

**REFUGEE CHILDREN’S PSYCHOSOCIAL HEALTH:  
TESTING FAMILY STRESS MODEL**



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# REFUGEE CHILDREN'S PSYCHOSOCIAL HEALTH: TESTING FAMILY STRESS MODEL

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*To my grandmother, the strongest refugee woman who taught me the meaning of love, and to all refugee women who hold onto hope.*



## **DECLARATION OF ORIGINALITY**

I hereby declare that I am the sole author of this thesis and that this is the true copy of my thesis, including the final revisions, approved by my thesis committee. All data and information have been obtained, produced, and presented in accordance with the rules of research ethics and principles of academic honesty. As required by these rules, to the best of my knowledge I have acknowledged ideas, thoughts, and any copyrighted material in accordance with the standard referencing rules. I certify that any part of this thesis has not been submitted for a degree or diploma in another educational institution.

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## ABSTRACT

This study focuses on refugee children's psychosocial health within the framework of the Family Stress Model (FSM). It examines how economic stress and post-migration living difficulties (PMLD) are related to child behavior problems, focusing on both direct and indirect relationships through maternal depression. The study employed a cross-sectional design and was conducted with a sample of 234 Syrian mothers residing in Türkiye, each providing information on one child (125 girls, 109 boys) between the ages of 4 and 16 years ( $M = 8.99$ ,  $SD = 3.24$ ). Participants completed a set of questionnaires online, assessing economic stress, post-migration living difficulties, maternal depression, and child behavior problems. Results from path analysis showed that economic stress and PMLD are directly related to child behavior problems. Additionally, both economic stress and PMLD were related to child behavior problems through maternal depression. The findings supported the FSM's proposed indirect pathways for both economic stress and PMLD, underscoring the crucial mediating roles of maternal depression. Results emphasized the importance of mental health and interventions focusing on maternal depression to decrease the negative effects of external stressors on refugee children's psychosocial health.

**Keywords:** Economic stress, post-migration difficulties, child behavior problems, maternal depression, family stress model

## ÖZET

Bu çalışma, Aile Stres Modeli (ASM) çerçevesinde mülteci çocukların psikososyal sağlığına odaklanarak ekonomik stres ve göç sonrası yaşam zorluklarının (GSYZ) annenin depresif semptomları aracılığıyla çocuk davranış problemleriyle nasıl ilişkili olduğunu incelemektedir. Çalışma kesitsel bir tasarıma sahip olup, Türkiye'de ikamet eden ve her biri 4 ila 16 yaşları arasındaki bir çocuk (125 kız, 109 erkek) hakkında ( $M = 8,99$ ,  $SD = 3,24$ ) bilgi veren 234 Suriyeli anneden oluşan bir örneklemle yürütülmüştür. Katılımcılar, ekonomik stresi, göç sonrası yaşam zorluklarını, depresif semptomlarını ve çocuk davranış problemlerini değerlendiren bir dizi anketi çevrimiçi olarak tamamlamıştır. Yol analizinden elde edilen sonuçlar, hem ekonomik stresin hem de GSYZ'nin doğrudan çocuk davranış problemleriyle ilişkili olduğunu göstermiştir. Ayrıca, hem ekonomik stres hem de GSYZ'nin annenin depresif semptomları aracılığıyla çocuk davranış problemleriyle ilişkili olduğu bulunmuştur. Bulgular, FSM'yi destekleyerek ekonomik stress ve GSYZ ve çocuk davranış problemleri arasında annenin depresif semptomlarının kritik aracı rolünü doğrulamaktadır. Sonuçlar, mülteci çocukların psikososyal sağlığı üzerindeki dış stres faktörlerinin olumsuz etkilerini azaltmak için anne depresyonuna odaklanan müdahale programlarının önemini vurgulamaktadır.

**Anahtar Kelimeler:** Ekonomik stres, göç sonrası yaşam zorlukları, çocuk davranış problemleri, ebeveyn depresyonu, aile stress modeli

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## 1. INTRODUCTION

Children's psychosocial health develops within a complex interplay of individual and environmental factors. Among these, chronic external stressors such as economic hardship have been recognized as significant risk factor for behavioral and emotional outcomes (Conger et al., 2002; Evans & Kim, 2013). Research also emphasizes the role of maternal factors, particularly maternal depression, in shaping these associations (Okur-Ataş & Kazak-Berument, 2023). For refugee families, these stressors are often intensified (Khraisha et al., 2024). In Türkiye, Syrian refugees experience not only economic stress but also post-migration challenges such as discrimination and uncertainty, which may affect the psychosocial health of both parents and children (Pluess et al., 2025). Despite the importance of this issue, limited research has examined how these stressors relate to child psychosocial health through maternal mental health in refugee contexts (Al Gharaibeh & O'Sullivan, 2018; Eruyar et al., 2018; Sim et al., 2018).

The civil war that began in Syria in 2011 has resulted in one of the largest displacement crises in recent history, with millions of Syrians migrating to neighboring countries. Türkiye has hosted the largest refugee population since 2011, approximately three million Syrian refugees as of late 2024 (UNHCR, 2024). While research on refugee experiences has often focused on pre-migration and war-related trauma, such as PTSD (Al Gharaibeh & O'Sullivan, 2018; Eruyar et al., 2018), growing evidence suggests that post-migration stressors, such as economic hardship or discrimination, can have an equal or even greater impact on mental health than war-related experiences (Akesson & Sousa, 2020; Miller & Rasmussen, 2010, 2024). These daily stressors can undermine parental mental health and, in turn, influence children's psychosocial well-being (Akesson & Sousa, 2020). Shifting the focus from past trauma to the daily realities of life in

displacement is therefore essential to develop a comprehensive understanding of family dynamics in refugee context and for designing effective support mechanisms (Alhaffar & Janos, 2021).

The Family Stress Model (FSM) provides a useful framework for understanding these dynamics. FSM conceptualizes economic stress as a factor that undermines parental mental health and parenting practices, which in turn are linked to child development outcomes (Conger & Conger, 1994; Masarik & Conger, 2017). However, most applications of FSM have focused on WEIRD populations, often overlooking context-specific stressors relevant to displaced families. Extending FSM to include post-migration living difficulties offers an opportunity to adapt the model to the realities of refugee life.

The current study examines how economic stress and post-migration living difficulties are associated with child psychosocial health, particularly behavioral problems, through maternal depression among Syrian refugee families in Türkiye. Rather than framing refugee experiences solely through the lens of war trauma, this study highlights the structural and contextual challenges that mothers and children experience in the host country. By testing FSM within a refugee context, this research addresses a critical gap in the literature and provides insights to inform interventions and policies that target daily external challenges faced by refugee families.

## **1.1 Theoretical Framework**

Beyond formal statistics, it is essential to understand how economic stress and post-migration living difficulties shape family dynamics and child development to inform effective interventions and policies. Previous research has employed various theoretical frameworks to explain these relationships (e.g., Egger et al., 2025; Miller & Rasmussen, 2010). For example, the Cumulative Risk Model emphasizes that the accumulation of

multiple risk factors, rather than any single factor, increases the likelihood of negative developmental outcomes in children (Evans et al., 2013). From this perspective, economic stress and post-migration difficulties may increase risk exposure for both mothers and children. Another approach, the Family Investment Model, focuses on the availability of financial resources and their role in enabling parents to invest in their children's development through material goods, educational opportunities, and enriched environments (Becker, 2010; Bradley & Corwyn, 2004). While this model highlights the importance of resource access, it largely overlooks the psychological processes within families and the impact of stress on parental well-being and parenting practices (Foster, 2002).

To address these limitations, the Family Stress Model (FSM) offers a comprehensive framework for understanding how economic and related stressors influence family functioning and child outcomes. Originally developed by Conger and Elder (1994) to examine the effects of economic hardship on rural Midwestern families, FSM builds on earlier research on the consequences of the Great Depression (Conger et al., 1992). The model posits that adverse economic conditions, such as job loss or financial strain, create economic pressure within families, which manifests as difficulties in meeting basic needs and making necessary cutbacks (Conger & Conger, 2008). Over time, these pressures increase the risk of parental psychological distress, including depression, and may contribute to interparental conflict and disrupted parenting practices. These disruptions, in turn, are associated with negative child outcomes, such as behavioral problems (Masarik & Conger, 2017).

FSM emphasizes the psychological toll of economic stress on parents, particularly the sense of reduced self-efficacy and perceived inability to fulfill parental

responsibilities despite efforts to cope with adversity. This distress can lead to negative family interactions, increased conflict, and less effective parenting, ultimately negative effects on children's psychosocial well-being (Conger & Elder, 1994; Wodzinski, 2023).

This study investigates how external stressors of Syrian refugee families relate to child psychosocial health within the Family Stress Model (FSM). Refugees experience all three FSM components (economic stress, parental mental health problems, and child behavior problems) yet FSM has rarely been applied in this context (Yu et al., 2020). To address this, external stressors are conceptualized as both economic stress and post-migration living difficulties.

Research shows that Syrian parents face depression due to economic hardship and integration challenges, which negatively affects children's psychosocial health (Arienliu, 2020; Huntley et al., 2021; Miller et al., 2022; Peltonen et al., 2023; Sim et al., 2018). Only one study has applied FSM directly to Syrian refugees, Sim et al. (2018) found that economic hardship in Lebanon was negatively related to parental mental health, parenting, and children's adjustment.

The present study is the first to test FSM quantitatively with Syrian refugees in Türkiye, examining the pathways from economic stress and post-migration living difficulties to maternal depression and child behavior problems.

## **1.2 Literature Review**

### ***1.2.1 Economic Stress and Maternal Depression***

The first external stressor examined in this study within the Family Stress Model (FSM) is economic stress. Economic stress refers to the stress felt due to unstable economic conditions, such as difficulty paying bills or affording basic necessities

(Masarik & Conger, 2017). Common measures of socioeconomic status often rely on objective indicators like income or education; however, these do not fully capture families' daily experiences (Roy et al., 2019). Subjective indicators, such as perceived economic stress or cutbacks, may provide more accurate insights into how economic stress affects maternal and child mental health (Heintz-Martin et al., 2021; Maguire-Jack & Sattler, 2022; Sosu & Schmidt, 2017).

In Türkiye, economic instability has manifested in various forms, including increased food insecurity (Chaudry & Wimer, 2016; TURKSTAT, 2023). Food insecurity is often the earliest and most visible sign of economic stress in low-income families and has been linked to maternal depression (Chen & Yeung, 2024; Reesor-Oyer et al., 2023) and adverse child outcomes (Maynard et al., 2018; Whitaker et al., 2006). Incorporating food insecurity into the conceptualization of economic stress may provide a more comprehensive understanding of families' daily realities. Economic stress and food insecurity are interconnected dimensions of the same challenge and should be considered together (Chen & Yeung, 2024; Doudna & Greder, 2023).

Economic stress is a well-documented risk factor for maternal mental health difficulties, particularly depression (Heflin & Iceland, 2009; Masarik & Conger, 2017). Several studies showed that economic stress predicts higher depressive symptoms among mothers (Gard et al., 2020; Santiago et al., 2011; Simons & Steele, 2020). The psychological pressure of being unable to meet basic needs might create feelings of guilt and hopelessness, which are core symptoms of depression (Belle & Doucet, 2003; Leung et al., 2015). These effects are consistent with FSM, which posits that economic stress negatively affects maternal mental health and, consequently, child psychosocial health (Masarik & Conger, 2017; Ridley et al., 2020).

