4	5	6	7

APPENDIX C

REVİZE EDİLMİŞ ÇOCUK VE GENÇ PSİKOLOJİK SAĞLAMLIK ÖLÇEĞİ (ÇGPSÖ) (CYRM-R)

“Aşağıdaki ifadeler senin için ne ölçüde geçerli? Doğru ya da yanlış cevap yoktur. Lütfen her bir ifadeyi okuyarak sana en uygun olanı işaretle.”

		Beni hiç tanımlamıyor.	Çok az tanımlıyor.	Biraz tanımlıyor	Oldukça tanımlıyor	Beni tamamen
1	Çevremdeki insanlar ile iş birliği içerisindeyimdir.	1	2	3	4	5
2	Eğitim almak benim için önemlidir.	1	2	3	4	5
3	Farklı sosyal ortamlarda nasıl davranacağımı bilirim (örneğin, okul, cami veya diğer sosyal ortamlar).	1	2	3	4	5
4	Anne-babam beni yakından takip eder, nerede olduğumu ve çoğu zaman ne yaptığımı bilir.	1	2	3	4	5
5	Ailem benim hakkımda birçok şeyi bilir (örneğin, arkadaşlarımın kim olduğunu, nelerden hoşlandığımı).	1	2	3	4	5

6	Acıkırsam, evde yemek için yeteri kadar yiyecek bulabilirim.	1	2	3	4	5
7	İnsanlar, benimle vakit geçirmekten hoşlanır.	1	2	3	4	5
8	Nasıl hissettiğim konusunda anne-babamla konuşurum (örneğin üzgün veya endişeli olduğumda).	1	2	3	4	5
9	Arkadaşlarım tarafından desteklendiğimi düşünüyorum/hissediyorum.	1	2	3	4	5
10	Kendimi okuluma ait hissediyorum.	1	2	3	4	5
11	Ailem zor zamanlarımda yanımdadır.	1	2	3	4	5
12	Arkadaşlarım zor zamanlarımda yanımdadır.	1	2	3	4	5
13	Yaşadığım toplumda bana adil bir şekilde davranılır.	1	2	3	4	5
14	Çevremde büyüdüğümü ve sorumluluk alabileceğimi diğer insanlara gösterebileceğim fırsatlara sahibim.	1	2	3	4	5
15	Ailemle olduğumda kendimi güvende hissediyorum.	1	2	3	4	5
16	Hayatımda gelecekte kullanacağım yeteneklerimi geliştireceğim fırsatlara sahibim (mesleki beceriler gibi).	1	2	3	4	5

17	Ailemin aile geleneklerini ve kültürünü seviyorum.	1	2	3	4	5

APPENDIX D

REVİZE EDİLMIŞ ÇOCUK OLAYLARIN ETKİSİ ÖLÇEĞI-8 (CRIES-8)

“Aşağıdaki listede stresli/zorlu yaşam olaylarına maruz kalan insanların ifade ettikleri bazı açıklamalar yer almaktadır. Lütfen aşağıdaki ifadelerden, **son yedi gün içinde**, senin için de geçerli olanları, sıklıklarına göre belirt. Bu ifadelerde belirtilen hususlardan son yedi gün içinde yaşamadıkların varsa, söz konusu ifade için ‘Hemen Hiç’ kutusunu işaretle. “

		Hemen Hiç	Nadiren	Bazen	Sıklıkla
1	İstemediğin halde olay aklına geliyor mu?				
2	Olayı hafızandan silmeye (aklından çıkarmaya) çalışıyor musun?				
3	Olayla ilgili kuvvetli duygu dalgalanmaları yaşıyor musun?				
4	Olayı hatırlatacak şeylerden uzak duruyor musun? (Örneğin; olayın geçtiği yer veya durumlar.)				
5	Olay hakkında konuşmamaya çalışıyor musun?				
6	Olayla ilgili görüntüler birden zihninde beliriyor mu?				

		Hemen Hiç	Nadiren	Bazen	Sıklıkla
7	Başka şeyler aklına o olayı getiriyor mu?				
8	O olayı düşünmemeye çalışıyor musun?				

APPENDIX E

DEPRESYON, ANKSİYETE STRESS - ANKSİYETE SKALASI-21 (DASS-21)

"Lütfen her bir ifadeyi okuyun ve 0, 1, 2, ve 3 numaralarından bugün dâhil son bir haftayı dikkate alarak size en uygun olanı işaretleyin. Doğru ya da yanlış cevap yoktur. Herhangi bir cümle üzerinde çok fazla zaman harcamayın."

	Son Bir Haftadaki Durumunuz	Bana Hiç Uygun Değil	Bana Biraz Uygun	Bana Genellikle	Bana Tamamen
1	Kendimi gevşetip salıvermek zor geldi.	0	1	2	3
2	Ağzımda kuruluk olduğunu farkettim.	0	1	2	3
3	Hiç olumlu duygu yaşayamadığımı farkettim.	0	1	2	3
4	Soluk almada zorluk çektim (*örneğin fizik egzersiz yapmadığım halde aşırı hızlı nefes alma, nefessiz kalma gibi)*	0	1	2	3
5	Bir iş yapmak için gerekli olan ilk adımı atmada zorlandım.	0	1	2	3
6	Olaylara aşırı tepki vermeye meyilliydim.	0	1	2	3
7	Vücudumda *(örneğin ellerimde)* titremeler oldu.	0	1	2	3
8	Sinirsel enerjimi çok fazla kullandığımı hissettim.	0	1	2	3

	Son Bir Haftadaki Durumunuz	Bana Hiç Uygun Değil	Bana Biraz Uygun	Bana Genellikle	Bana Tamamen
9	Panikleyip kendimi aptal durumuna düşüreceğim durumlar nedeniyle endişelendim.	0	1	2	3
10	Hiçbir beklentimin olmadığı hissine kapıldım.	0	1	2	3
11	Kışkırtılmakta olduğumu hissettim.	0	1	2	3
12	Gevşeyip rahatlamakta zorluk çektim.	0	1	2	3
13	Kendimi perişan ve hüzünlü hissettim.	0	1	2	3
14	Beni yaptığım işten alıkoyan şeylere dayanamıyordum.	0	1	2	3
15	Panik haline yakın olduğumu hissettim.	0	1	2	3
16	Hiçbir şey bende heyecan uyandırmıyordu.	0	1	2	3
17	Birey olarak değersiz olduğumu hissettim.	0	1	2	3
18	Alıngan olduğumu hissettim.	0	1	2	3
19	Fiziksel egzersiz söz konusu olmadığı halde kalbimin hareketlerini hissettim *(kalp atışlarımın hızlandığını veya düzensizleştiğini hissettim).*	0	1	2	3
20	Geçerli bir neden olmadığı halde korktuğumu hissettim.	0	1	2	3
21	Hayatın değersiz olduğunu hissettim.	0	1	2	3

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