Evidence from refugee populations supports these findings (Abou-Rizk et al., 2022; Arienliu, 2022). Refugee mothers are particularly vulnerable to the negative effects of economic stress due to social exclusion, language barriers, and legal insecurity (Akesson & Sousa, 2020; Hazer & Gredebäck, 2023). Studies have reported high rates of depression among Syrian refugee mothers linked to economic hardship (Cratsley et al., 2021; Khamis, 2022). These findings suggest that economic stress is a crucial risk factor for maternal depression in refugee contexts.

Based on the literature, the present study conceptualizes economic stress broadly and examines its relationship with depressive symptoms of Syrian refugee mothers in Türkiye. Consistent with FSM, it is expected that higher levels of economic stress will be associated with increased maternal depressive symptoms.

### ***1.2.2 Post-Migration Living Difficulties and Maternal Depression***

Post-migration living difficulties represent another critical stressor that may influence maternal mental health among refugee families. High rates of depression among Syrian refugees (Acarturk et al., 2021) show the need to identify factors contributing to this vulnerability (Almeida et al., 2024). Beyond economic stress, daily challenges experienced after migration, such as discrimination or barriers to employment, are significant sources of stress, making them essential to consider as risk factors for maternal depression (Jannesari et al., 2020; Miller & Rasmussen, 2017).

Empirical evidence supports the relationship between post-migration stressors and maternal depression. Studies have shown that difficulties related to acculturation, social integration, and legal status are linked to increased depressive symptoms among refugee mothers (Hou et al., 2020; Li et al., 2016; Parke et al., 2004). These findings highlight the

importance of considering daily stressors beyond economic stress when examining maternal depression in refugee families.

The Family Stress Model (FSM), while originally developed to explain the effects of economic stress on family functioning, provides a flexible framework that can be adapted to refugee contexts. Integrating post-migration living difficulties into FSM allows for a more comprehensive understanding of how structural and contextual challenges may influence maternal mental health and, subsequently, child outcomes (Masarik & Conger, 2017). Based on this perspective, the current study offers a unique contribution to the literature by incorporating Syrian refugee mothers' post-migration living difficulties into the FSM. Accordingly, it is expected that mothers who experience more post-migration stressors tend to show more depressive symptoms.

### ***1.2.3 Economic Stress and Child Behavior Problems***

Economic stress is a well-documented risk factor for child behavioral problems (Schenck-Fontaine & Panico, 2019). Besides the indirect pathways that may operate between them, studies show a direct relationship between economic stress and children's emotional and behavioral difficulties, including aggression, hyperactivity, and internalizing symptoms (Evans & Cassells, 2014; Lee & Lee, 2016; Sosu & Schmidt, 2017). This relationship has been confirmed across diverse populations and age groups, even after controlling for mediators such as parental depression (Santiago et al., 2011).

Several mechanisms have been proposed to explain this direct link. Children in economically stressed households may experience emotional insecurity and self-regulation difficulties due to exposure to inadequate housing, poor nutrition, unsafe neighborhoods, and social exclusion (Gershoff et al., 2007; Raver et al., 2015; Wadsworth et al., 2008). Economic stress can also have immediate behavioral consequences, as

shown in longitudinal studies where economic stress and deprivation predicted attention problems and conduct disorders over time (Hatem et al., 2020; Slopen et al., 2010; Whitaker et al., 2006). Food insecurity, as a form of economic stress, has similarly been linked to behavioral difficulties (Kimbrow & Denney, 2015; Perez-Escamilla & Vianna, 2012). Additionally, children's awareness of economic stress may disrupt their sense of security and contribute to behavioral problems (Elenbaas & Killen, 2019).

Research with refugee populations supports these findings. Syrian refugee children in Türkiye living in economically insecure households exhibit higher levels of aggression, attention problems, and peer difficulties compared to those in more stable conditions (Çeri & Nasiroğlu, 2018). Similar patterns have been reported in Lebanon and Jordan, where economic stress predicted behavioral problems even after accounting for war exposure and parental mental health (Rizkalla et al., 2020; Sim et al., 2018). Thus, there is a need to focus on economic stress not only as a contextual risk but also as a proximal factor that is directly related to children's psychosocial health.

Based on this evidence, the present study examines the direct association between economic stress and child behavior problems among Syrian refugee families in Türkiye. It is hypothesized that higher levels of economic stress will be positively associated with greater behavior problems in children.

#### ***1.2.4 Post-Migration Living Difficulties and Child Behavior Problems***

Post-migration living difficulties (PMLD) refer to structural, social, and institutional stressors that refugee families encounter in the host country, such as legal insecurity, discrimination, and language barriers (Miller & Rasmussen, 2010; Jannesari et al., 2020). These challenges are chronic and persistent, shaping the daily lives of

mothers and children as they spend effort to rebuild their lives under conditions of uncertainty (Akesson & Sousa, 2020; Hazer & Gredebäck, 2023).

Research indicates that PMLD can directly affect children's emotional and behavioral adjustment. Refugee children exposed to higher levels of post-migration stressors are at increased risk for conduct problems, hyperactivity, and internalizing symptoms (Alami, 2020; Hou et al., 2020). For example, studies in Türkiye and Lebanon have shown that PMLD predicts behavioral difficulties even after controlling for war exposure (Sim et al., 2018; Solmaz et al., 2021).

These stressors may undermine children's sense of safety and stability and may lead to anxiety, frustration, and social withdrawal, or externalizing behaviors such as aggression (Fazel et al., 2012; Frounfelker et al., 2020). Additionally, limited access to social support and enriching opportunities can exacerbate these difficulties (Bronstein & Montgomery, 2011; Gormez et al., 2018).

In sum, PMLD may operate as immediate daily stressors that can be directly related to children's behavior problems. Consistent with the Family Stress Model, this study investigates the direct association between Syrian refugee mothers' post-migration living difficulties and their children's behavioral problems. It is hypothesized that higher levels of PMLD will be positively associated with greater behavioral difficulties in children.

#### ***1.2.5 Maternal Depression and Child Behavior Problems***

Maternal depression is a well-established risk factor for children's psychosocial health. Depressed mothers often exhibit reduced emotional availability and lower engagement, which can impair children's emotional regulation and social development (Goodman et al., 2011; Lovejoy et al., 2000). Maternal depression has been consistently

linked to behavioral problems such as aggression, hyperactivity, and withdrawal (Connell & Goodman, 2002; Weissman et al., 2006), with effects persisting into adolescence and adulthood (Keenan-Miller et al., 2007; Pires et al., 2020).

Depressed mothers may be less responsive to their children, may feel distanced, and not be able to engage positively (Dix & Meunier, 2009; Lovejoy et al., 2000; Wachs et al., 2009). Maternal depression may cause behavioral problems in children by limiting the mother's ability to provide structured discipline in a consistent and nurturing way (Bayer et al., 2006; Fatori et al., 2020; Goodman et al., 2011).

Evidence from refugee populations aligns with these findings. Refugee mothers commonly experience depressive symptoms due to cumulative stressors across pre- and post-migration periods, including poverty, discrimination, and legal insecurity (Akesson & Sousa, 2020; Hazer & Gredebäck, 2023; Stevenson et al., 2019). Studies have demonstrated that maternal depression among refugees significantly predicts child behavioral problems (East et al., 2018; Peltonen et al., 2022). Syrian refugee families in Türkiye show similar patterns, with maternal depression emerging as a strong predictor of children's psychosocial difficulties (Solmaz et al., 2021).

In summary, maternal depression is a significant risk factor for child behavior problems (Bagner et al., 2010). Refugee mothers are particularly vulnerable due to their exposure to multiple risk factors for depression, making it essential to understand the link between maternal depression and child behavior issues. It is expected that there will be a direct relationship between the level of depressive symptoms in Syrian refugee mothers and the behavior problems of their children.

### ***1.2.6 Mediating Role of Maternal Depression***

#### **1.2.6.1 The Mediating Role of Maternal Depression in the Relationship Between Economic Stress and Maternal Depression**

According to the Family Stress Model (FSM), economic stress influences child behavior problems indirectly through its impact on maternal depression (Conger et al., 1992; Masarik & Conger, 2017). Thus, maternal depression plays a key role in transferring the negative effect of economic stress felt by mothers to children's behaviors (Neppl et al., 2016).

Empirical evidence supports this pathway. Economic stress is a strong predictor of maternal depression, which in turn is associated with increased behavioral problems in children (Goodman et al., 2011; Lovejoy et al., 2000). Maternal depression has been identified as one of the mediating mechanisms between economic stress and child behavior problems (Gershoff et al., 2007; Lee, 2022; Rijlaarsdam et al., 2013; Yeung et al., 2002). Similar findings were also reported by Chen and colleagues (2020) and Chen and Yeung (2024). In their longitudinal study, Thompson and Henrich (2022) and Iruka and colleagues (2012) highlighted the mediating role of maternal depression. Lee (2022) conducted a four-wave longitudinal study showing that maternal depression mediated the relationship between economic stress and child behavior problems from kindergarten to fourth grade. Additionally, Yang and colleagues (2023), Simons and Steele (2020), and Low and Mounts (2022) identified that parental mental health is a mediator between the economic stress experienced by families and child behavior problems.

Similar findings have been reported in refugee contexts, where economic hardship significantly predicts maternal depressive symptoms, which subsequently relate to child psychosocial difficulties (Arakelyan & Ager, 2021; Beiser et al., 2002; Peltonen et al.,

2022; Popham et al., 2024; Sim et al., 2018). Studies with Syrian refugee families specifically highlight this indirect pathway (Hazer & Gredebäck, 2023).

Understanding this mediating mechanism is critical for both theory and practice. It focuses on maternal depression as a potential intervention target to mitigate the negative effects of economic stress on children (Pluess et al., 2025; Silva-Rodrigues et al., 2022). Thus, the current study hypothesizes that maternal depression mediates the positive association between Syrian refugee mothers' economic stress and their children's behavioral problems, such that higher economic stress is associated with greater maternal depressive symptoms, which in turn are associated with more child behavior problems.

#### **1.2.6.2 The Mediating Role of Maternal Depression in the Relationship Between Post-Migration Living Difficulties and Child Behavior Problems**

Post-migration living difficulties (PMLD) may influence child behavior problems indirectly through maternal depression, consistent with the Family Stress Model (FSM) (Miller & Rasmussen, 2010; Yu et al., 2020). These stressors, such as legal insecurity, discrimination, and social isolation, are chronic and can significantly undermine maternal mental health (Hazer & Gredebäck, 2023; Solmaz et al., 2021). Depressive symptoms, including withdrawal and reduced emotional availability, are well-documented predictors of child behavioral difficulties (Weissman et al., 2006; Peltonen et al., 2022).

Empirical evidence supports this mediating pathway. Studies have shown that post-migration stressors increase maternal depression, which in turn predicts child psychosocial problems (Peltonen et al., 2022; Emmen et al., 2013; Miller & Czismadia, 2022). Research with refugee families, including Syrian refugees, confirms that maternal depression mediates the association between PMLD and child behavior problems (Sim et

al., 2018; Popham et al., 2024). These findings highlight maternal depression as a central mechanism linking structural challenges to child outcomes.

Building on FSM, this study hypothesizes that maternal depression mediates the positive relationship between Syrian refugee mothers' post-migration living difficulties and their children's behavioral problems, such that higher PMLD is associated with greater maternal depressive symptoms, which in turn are associated with more child behavior problems.

### **1.3 The Current Study**

The Family Stress Model (FSM) has been widely validated across diverse populations, including African American, Latinx, Finnish, and European-American families, demonstrating strong empirical support (Masarik et al., 2022; Miller & Csizmadia, 2022; Parke et al., 2004; Solantaus et al., 2004). However, in their comprehensive review, Cooper and Stewart (2021) stated that 45% of the FSM studies were based in the US, and others were from EU countries. It is a model that tries to understand the impact of economic conditions on families, yet it has been tested in countries that are not economically disadvantaged. This limitation undermines the ability to understand the dynamics of families in economically challenged regions accurately.

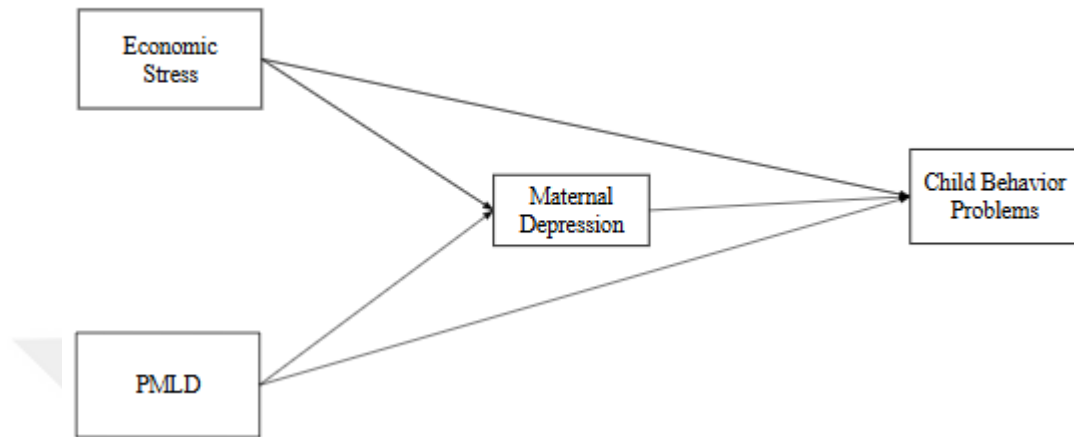
The current study addresses this gap by applying FSM to Syrian refugee families in Türkiye, a population experience chronic economic hardship and unique post-migration challenges (Rizkalla et al., 2020; Ulutaş et al., 2025). Refugee contexts provide a critical test of FSM because these families experience all three core components of the model: economic stress, parental mental health difficulties (e.g., depression), and child behavior problems (Yu et al., 2020). While prior research with refugees has largely been qualitative or focused on war-related trauma (Ghumman et al., 2016; Ulutaş et al., 2025),

there is a need for quantitative studies that incorporate daily stressors, such as economic stress and post-migration living difficulties, into the FSM framework (Emmen et al., 2013; Masarik & Conger, 2017). The inclusion of different variables associated with refugee parents' daily lives (e.g., refugees' relationships with the host community and acculturation) needs to be included to gain a broader perspective (Bustos & Santiago, 2023; Masarik et al., 2022; Yu et al., 2020). The current study offers a unique contribution by incorporating the post-migration living difficulties of Syrian refugee parents to the FSM using a context-specific approach.

Another contribution of this study is its focus on a broader age range of children. Although FSM research increasingly includes younger children, most of the literature is still on adolescent studies (Barnett, 2008; Mistry et al., 2002). Examining the effects of external stressors on children with a wider age range can provide valuable insights into family dynamics and child well-being.

Building on these considerations, the present study investigates how economic stress and post-migration living difficulties relate to child behavioral problems among Syrian refugee families in Türkiye, both directly and indirectly through maternal depression. By testing FSM within a refugee context and incorporating contextual stressors, this research aims to refine the model and inform interventions that address the structural and psychological challenges faced by displaced families. The Family Stress Model of the study can be seen in Figure 1.1. Also, the research questions and hypotheses for proposed direct and indirect associations of the study are presented below.

**Figure 1.1** *The Conceptual Model of Direct and Indirect Associations from Daily External Stressors and Child Psychosocial Health*



*Note. PMLD = Post-Migration Living Difficulties.*

**RQ1.** To what extent is economic stress associated with maternal depression among Syrian refugee mothers in Türkiye?

**H1.** Economic stress is expected to be positively associated with maternal depression, such that higher levels of economic stress predict greater maternal depressive symptoms.

**RQ2.** To what extent are post-migration living difficulties associated with maternal depression?

**H2.** Post-migration living difficulties are expected to be positively associated with maternal depression.

**RQ3.** To what extent is economic stress associated with child behavioral problems?

**H3.** Economic stress is expected to be positively associated with child behavioral problems.

**RQ4.** To what extent are post-migration living difficulties associated with child behavioral problems?

**H4.** Post-migration living difficulties are expected to be positively associated with child behavioral problems.

**RQ5.** To what extent is maternal depression associated with child behavioral problems?

**H5.** Maternal depression is expected to be positively associated with child behavioral problems.

**RQ6.** To what extent does maternal depression mediate the relationship between economic stress and child behavioral problems?

**H6:** Maternal depression is expected to mediate the positive relationship between economic stress and child behavioral problems, such that higher economic stress predicts greater maternal depressive symptoms, which in turn predict more child behavior problems.

**RQ7.** To what extent does maternal depression mediate the relationship between post-migration living difficulties and child behavioral problems?

**H7.** Maternal depression is expected to mediate the positive relationship between post-migration living difficulties and child behavioral problems, such that higher PMLD predicts greater maternal depressive symptoms, which in turn predict more child behavior problems.

## **2. METHOD**

The Method chapter of a thesis includes a description of the study, including the sample characteristics, procedures followed, and the description of the materials used.

### **2.1 Participants**

The final sample for this cross-sectional study consisted of 234 Syrian mothers living in Türkiye. Initially, data were collected from 258 participants. 16 participants completed only the demographic questionnaire and were therefore excluded. Additionally, five multivariate outliers were identified and removed during the data screening process. Four more participants were excluded because their children were under the age of four, which did not meet the age requirements for the measures in the study. Consequently, the final analyses were conducted with 234 Syrian mothers, each reporting on one child (125 girls, 109 boys), whose ages ranged from 4 to 16 years ( $M = 8.99$ ,  $SD = 3.24$ ). Mothers' ages range from 18 to 55 years ( $M = 36.00$ ,  $SD = 6.82$ ). Complete demographic information for the sample is presented in Table 2.1.

**Table 2.1** *Participants' Demographic Information*

|                                | <i>N</i> | <i>%</i> | <i>Missing</i> | <i>Mean</i> | <i>SD</i> | <i>Range</i> |
|--------------------------------|----------|----------|----------------|-------------|-----------|--------------|
| <b>Family Characteristics</b>  |          |          |                |             |           |              |
| Parent age                     | 223      |          | 2%             | 36.00       | 6.82      | 18-55        |
| Parent education               | 234      |          | 0              |             |           |              |
| Literate (No formal education) | 33       | 14.10    |                |             |           |              |
| Primary school                 | 52       | 22.20    |                |             |           |              |
| Secondary school               | 59       | 25.20    |                |             |           |              |
| High school                    | 43       | 18.40    |                |             |           |              |
| University and higher          | 47       | 20.10    |                |             |           |              |
| Parent Turkish level           | 238      |          |                |             |           |              |
| A1                             | 135      | 57.70    |                |             |           |              |
| A2                             | 59       | 25.20    |                |             |           |              |
| B1                             | 18       | 7.70     |                |             |           |              |
| B2                             | 8        | 3.40     |                |             |           |              |
| C1                             | 9        | 3.90     |                |             |           |              |
| C2                             | 5        | 2.10     |                |             |           |              |
| # Household people             | 232      |          | 0.8%           | 5.97        | 1.93      | 2-12         |
| # of Employed people           | 231      |          | 0.8%           | 1.00        | 0.79      | 0-6          |
| Parent marital status          | 234      |          |                |             |           |              |
| Married                        | 160      | 68.40    |                |             |           |              |
| Divorced                       | 11       | 4.70     |                |             |           |              |
| Widowed                        | 56       | 23.90    |                |             |           |              |
| Separated/Unknown              | 7        | 3.0      |                |             |           |              |
| Number of children             | 227      |          | 2.9%           | 4           | 1.74      | 1-10         |
| Financial support              | 234      |          |                |             |           |              |
| Presence                       | 109      | 46.60    |                |             |           |              |
| Absence                        | 125      | 53.40    |                |             |           |              |
| Amount of financial support    | 78       |          |                | 4890        | 3600      | 0 – 18.000   |
| Extra support                  | 234      |          |                |             |           |              |
| Presence                       | 33       | 14.10    |                |             |           |              |
| Absence                        | 201      | 85.90    |                |             |           |              |
| City                           | 234      |          |                |             |           |              |
| Istanbul                       | 92       | 39.30    |                |             |           |              |
| Hatay                          | 81       | 34.60    |                |             |           |              |
| Gaziantep                      | 43       | 18.40    |                |             |           |              |
| Other cities                   | 18       | 7.70     |                |             |           |              |
| Duration of migration (Years)  | 228      |          | 2.5%           | 8.85        | 2.21      | 2-13         |
| <b>Child Characteristics</b>   |          |          |                |             |           |              |
| Child age (Years)              | 212      |          | 9.2%           | 8.99        | 3.24      | 4-16         |
| Child sex                      | 234      |          |                |             |           |              |
| Girl                           | 125      | 53.40    |                |             |           |              |
| Boy                            | 109      | 46.60    |                |             |           |              |

## **2.2 Procedure**

The data utilized in this study were drawn from a larger research project supported by TÜBİTAK (The Scientific and Technological Research Council of Türkiye) under the 1002 program (Project No: 324K550). Initially, ethics approval was granted by the Human Research Ethics Committee of Özyegin University (Confirmation Code: 2025/04/01). The data for this research were collected from Syrian refugee parents who migrated from Syria and currently live in Türkiye. The inclusion criteria were that participating mothers would have children with typical development. All data collection is completed using an online questionnaire platform, Qualtrics. Parents completed the Demographic Form, Economic Stress, Post-Migration Living Difficulties, Maternal Depression, and Strengths and Difficulties Questionnaires through an online data collection platform. Participants were recruited through multiple community-based organizations (e.g., Karam Evi Foundation, Al-Sham Association) that provide support to Syrian refugee families in Türkiye. Initial participants were reached through direct contact with these organizations, and additional participants were recruited using snowball sampling.

Consent forms detailing the study were provided to parents at the beginning of the online survey. The procedure, duration, and goal of the study were explained to participants in the consent form. All data collected within the scope of the study were anonymous and confidential.

## **2.3 Materials**

### ***2.3.1 Economic Stress Scale***

In the current study, economic stress, conceptualized as a broader latent construct,

includes different economically stressful experiences of mothers including food insecurity since it is one of the important indicators of economic stress (Santiago et al., 2011). In line with this perspective, we assessed the factorial validity of combining items from the Economic Hardship Scale (Gard et al., 2020) and the Food Insecurity Scale (Naja et al., 2015) into a unified construct that reflect overall economic stress.

The “Economic Hardship” scale (Gard et al., 2020) consists of 12 items with yes/no options (e.g., “In the past 12 months, did you borrow money from friends or family to help pay bills?”). Parents reported different economic experiences they had in the last 12 months (e.g., maladaptive coping strategies). This scale was used for Syrian parents for the first time in the current study and translated into Arabic following the translation and back-translation procedures. The translation process followed rigorous procedures to ensure linguistic and conceptual equivalence in Syrian Arabic. The initial forward translation was conducted by a native Syrian Arabic speaker psychologist with advanced proficiency in English. A back-translation was made by another Syrian native Arabic speaker who has worked for many years in civil society organizations with Syrian refugees and is fluent in English. To ensure that the items were not only linguistically accurate but also culturally appropriate, the research team carefully reviewed all translated items for clarity and comprehensibility.

The food insecurity experiences of parents were measured by the Food Insecurity Scale, which aims to understand the level of food insecurity in families, developed by Naja and colleagues (2015) in Arabic. It consists of nine yes/no items assessing parents’ experiences of food insecurity in the last four weeks (e.g., “In the past 4 weeks, did you or any family member living with you at home have to eat a smaller meal than you felt you needed because there was not enough food available?”).

A confirmatory factor analysis (CFA) was conducted with 21 observed items of two scales to examine whether they could be considered a single latent factor. The results demonstrated good model fit, with CFI = .955, TLI = .950, and RMSEA = .070 (90% CI [.061, .080]), all falling within recommended thresholds (Hu & Bentler, 1999). Standardized factor loadings ranged from .373 to .768, and all items loaded significantly ( $p < .001$ ) on the latent factor. Importantly, items from both original subscales showed strong and meaningful contributions to the overall construct.

A total score was computed by summing the "yes" responses of both scales, with higher scores reflecting greater levels of economic stress. The internal consistency of the combined construct supports the reliability of the merged scale (Cronbach's  $\alpha = .891$ ; McDonald's  $\omega = .865$ ). These statistical results support the theoretical justification of merging into a single economic stress construct. This approach allows for a more comprehensive representation of families' economic experiences and aligns with recommendations for modeling socioeconomic adversity as a multifaceted yet unified latent variable in developmental and clinical research (Evans & Kim, 2013; Masarik & Conger, 2017).

### ***2.3.2 Post-Migration Living Difficulties Scale***

This scale, developed by Schick and colleagues (2016), aims to assess parents' post-migration stress factors they may have experienced in the last 12 months ("Difficulties with employment (being permitted to work, finding work, bad working conditions, etc.)"). It consists of 17 items with a 4-point Likert-type scale from 0 (No, it was not a problem/Did not happen) to 4 (Severe problem), and it has a two-factor structure (post-migration socioeconomic challenges and structural difficulties). Cronbach's Alpha coefficient of the Arabic version is 0.87 for the socio-economic challenges subscale and

0.78 for the structural difficulties subscale (Kurt et al., 2022). We averaged items to create a composite score. A greater score indicates more post-migration challenges faced by participants. The internal consistency of the scale is .88 (Cronbach's alpha) for the current study (see Table 2.2).

### ***2.3.3 Maternal Depression – The Patient Health Questionnaire (PHQ-9)***

The Patient Health Questionnaire (PHQ-9) aims to assess maternal depression, developed by Kroenke and Spitzer (2002). Participants reported the frequency of different symptoms they have had in the last two weeks (e.g., "Having trouble falling or staying asleep or sleeping too much"). It consists of nine items with a 4-point Likert scale from 0 (Not at all) to 3 (Nearly every day). The validity and reliability of the Arabic version of the PHQ-9 were tested by AlHadi and colleagues (2017), showing a unifactorial structure and Cronbach's alpha coefficient of 0.87. We averaged items to create a composite score where a higher score indicates higher maternal depression. The internal consistency of the scale is .85 (Cronbach's alpha) for the current study (see Table 2.2).

### ***2.3.4 Child Behavior Problems – Strengths and Difficulties Questionnaire (SDQ)***

The Strengths and Difficulties Questionnaire (SDQ), developed by Goodman (1997), is a widely used instrument for assessing children's psychological adjustment. It comprises five subscales: Hyperactivity, Emotional Problems, Conduct Problems, Peer Problems, and Prosocial Behaviors, each comprising five items rated on a 3-point Likert scale (0 = Not true, 1 = Somewhat true, 2 = Certainly true). An example item from the Conduct Problems subscale is: "Often fights with other children or bullies them." In the present study, the Arabic version (Alyahri & Goodman, 2008) of the SDQ, completed by parents, was utilized. In the current study, a total behavior problems score was calculated

by averaging the items from four subscales: Hyperactivity, Emotional Problems, Conduct Problems, and Peer Problems.

The decision to use the Total Difficulties Score rather than individual SDQ subscales was based on both theoretical and empirical considerations. First, the Total Difficulties Score provides a broad representation of children's overall psychosocial health, capturing both internalizing and externalizing difficulties. This composite score is especially useful in high-adversity contexts, such as refugee populations, where children are often exposed to multiple and co-occurring stressors that may not manifest in isolated symptom domains (Panter-Brick et al., 2018). Second, several studies working with displaced children have relied on the Total Difficulties Score as the most stable and psychometrically supported indicator. Research with Syrian refugees used the total score to assess behavior problems children face (McEwen et al., 2020; Sim et al., 2018). Previous research examining the reliability and validity of the Arabic SDQ among Syrian refugee children (N = 1596) reported higher internal consistency for the Total Difficulties score rather than subscales separately (Cronbach's  $\alpha = .76$ ; McEwen et al., 2020).

Finally, the use of the total score aligns with the conceptual focus of the current study, which aims to focus on broad psychosocial outcomes to understand the relationships between maternal stressors and child psychosocial health (Masarik & Conger, 2017). Thus, the current study used the total difficulties score; higher scores reflect greater levels of behavioral problems. The internal consistency of this composite score was acceptable (Cronbach's  $\alpha = .79$ ; see Table 2.2).

**Table 2.2** *Descriptive Statistics of Study Variables (N = 234)*

|                         | Internal Consistency<br>( $\alpha$ or $\omega$ ) | Missing | Min-Max | <i>M</i> | <i>SD</i> | Skewness | Kurtosis |
|-------------------------|--------------------------------------------------|---------|---------|----------|-----------|----------|----------|
| Child behavior problems | .79                                              | 2%      | 1–33    | 13.14    | 6.23      | 0.491    | -0.414   |
| Maternal depression     | .85                                              | 6.6%    | 0-27    | 10.92    | 6.76      | 0.382    | -0.319   |
| Daily stressors         |                                                  |         |         |          |           |          |          |
| Economic stress         | .89                                              | 0%      | 0-12    | 5.33     | 3.03      | 0.143    | -0.596   |
| PMLD                    | .88                                              | 10.3%   | 0-66    | 34.10    | 14.06     | -0.203   | -0.353   |

*Note.* *Min* = Minimum, *Max* = Maximum, *M* = Mean, *SD* = Standard Deviation, *PMLD* = Post-Migration Living Difficulties.

### 3. RESULTS

#### 3.1 Analytical Strategy

##### 3.1.1 Data Screening

Before the main analysis, data were screened using SPSS 27.0 (IBM Corp., Published 2020) for accuracy of data entry, missing values, and the assumptions of multivariate analysis. After checking the accuracy at the item level, composite and averaged scores were created for all variables by summing or averaging relevant items. Missing values ranged from 0% to 11.7% across variables (see Table 2). Missing value patterns for focal variables were tested using Little's (1988) test of Missing Completely at Random (MCAR). The result of the MCAR test was significant,  $\chi^2(31) = 76.30$ ,  $p < .05$ , indicating that the missing data were not completely at random (MCAR). Given this result, the use of appropriate missing data handling techniques was essential to minimize potential bias in parameter estimation. In this study, we employed Maximum Likelihood estimation with robust standard errors (MLR) in Mplus to address missing data.

MLR is a widely recommended method for handling missing data, particularly when the assumption of MCAR is violated and data may be missing at random (MAR) (Enders, 2022; Little & Rubin, 2019). Unlike listwise deletion or mean imputation, MLR uses all available data points and provides unbiased parameter estimates and standard errors under MAR conditions. Simulation studies have demonstrated that MLR performs well in recovering population parameters and standard errors even when data are not MCAR, provided that the missingness mechanism is ignorable (Enders & Bandalos, 2001; Graham, 2009).

Moreover, MLR accounts for potential non-normality in the data, making it a robust choice for structural equation modeling with real-world data, which often violates assumptions of multivariate normality. Thus, in light of the significant MCAR test result and the advantages offered by MLR, its use in this study provides a statistically sound approach to estimating model parameters in the presence of missing data.

Multivariate outliers were analyzed via the Mahalanobis Distance technique (Tabachnick & Fidell, 2007). Five multivariate outliers were detected above the Chi-square value,  $\chi^2(8) = 31.319$ ,  $p = .0001$ , and therefore deleted from the data set, leaving 234 participants for further analyses.

Normality assumptions were tested using the criteria of  $\pm 2$  skewness and kurtosis (Bryne, 2010; Hair et al., 2010). Skewness and kurtosis scores of variables were between critical values and acceptable for normality.

### ***3.1.2 Multivariate Analytical Approach***

Multivariate path analyses were run in Mplus 8.7 (Muthén & Muthén, 2017). Path analysis uses observed variables in the context of structural equation modeling (SEM) (Kline, 2011). Standardized coefficients were used in the path analysis to report effect sizes (Durlak, 2009). First, only the main effects model was run. Second, we tested the indirect effects of external stressors on child behavior problems via maternal depression. In detail, the direct paths were from economic stress and post-migration living difficulties to child behavior problems, from economic stress and post-migration living difficulties to maternal depression, and from maternal depression to child behavior problems.

The significance of indirect effects was examined by using the bootstrapping technique (2000 resampling) with 95% confidence intervals (MacKinnon, Fairchild, & Fritz, 2007). In all path analyses, top-down model building was applied, where all

possible covariates (parent age, child age, duration of migration, education level of parent, number of household members, parental perception of family financial situation before and after migration) were considered, and then the non-significant ones were removed to improve the model fit. We reported the final parsimonious models in the results. To test the model accuracy, Comparative fit index (CFI) > 0.90, root mean square error of approximation (RMSEA) < 0.08, and standardized root mean square residual (SRMR) < 0.08 are used (Brown, 2006; Kline, 2011).

### **3.2 Preliminary Analyses**

Preliminary analyses were run via SPSS 27.0. Descriptive statistics and the internal consistencies of all variables can be seen in Table 3.1.

#### **3.2.1 Bivariate Analysis**

The bivariate correlations (Pearson) were examined between parents' stress factors (economic stress and post-migration living difficulties), maternal depression, and child behavior problems. The correlations among variables can be seen in Table 3.

The relationships between external stress factors and other variables were examined. Economic stress was positively related to PMLD ( $r(207) = .188, p < .001$ ), maternal depression ( $r(216) = .372, p < .001$ ), and child behavior problems ( $r(227) = .267, p < .001$ ). PMLD was positively related to depression ( $r(207) = .364, p < .001$ ), and child behavior problems ( $r(207) = .286, p < .001$ ). Maternal depression was positively related to child behavior problems ( $r(216) = .405, p < .001$ ).

**Table 3.3** *The Pearson Correlations of the Study Variables*

|                                  | 1      | 2      | 3      | 4      | 5      | 6     | 7      | 8      | 9    | 10 |
|----------------------------------|--------|--------|--------|--------|--------|-------|--------|--------|------|----|
| 1. Behavior problems             | -      |        |        |        |        |       |        |        |      |    |
| 2. Maternal depression           | .405** | -      |        |        |        |       |        |        |      |    |
| 3. PMLD                          | .286** | .364** | -      |        |        |       |        |        |      |    |
| 4. Economic stress               | .267** | .372** | .188** | -      |        |       |        |        |      |    |
| 5. Mother's age                  | -.044  | .056   | -.026  | .052   | -      |       |        |        |      |    |
| 6. Child's age (year)            | -.003  | .058   | -.47   | .077   | .339** | -     |        |        |      |    |
| 7. Migration duration (in years) | .033   | .065   | -.120  | .053   | .190** | .107  | -      |        |      |    |
| 8. Number of children            | .008   | .053   | -.058  | .213** | .429** | -.013 | .190** | -      |      |    |
| 9. Number of household members   | .020   | .025   | .032   | .214** | .307** | -.055 | .158*  | .786** | -    |    |
| 10. Child sex                    | -.002  | -.009  | -.050  | .076   | .137*  | -.117 | .022   | .124   | .108 | -  |

Note. \* $p < .05$  (2-tailed), \*\* $p < .01$  (2-tailed), \*\*\* $p < .001$ . PMLD = Post-Migration Living Difficulties, Child Sex (Girl = 1, Boy = 0).

### **3.3 Multivariate Analyses**

#### ***3.3.1 Direct Associations***

A saturated path model was estimated to examine the hypothesized relationships among economic stress, post-migration living difficulties, maternal mental health, and child behavioral problems. Because the model was saturated, meaning it included all possible direct and indirect paths among the observed variables, it reproduced the observed covariance matrix exactly, resulting in a perfect model fit. As expected, fit indices indicated a perfect fit to the data: Comparative Fit Index (CFI) = 1.00, Root Mean Square Error of Approximation (RMSEA) = .00, and Standardized Root Mean Square Residual (SRMR) = .00. These indices reflect that the model had zero degrees of freedom and, therefore, no discrepancy between the estimated and observed covariance structures.

In the final model, child behavior problems were predicted by economic stress ( $\beta = 0.134$ ,  $SE = 0.063$ ), PMLD ( $\beta = 0.150$ ,  $SE = 0.064$ ), and maternal depression ( $\beta = 0.296$ ,  $SE = 0.070$ ). Maternal depression was predicted by economic stress ( $\beta = 0.309$ ,  $SE = 0.065$ ) and PMLD ( $\beta = 0.307$ ,  $SE = 0.068$ ). See Figure 3.1 for complete associations.

#### ***3.3.2 Indirect Associations***

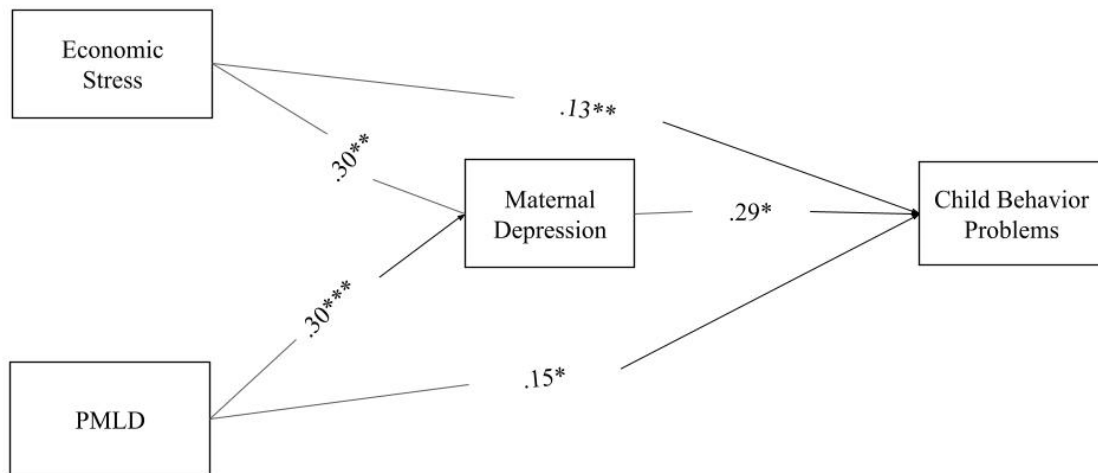
The indirect relationships between external stress factors (economic stress and PMLD) and child behavior problems through maternal depression were tested using 2000 bootstraps with 95% CIs.

The analyses revealed several significant indirect effects for economic stress and post-migration living difficulties (PMLD) on children's behavior problems. Economic stress showed a significant indirect effect on child behavior problems via maternal depression ( $\beta = 0.091$ , 95% CI [0.046, 0.150])

Similarly, PMLD was found to be indirectly related to child behavior problems via maternal depression ( $\beta = 0.091$ , 95% CI [0.040, 0.161]), indicating that higher levels of PMLD were related to greater depression symptoms for mothers, which in turn related to more behavior problems in children.

The data were not collected longitudinally and should be interpreted carefully since these results cannot be assumed to be pure mediation (Agler & Boeck, 2017).

**Figure 3.2** *Saturated Path Model Depicting the Relationships Between Economic Stress and Post-Migration Living Difficulties, and Child Behavior Problems Through Maternal Depression*



Note. \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ . PMLD = Post-Migration Living Difficulties.

## **4. DISCUSSION**

This study examined the relationships between economic stress, post-migration living difficulties (PMLD), maternal depression, and child behavior problems using the Family Stress Model framework. The findings revealed that both economic stress and PMLD were directly related to child behavior problems. Additionally, both economic stress and post-migration living difficulties were indirectly related to child behavior problems through maternal depression. These findings were discussed based on existing literature and with the framework of the Family Stress Model.

### **4.1 Economic Stress and Maternal Depression**

The results of the current study confirmed the hypothesis that higher levels of economic stress were directly related to higher maternal depressive symptoms among Syrian refugee mothers in Türkiye. This finding is in line with the literature showing the negative impact of economic stress on maternal mental health (Heflin & Iceland, 2009; Masarik & Conger, 2017). Increased economic stress due to the decreased ability to meet basic needs such as food and housing has been documented as a risk factor for maternal depression (Gard et al., 2020; Santiago et al., 2011). Consistent with the Family Stress Model (FSM), the present findings suggest that economic stress has a negative effect on maternal mental health (Belle & Doucet, 2003; Leung et al., 2015). Mothers may experience hopelessness and low self-efficacy due to economic stress (e.g., food insecurity), and these feelings may lead to more depressive symptoms (Whitaker et al., 2006).

The findings are also consistent with studies conducted in refugee contexts. Syrian refugee mothers in Türkiye, similar to those in Lebanon and Jordan, have reported high

levels of depressive symptoms due to economic conditions (Arienliu et al., 2020; Cratsley et al., 2021; Khamis, 2022). Refugee mothers experience economic stress mostly chronically due to several factors, such as legal uncertainties and challenges to enter the labor market (Akesson & Sousa, 2020; Hazer & Gredebäck, 2023). Thus, the present study provides empirical evidence that Syrian refugee mothers' economic stress in Türkiye is directly related to maternal depression.

Taken together, these findings confirm that for Syrian mothers in Türkiye, increased economic stress not only limits material resources but also increases depressive symptoms. This emphasized the importance of considering economic stress as a multifaceted risk factor since daily structural challenges may negatively affect maternal mental health.

#### **4.2 Post-Migration Living Difficulties and Maternal Depression**

The present findings confirmed the hypothesis that post-migration living difficulties (PMLD) are positively related to maternal depressive symptoms among Syrian refugee mothers in Türkiye. This is consistent with the daily stressors perspective, which argues that daily chronic stressors after migration, such as discrimination or difficulties accessing services, have a negative effect on mental health (Jannesari et al., 2020; Miller & Rasmussen, 2017). Current results support the evidence that post-migration conditions are one of the risk factors for worsened mental health of Syrian refugees (Acarturk et al., 2021; Almeida et al., 2024).

The results may indicate that chronic challenges after migration can increase the risk of maternal depression due to decreased perceived control and belonging, with the negative effect of uncertainty, limited social support, and access to services. All these difficulties related to acculturation and social integration, together with legal uncertainty,

were linked to higher depressive symptoms among refugee mothers (Hou et al., 2020; Li et al., 2016). The current findings contribute to the literature by confirming that these challenges are related to maternal depression for Syrian refugee mothers living in Türkiye.

Furthermore, this study integrated PMLD into the Family Stress Model (FSM) since it helps explain how structural and contextual challenges affect maternal mental health (Masarik & Conger, 2017). Our results support this adaptation; PMLD emerged as a distinct stressor related to maternal depression, even when economic stress was considered, showing that the challenges of being a refugee are an independent risk factor for maternal depression. Recognizing PMLD is therefore essential for interventions, solutions (e.g., access to services), and policies that may aim to reduce these post-migration challenges to support maternal mental health (Hou et al., 2020; Miller & Rasmussen, 2017)

#### **4.3 Economic Stress and Child Behavior Problems**

The results showed a direct relationship between economic stress and child behavior problems. This finding aligns with previous research indicating that economic stress can be directly related to children's psychosocial health and confirms the hypothesis of the current study (Conger et al., 2010; Gard et al., 2020).

The direct relationship between economic stress and child behavior problems shows that economic stress itself may serve as an independent risk factor for child behavioral difficulties aside from parental factors. Economic stress might reduce access to enriching materials and activities, negatively affect the investment of mothers through the environment to children due to the limited ability to provide the necessary resources for growth and success (Becker, 2010; Bradley & Corwyn, 2004). Economic stress may

affect children by reducing the quality of “the family’s standard of living (i.e., adequate food, housing, clothing, medical care, etc.) and residing in a location that fosters a child’s competent development” (Conger & Conger, 2008, p.68). Therefore, children may experience economic stress through the natural environment they are in, regardless of maternal mental health. Children living in better neighborhoods have more access to better resources, schools, and an environment that includes good examples (e.g., playgrounds), thereby enhancing psychosocial well-being. A growing number of studies focus on the direct effect of economic stress due to the environmental conditions (Ettekal et al., 2020; Kamps, 2019; Kim et al., 2024; Simons & Steele, 2020; Zhang, 2021). Considering the studies conducted with Syrian refugees in Türkiye showing that they mostly live in low-quality neighborhoods due to economic challenges (Akçalı, 2023; Erdoğan, 2017), economic stress can be considered as a proximal direct risk factor that is related to child behavior problems since the environmental factors children are exposed to might be directly related to children’s psychosocial health (Noonan et al., 2016; Simons et al., 2016).

Besides the direct exposure to economic stress, children’s awareness of the situation could be an important source of this direct relationship. Children may have their own perceptions and experiences, since they are agents rather than passive actors, due to the economic stress they feel, regardless of parental influences (Mistry & Elenbaas, 2021). Children start to develop a perception about their own socioeconomic status and challenges faced by their families around age 4-5, might feel excluded and distressed due to economic stress (Heberle & Carter, 2015; Redmond, 2008). Thus, considering the age range of children in the current study (4-16), it is possible that children's own experiences of economic stress may be a potential source of this direct relationship.

Overall, these findings highlight that economic stress and child behavior problems are directly related, possibly through both environmental exposure and children's own perceptions of their parents' economic stress, independent of maternal depression. This result shows the importance of interventions addressing structural and contextual factors, such as housing quality and neighborhood resources, to decrease the negative effects of economic stress and support refugee children's psychosocial health.

#### **4.4 Post-Migration Living Difficulties and Child Behavior Problems**

This study aimed to expand the Family Stress Model (FSM) by integrating post-migration living difficulties (PMLD) to better understand the unique external stressors experienced by Syrian refugee families and their relationship with child behavior problems. The results aligned with the FSM framework, and both direct and indirect pathways provided evidence for the role of post-migration stressors of refugee mothers and maternal depression in child psychosocial health.

Consistent with the literature, PMLD was related to child behavior problems both directly and indirectly through maternal depression. Results showed that post-migration challenges parents face might be directly related to children's psychosocial health. Although mothers reported their own challenges, children are observers who can be affected by the existence of these problems. Children might witness the events parents reported, such as discrimination or problems with legal authorities. Also, they may hear it at home or from the media and also face similar challenges in their own environment (e.g., discrimination at school) (Bernard et al., 2024; Mattelin et al., 2024). All these factors can be the reason why parents' post-migration challenges were directly related to child behavior problems, as is shown in the literature (Pachter & Coll, 2009; Scharpf et al., 2021).

In sum, the direct relationship between PMLD and child behavior problems emphasizes that these stressors extend beyond parental experiences and affect children's emotional and behavioral adjustment. Therefore, these post-migration stressors should be addressed at the policy level to mitigate systemic and community-level factors that children directly experience in order to promote their overall psychosocial well-being.

#### **4.5 Maternal Depression and Child Behavior Problems**

The results of the present study confirmed the hypothesis that maternal depression is directly related to child behavior problems among Syrian refugee families in Türkiye. Maternal depression has been found to negatively affect children's emotional and behavioral adjustment (Goodman et al., 2011; Lovejoy et al., 2000; Weissman et al., 2006).

Current results indicated that higher levels of maternal depression were directly related to elevated child behavior problems, aligning with the Family Stress Model (FSM). Depressed mothers may show reduced emotional availability and engagement, leading to increased behavior problems due to lower socioemotional skills (Bayer et al., 2006; Dix & Meunier, 2009). This indicates that maternal depression transmits stress to children through both emotional processes and disruptions in parenting practices (Masarik & Conger, 2017).

Studies conducted with refugee populations also confirm these results. For example, Peltonen and colleagues (2022) found that maternal depression significantly predicted behavioral difficulties in Syrian refugee children. Similarly, Solmaz and colleagues (2021) reported that maternal depression of refugee mothers was one of the strongest predictors of children's psychosocial problems. Our findings support the existing evidence showing that refugee mothers' depressive symptoms might directly

affect their children's psychosocial health (Akesson & Sousa, 2020; Stevenson et al., 2019).

Consistent with FSM, maternal depression emerges as a key risk factor that is directly related to child behavior problems. Interventions aiming supporting Syrian refugee children's psychosocial health must therefore prioritize maternal well-being (Erucar et al., 2018; Popham et al., 2023). Thus, maternal depression represents not only a risk factor but also a potentially modifiable target for improving the resilience and adjustment of refugee children.

#### **4.6 Mediating Role of Maternal Depression**

##### ***4.6.1 The Mediating Role of Maternal Depression in the Relationship Between Economic Stress and Child Behavior Problems***

The present study showed that Syrian refugee mothers' economic stress and their children's behavior problems are indirectly related via maternal depression. This finding is consistent with the Family Stress Model (Conger et al., 1992; Masarik & Conger, 2017), confirms the mediating role of maternal depression. In our model, higher economic stress was related to increased depressive symptoms in Syrian refugee mothers, which in turn was related to higher levels of child behavior problems. This indirect pathway is consistent with previous research conducted in both general and refugee populations (Bartoll-Roca et al., 2024; Gershoff et al., 2007; Peltonen et al., 2022).

One possible explanation for this indirect link is that the chronic economic stress limits mothers' capacity to maintain consistent and responsive parenting (Dix & Meunier, 2009; Lovejoy et al., 2000). Economic stress often leads to maternal depression with negative feelings such as helplessness or shame (Belle & Doucet, 2003; Jespersen et al.,

2023; Liebe et al., 2024). These negative feelings might decrease parental competence and negatively affect parenting practices (Goodman et al., 2020; Mazza et al., 2016). Consequently, depression may lead to reduced emotional availability in parenting, increasing the likelihood of children developing behavior problems (Goodman et al., 2011; Wachs et al., 2009).

Our findings also align with prior work in refugee settings, showing that refugee mothers' depressive symptoms play a mediating role between external stressors and child behavior problems. Peltonen and colleagues (2022) found that maternal depression mediated the link between economic situation and psychosocial difficulties among Syrian refugee children. Arakelyan and Ager (2021) mentioned the negative effect of economic conditions on child psychosocial health and the role of maternal depression. Also, Solmaz and colleagues (2021) and Popham and colleagues (2024) showed the mediating role of maternal depression for Syrian refugee families. To sum up, this finding shows that maternal depression is a pathway through which economic stress may affect refugee children's behavior problems, along with the Family Stress Model.

These results highlight maternal depression as a critical factor to mitigate the potential negative effect of economic stress on children (Shaw et al., 2009). Intervention programs that aim to decrease refugee mothers' depression may help buffer the negative effects of economic stress on child behavior problems (Silva-Rodrigues et al., 2022). Thus, the current findings are consistent with FSM and also practically relevant, suggesting that the importance of integrating economic and psychosocial support could be particularly effective for refugee families feeling economic stress.

#### ***4.6.2 The Mediating Role of Maternal Depression in the Relationship Between Post-Migration Living Difficulties and Child Behavior Problems***

The observed positive association between post-migration living difficulties (PMLD) and maternal depression aligns closely with the Family Stress Model (FSM), which posits that external stressors undermine parental psychological well-being, leading to disruptions in parenting and adverse child outcomes (Conger & Elder, 1994; Masarik & Conger, 2017). In this framework, PMLD, such as legal insecurity, discrimination, and social isolation, function as chronic stressors that increase maternal emotional distress, reducing their capacity for responsive and consistent parenting. This, in turn, elevates the risk of behavioral and emotional problems in children.

Empirical evidence supports this pathway. Studies have shown that post-migration stressors significantly predict maternal depressive symptoms among refugee populations (Hedstrom et al., 2021; Turunç & Kisbu, 2025; Zhang et al., 2023). Furthermore, maternal depression has been identified as a key mediator linking PMLD to child psychosocial difficulties (Scharpf et al., 2021), consistent with FSM's stress-to-parenting mechanism. These findings underscore the importance of considering both structural and psychological processes when examining child development in refugee contexts.

In summary, these findings reinforce FSM's applicability beyond economic stress, highlighting its flexibility to incorporate context-specific stressors such as PMLD. They also point to maternal mental health as a critical intervention target for mitigating the negative impact of post-migration challenges on child development.

#### **4.7 Strengths and Limitations**

One of the most important strengths of the present study is its focus on Syrian refugee mothers living in Türkiye, a population that remains underrepresented in empirical research despite the need for focus. To our knowledge, this is the first study to test the Family Stress Model (Conger et al., 1992) with both economic stress and post-migration living difficulties (PMLD) as parallel stressors in this context. Additionally, the inclusion of PMLD extends the FSM by integrating stressors such as discrimination or legal insecurity, which are particularly unique to refugees, and offering a more context-specific adaptation of the model. Moreover, the study conceptualizes economic stress as a wider spectrum, including different economic experiences of mothers and food insecurity as a central component of economic stress.

The findings confirmed both direct and indirect pathways predicted by FSM: (1) economic stress was related to child behavior problems both directly and indirectly through maternal depression, and (2) PMLD was directly and indirectly related to child behavior problems indirectly through maternal depression, confirming the approach of integrating PMLD into FSM. The present study provides empirical evidence for the multifaceted nature of refugee mothers' stress and contributes to the literature by showing the importance of external stressors in the refugee context.

There are also some limitations that need to be considered when evaluating the results of the study. The study was conducted in a cross-sectional design, and longitudinal studies are needed to make causal comments about the results. The depth, persistence, and timing of these external stressors can be measured longitudinally in future studies. For example, parents may develop strategies to protect their children from short-term challenges. However, its cumulative, deeper/continuous nature and timing for the mothers

(e.g., prenatal period) or child (e.g., infancy) can lead to negative consequences for both parents and children (Barajas et al., 2008; de Laat et al., 2018; Ferschmann et al., 2024; González et al., 2023).

All measurements in the study were taken from the mothers. In order to prevent measurement bias, it would be a good option to take measurements from the child in future studies. Another important point here is that since the study was conducted with refugee mothers, there is a possibility of security concerns, fear of stigmatization, or social desirability.

The sample size of the study can be considered another limitation. Due to the sensitivity of the topic and barriers preventing the reach of more participants, a smaller number of participants than expected resulted. Additionally, the same reasons led to the inclusion of all participants who met the criteria, without diving into the diversity of the refugee population. Participants reported that they reside in different cities in Türkiye and have spent different amounts of time there. Studies mainly focus on these factors, which may reach different results since, for instance, families living in Istanbul might have different perceptions of external stressors than families in smaller cities.

#### **4.8 Implications and Future Directions**

The current study focuses on the relationship between the external stressors of Syrian refugee mothers living in Türkiye and child psychosocial health through maternal mental health using the Family Stress Model framework. Several key findings have been found that both align with and challenge the hypotheses. Results offer contributions and implications for research, intervention, and policies.

If the findings of this thesis are to be evaluated in the applied field, the first point that can be emphasized is the importance of maternal mental health. Maternal depression

was directly negatively related to the child's behavioral problems, and its mediating role has also been found (Erucar et al., 2018). Lee (2022) emphasized the need for interventions focused on maternal depression to help reduce the negative effects of disrupted positive parenting on child psychosocial health, along with anti-poverty programs (Silva-Rodrigues et al., 2022). "Perhaps interventions are needed that support caregivers by addressing their mental health problems, reducing external stressors, and enabling an environment in which they have the resources to parent supportively" (Popham et al., 2023, p.219).

When evaluated at the policy level, one of the most important findings of this study is the integration of Post-Migration Living Difficulties (PMLD) into the Family Stress Model (FSM). Daily post-migration stressors, such as lack of social support or difficulty accessing services, were found to be negatively related to child behavior problems through maternal depression. In this context, it is clear that these post-migration difficulties cannot be solved only with individual or family-based interventions (Şahin et al., 2020). In particular, solutions for the uncertainties caused by the "temporary protection" status and ensuring their access to a permanent and secure legal status are also vital (Erdoğan, 2022). In addition, public awareness campaigns, media language transformations, and policy initiatives to increase social cohesion should be developed to reduce the negative attitudes that refugees face in their daily lives. Changes must be made to the structural conditions that are the sources of these stressors. Otherwise, psychological support for families will have limited effects, and insecurity will continue to put pressure on mental health. Therefore, the psychological well-being of refugee parents and children is possible not only through psychosocial interventions but also through structural steps to be taken at the policy level.

It should not be ignored that important developments occurred for Syrian refugees during the study period. Especially after December 8, 2024, a new period has begun for Syrian refugee families (UNHCR, 2025). After developments in Syria in December 2024, thousands of families have returned to their homeland (Refugees Association, 2025), but millions of families continue to live in Türkiye and other countries. The reintegration processes of families who returned to Syria after a decade, the magnitude of deprivation there, and the potential negative effects of external stressors continue in a completely different structure. Similarly, for families in Türkiye, the uncertainty of the future, in addition to the current stressful conditions, is deeper than ever (Bunn et al., 2023). The current study shows the importance of considering the context by integrating post-migration living difficulties into the Family Stress Model. Now, future studies should also consider the inclusion of the intention/decision to return and various stress factors that affect this decision.

In conclusion, the current study shows the relationships between daily economic and post-migration stressors on the psychosocial well-being of Syrian refugee mothers and children in Türkiye. By integrating these context-specific difficulties into the Family Stress Model, the study not only extends theoretical understanding but also offers practical implications for intervention and policy. Supporting maternal mental health is essential for improving child outcomes, yet sustainable change requires structural solutions that address the root causes of economic hardship and post-migration challenges. Improving the lives of Syrian refugee families requires a multi-level approach to combine family-based psychosocial interventions with broader policy applications to foster resilience and stability for mothers and children.

## REFERENCES

- Agler, R., & De Boeck, P. (2017). On the interpretation and use of mediation: Multiple perspectives on mediation analysis. *Frontiers in Psychology*, 8, 1984.
- Ahmed, A., Stewart, D. E., Teng, L., Wahoush, O., & Gagnon, A. J. (2008). Experiences of immigrant new mothers with symptoms of depression. *Archives of Women's Mental Health*, 11(4), 295-303.
- Ulutaş, D. A., Onur, D., Özkan, M., Saygın, S., & Güngör, Y. (2025). A Scoping Review on the Effects of War and Migration on Emotion Regulation In Syrian Children. *Habitus Toplumbilim Dergisi*, 6, 125-156.
- Akçalı, E. (2023). Little Aleppo: The neighbourhood experiences of Syrian refugees in Adana, Turkey, 'poor to poor, peer to peer'. *Environment and Planning C: Politics and Space*, 41(2), 240-256.
- Akesson, B., & Sousa, C. (2020). Parental Suffering and Resilience Among Recently Displaced Syrian Refugees in Lebanon. *Journal of Child and Family Studies*, 29(5), 1264–1273. <https://doi.org/10.1007/s10826-019-01664-6>
- Akesson, B., Badawi, D., & Frensch, K. (2023). "The Life Needs to Go On": The Perinatal Experiences of Syrian Mothers in Lebanon. *Journal of Mother Studies*, 8, 1-13.
- Aksu Kargin, İ., & Sirkeci, I. (2023). Understanding Syrian refugees in Turkey from an environment of insecurity and the conflict model of migration perspective. *Third World Quarterly*, 44(5), 856-871.
- Al Gharaibeh, F., & O'Sullivan, J. (2021). The impact of war followed by forced displacement on women and children: how Syrian mothers perceive their

- experiences. *International Journal of Sociology and Social Policy*, 41(11)  
<https://doi.org/10.1108/ijssp-11-2020-0508>
- Alami, R. (2020). From war to refuge: A literature review of the psychosocial impact of pre-and post-migration experience on the Syrian child refugee (Doctoral dissertation, Alliant International University).
- AlHadi, A. N., AlAteeq, D. A., Al-Sharif, E., Bawazeer, H. M., Alanazi, H., AlShomrani, A. T., Shuqdar, R. M., & AlOwaybil, R. (2017). An Arabic translation, reliability, and validation of the Patient Health Questionnaire in a Saudi sample. *Annals of General Psychiatry*, 16(1). <https://doi.org/10.1186/s12991-017-0155-1>
- Alhaffar, M. B. A., & Janos, S. (2021). Public health consequences after ten years of the Syrian crisis: a literature review. *Globalization and Health*, 17(1), 111.
- Almeida, L. M., Moutinho, A. R., Siciliano, F., Leite, J., & Caldas, J. P. (2024). Maternal mental health in refugees and migrants: A comprehensive systematic review. *Journal of International Migration and Integration*, 25(1), 209-222.
- Alyahri, A., & Goodman, R. (2008). The prevalence of DSM-IV psychiatric disorders among 7–10-year-old Yemeni schoolchildren. *Social Psychiatry and Psychiatric Epidemiology*, 43(3), 224–230.
- Arakelyan, S., & Ager, A. (2021). Annual Research Review: A multilevel bioecological analysis of factors influencing the mental health and psychosocial well-being of refugee children. *Journal of Child Psychology and Psychiatry*, 62(5), 484–509.
- Arenliu, A., Bertelsen, N., Saad, R., Abdulaziz, H., & Weine, S. M. (2020). War and displacement stressors and coping mechanisms of Syrian urban refugee families living in Istanbul. *Journal of Family Psychology*, 34(4), 392–401.  
<https://doi.org/10.1037/fam0000603>

- Bagner, D. M., Pettit, J. W., Lewinsohn, P. M., & Seeley, J. R. (2010). Effect of maternal depression on child behavior: a sensitive period?. *Journal of the American Academy of Child & Adolescent Psychiatry*, 49(7), 699–707.
- Baker, C. E., Brooks-Gunn, J., & Gouskova, N. (2019). Reciprocal Relations Between Maternal Depression and Child Behavior Problems in Families Served by Head Start. *Child Development*, 91(5). <https://doi.org/10.1111/cdev.13344>
- Barajas, R. G., Philipsen, N., & Brooks-Gunn, J. (2008). Cognitive and emotional outcomes for children in poverty. In *Handbook of families & poverty* (pp. 311–333). SAGE Publications, Inc.
- Barnett, M. A. (2008). Economic Disadvantage in Complex Family Systems: Expansion of Family Stress Models. *Clinical Child and Family Psychology Review*, 11(3), 145–161. <https://doi.org/10.1007/s10567-008-0034-z>
- Bartoll-Roca, X., Cano, G. S., Albaladejo, M. C., & Pérez, K. (2024). Household Economic Hardship and Child Mental Health: The Mediating Role of Parents' Mental Distress in a Southern European City. *Social Indicators Research*, 175(1). <https://doi.org/10.1007/s11205-024-03428-2>
- Bayer, J. K., Sanson, A. V., & Hemphill, S. A. (2006). Parent influences on early childhood internalizing difficulties. *Journal of Applied Developmental Psychology*, 27(6), 542–559.
- Becker, B. (2010). Who profits most from early parental investments? The effects of activities inside and outside the family on German and Turkish children's language development. *Child Indicators Research*, 3(1), 29-46.

- Beiser, M., Hou, F., Hyman, I., & Tousignant, M. (2002). Poverty, family process, and the mental health of immigrant children in Canada. *American Journal of Public Health, 92*(2), 220-227.
- Belhadj Kouider, E., Koglin, U., & Petermann, F. (2014). Emotional and behavioral problems in migrant children and adolescents in Europe: a systematic review. *European Child & Adolescent Psychiatry, 23*(6), 373-391.
- Belle, D., & Doucet, J. (2003). Poverty, inequality, and discrimination as sources of depression among US women. *Psychology of Women Quarterly, 27*(2), 101-113.
- Bernard, D. L., Saleem, F. T., Moreland, A. D., Shacklewood, C., & Danielson, C. K. (2024). A qualitative analysis of black mother preparation for bias messages following incidents of racism-related violence. *Journal of Family Psychology, 38*(1), 38.
- Bowlby, J. (1982). Attachment and loss: retrospect and. *Psychological Bulletin, 139*(6), 1342.
- Bradley, R. H., & Corwyn, R. F. (2004). Family Process Investments That Matter for Child Well-Being. Psychology Press EBooks, 1–32.  
<https://doi.org/10.4324/9781410610874-1>
- Bronfenbrenner, U. (1979). The ecology of human development: Experiments by nature and design. Harvard university press.
- Bronfenbrenner, U. (1994). Ecological models of human development. *International Encyclopedia of Education, 3*(2), 37-43.
- Bronstein, I., & Montgomery, P. (2011). Psychological distress in refugee children: a systematic review. *Clinical Child and Family Psychology Review, 14*(1), 44-56.

- Bronstein, I., & Montgomery, P. (2011). Psychological distress in refugee children: a systematic review. *Clinical Child and Family Psychology Review*, 14(1), 44-56.
- Brooks-Gunn, J., & Duncan, G. J. (1997). The Effects of Poverty on Children. *The Future of Children*, 7(2), 55–71. <https://doi.org/10.2307/1602387>
- Brown, T. A. (2015). Confirmatory factor analysis for applied research (2nd ed.). Guilford.
- Bunn, M., Samuels, G., & Higson-Smith, C. (2023). Ambiguous loss of home: Syrian refugees and the process of losing and remaking home. *Wellbeing, Space and Society*, 4(4), 100136. <https://doi.org/10.1016/j.wss.2023.100136>
- Bustos, Y., & Santiago, C. D. (2023). Effects of Familism, Parenting, and Family Cohesion on Child Internalizing Symptoms among Mexican Immigrant Families. *Journal of Child and Family Studies*, 32(1), 243-256.,
- Byrne, B. M. (2010). Structural equation modeling with Amos : Basic concepts, applications, and programming. Routledge, Taylor & Francis Group.
- Byrne, B.M. (2010). Structural Equation Modeling with AMOS: Basic Concepts, Applications, and Programming. Taylor and Francis Group Publication.
- Cantekin, D., & Gençöz, T. (2017). Mental Health of Syrian Asylum Seekers in Turkey: The Role of Pre-Migration and Post-Migration Risk Factors. *Journal of Social and Clinical Psychology*, 36(10), 835–859. <https://doi.org/10.1521/jscp.2017.36.10.835>
- Çeri, V., & Nasiroğlu, S. (2018). The number of war-related traumatic events is associated with increased behavioural but not emotional problems among Syrian refugee children years after resettlement. *Archives of Clinical Psychiatry* (São Paulo), 45(4), 100–105. <https://doi.org/10.1590/0101-60830000000167>

- Chaudry, A., & Wimer, C. (2016). Poverty is Not Just an Indicator: The Relationship Between Income, Poverty, and Child Well-Being. *Academic Pediatrics*, 16(3), S23–S29. <https://doi.org/10.1016/j.acap.2015.12.010>
- Chen, J.-H., Helton, J. J., Chiang, C.-J., Wu, C.-F., Jonson-Reid, M., & Drake, B. (2024). Breaking the cycle between caregiver mental health and child behavioral issues: Does food insecurity matter? *Social Science & Medicine*, 364, 117488. <https://doi.org/10.1016/j.socscimed.2024.117488>
- Chen, X., & Yeung, W. J. J. (2024). How food insecurity affects children's behavior problems in early childhood: the nutrition and family stress pathways. *Plos one*, 19(1), e0294109.
- Coddington, C. H., Mistry, R. S., & Bailey, A. L. (2014). Socioeconomic status and receptive vocabulary development: Replication of the parental investment model with Chilean preschoolers and their families. *Early Childhood Research Quarterly*, 29(4), 538–549. <https://doi.org/10.1016/j.ecresq.2014.06.004>
- Conger, R. D., & Conger, K. J. (2002). Resilience in Midwestern Families: Selected Findings from the First Decade of a Prospective, Longitudinal Study. *Journal of Marriage and Family*, 64(2), 361–373. <https://doi.org/10.1111/j.1741-3737.2002.00361.x>
- Conger, R. D., & Conger, K. J. (2008). Understanding the processes through which economic hardship influences families and children. In *Handbook of families & poverty* (pp. 64-81). SAGE Publications, Inc.
- Conger, R. D., & Elder, G. H., Jr. (Eds.). (1994). *Families in troubled times: Adapting to change in rural America*. Aldine de Gruyter.

- Conger, R. D., Conger, K. J., & Martin, M. J. (2010). Socioeconomic Status, Family Processes, and Individual Development. *Journal of Marriage and Family*, 72(3), 685–704. <https://doi.org/10.1111/j.1741-3737.2010.00725.x>
- Conger, R. D., Conger, K. J., Elder, G. H., Lorenz, F. O., Simons, R. L., & Whitbeck, L. B. (1992). A Family Process Model of Economic Hardship and Adjustment of Early Adolescent Boys. *Child Development*, 63(3), 526. <https://doi.org/10.2307/1131344>
- Conger, R. D., Lora Ebert Wallace, Sun, Y., Simons, R. L., McLoyd, V. C., & Brody, G. H. (2002). Economic pressure in African American families: A replication and extension of the family stress model. *Developmental Psychology*, 38(2), 179–193. <https://doi.org/10.1037//0012-1649.38.2.179>
- Connell, A. M., & Goodman, S. H. (2002). The association between psychopathology in fathers versus mothers and children's internalizing and externalizing behavior problems: a meta-analysis. *Psychological Bulletin*, 128(5), 746.
- Cook, M. L., Yan, J. J., & Butler, K. (2024). Maternal parenting stress and child externalizing behaviors: Low-income as a context. *Journal of Applied Developmental Psychology*, 93, 101673.
- Cooper, K., & Stewart, K. (2020). Does Household Income Affect Children's Outcomes? a Systematic Review of the Evidence. *Child Indicators Research*, 14(14), 981–1005. <https://doi.org/10.1007/s12187-020-09782-0>
- Cratsley, K., Brooks, M. A., & Mackey, T. K. (2021). Refugee mental health, global health policy, and the Syrian crisis. *Frontiers in Public Health*, 9, 676000.
- Dartanto, & Otsubo, S. T. (2015). Measurements and determinants of multifaceted poverty: absolute, relative, and subjective poverty in Indonesia. In Routledge

eBooks (Vol. 3, pp. 99–143). Informa. [https://doi.org/10.4324/9781315678344-](https://doi.org/10.4324/9781315678344-15)

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de Laat, S. A., Huizink, A. C., Hof, M. H., & Vrijkotte, T. G. M. (2018). Socioeconomic inequalities in psychosocial problems of children: mediating role of maternal depressive symptoms. *European Journal of Public Health*, 28(6), 1062–1068.

<https://doi.org/10.1093/eurpub/cky125>

Dix, T., & Meunier, L. N. (2009). Depressive symptoms and parenting competence: An analysis of 13 regulatory processes. *Developmental Review*, 29(1), 45–68.

Durlak, J. A. (2009). How to select, calculate, and interpret effect sizes. *Journal of Pediatric Psychology*, 34(9), 917–928.

East, P. L., Gahagan, S., & Al-Delaimy, W. K. (2018). The impact of refugee mothers' trauma, posttraumatic stress, and depression on their children's adjustment. *Journal of Immigrant and Minority Health*, 20(2), 271–282.

Egger, T., Buchheim, A., & Gander, M. (2025). The Role of Attachment in Refugees with Impaired Mental Health: A Systematic Review. *Brain Sciences*, 15(5), 495.

Elenbaas, L., & Killen, M. (2019). Children's perceptions of economic groups in a context of limited access to opportunities. *Child Development*, 90(5), 1632–1649.

Eltanamy, H., Leijten, P., Rooij, F., & Overbeek, G. (2021). Parenting in times of refuge: A qualitative investigation. *Family Process*, 61(3). <https://doi.org/10.1111/famp.12717>

Emmen, R. A. G., Malda, M., Mesman, J., van IJzendoorn, M. H., Prevoo, M. J. L., & Yenzi, N. (2013). Socioeconomic status and parenting in ethnic minority families: Testing a minority family stress model. *Journal of Family Psychology*, 27(6), 896–904. <https://doi.org/10.1037/a0034693>

- Enders, C. K. (2022). *Applied missing data analysis*. Guilford Press.
- Enders, C., & Bandalos, D. (2001). The Relative Performance of Full Information Maximum Likelihood Estimation for Missing Data in Structural Equation Models. *Structural Equation Modeling: A Multidisciplinary Journal*, 8(3), 430–457. [https://doi.org/10.1207/s15328007sem0803\\_5](https://doi.org/10.1207/s15328007sem0803_5)
- Erdoğan, M. (2017). *Thinking outside the camp: Syrian refugees in Istanbul*. *The Migration Information Source*. <https://www.migrationpolicy.org/article/thinking-outside-camp-syrian-refugees-istanbul>
- Erdoğan, M. (2022). *Syrian Barometer 2021. A Framework for Achieving Social Cohesion with Syrians in Türkiye*. UNHCR Türkiye. <https://www.unhcr.org/tr/media/sb-2021-english-01122022-pdf>
- Eruyar, S., Maltby, J., & Vostanis, P. (2018). Mental health problems of Syrian refugee children: the role of parental factors. *European Child & Adolescent Psychiatry*, 27(4), 401–409. <https://doi.org/10.1007/s00787-017-1101-0>
- Ettekal, I., Eiden, R. D., Nickerson, A. B., Molnar, D. S., & Schuetze, P. (2019). Developmental cascades to children's conduct problems: The role of prenatal substance use, socioeconomic adversity, maternal depression and sensitivity, and children's conscience. *Development and Psychopathology*, 32(1), 85–103. <https://doi.org/10.1017/s095457941800144x>
- Evans, G. W., & Cassells, R. C. (2014). Childhood poverty, cumulative risk exposure, and mental health in emerging adults. *Clinical Psychological Science*, 2(3), 287–296.
- Evans, G. W., & Kim, P. (2013). Childhood poverty, chronic stress, self-regulation, and coping. *Child Development Perspectives*, 7(1), 43–48.

- Evans, G. W., Li, D., & Whipple, S. S. (2013). Cumulative risk and child development. *Psychological bulletin*, 139(6), 1342.
- Fatori, D., Zuccolo, P. F., & Polanczyk, G. V. (2020). A global challenge: maternal depression and offspring mental disorders. *European Child & Adolescent Psychiatry*, 29(5), 569-571.
- Ferschmann, L., Grydeland, H., MacSweeney, N., Beck, D., Bos, M. G. N., Norbom, L. B., Aksnes, E. R., Bekkhus, M., Havdahl, A., Crone, E. A., von Soest, T., & Tamnes, C. K. (2024). The importance of timing of socioeconomic disadvantage throughout development for depressive symptoms and brain structure. *Developmental Cognitive Neuroscience*, 69(69), 101449. <https://doi.org/10.1016/j.dcn.2024.101449>
- Flouri, E., & Midouhas, E. (2017). Environmental adversity and children's early trajectories of problem behavior: The role of harsh parental discipline. *Journal of Family Psychology*, 31(2), 234–243. <https://doi.org/10.1037/fam0000258>
- Foster, E. M. (2002). How Economists Think about Family Resources and Child Development. *Child Development*, 73(6), 1904–1914. <https://doi.org/10.1111/1467-8624.00513>
- Frounfelker, R. L., Miconi, D., Farrar, J., Brooks, M. A., Rousseau, C., & Betancourt, T. S. (2020). Mental health of refugee children and youth: Epidemiology, interventions, and future directions. *Annual Review of Public Health*, 41, 159-176.
- Gard, A. M., McLoyd, V. C., Mitchell, C., & Hyde, L. W. (2020). Evaluation of a longitudinal family stress model in a population-based cohort. *Social Development*, 29(4), 1155–1175. <https://doi.org/10.1111/sode.12446>

- Gee, K. A., & Asim, M. (2019). Parenting While Food Insecure: Links Between Adult Food Insecurity, Parenting Aggravation, and Children's Behaviors. *Journal of Family Issues*, 40(11), 1462–1485. <https://doi.org/10.1177/0192513x19842902>
- GeoPoll (2022, October 13). *GeoPoll Reports: Global Cost of Living Crisis*. GeoPoll. <https://www.geopoll.com/blog/cost-of-living-crisis/>
- Gershoff, E. T., Aber, J. L., Raver, C. C., & Lennon, M. C. (2007). Income Is Not Enough: Incorporating Material Hardship Into Models of Income Associations With Parenting and Child Development. *Child Development*, 78(1), 70–95. <https://doi.org/10.1111/j.1467-8624.2007.00986.x>
- Ghumman, U., McCord, C. E., & Chang, J. E. (2016). Posttraumatic stress disorder in Syrian refugees: A review. *Canadian Psychology/Psychologie Canadienne*, 57(4), 246.
- González, L., Estarlich, M., Murcia, M., Barreto-Zarza, F., Santa-Marina, L., Simó, S., Larrañaga, M. I., Ruiz-Palomino, E., Ibarluzea, J., & Rebagliato, M. (2021). Poverty, social exclusion, and mental health: the role of the family context in children aged 7–11 years INMA mother-and-child cohort study. *European Child & Adolescent Psychiatry*, 32(2). <https://doi.org/10.1007/s00787-021-01848-w>
- Goodman, R. (1997). The Strengths and Difficulties Questionnaire: A Research Note. *Journal of Child Psychology and Psychiatry*, 38(5), 581–586. <https://doi.org/10.1111/j.1469-7610.1997.tb01545.x>
- Goodman, S. H., Rouse, M. H., Connell, A. M., Broth, M. R., Hall, C. M., & Heyward, D. (2011). Maternal depression and child psychopathology: A meta-analytic review. *Clinical Child and Family Psychology Review*, 14(1), 1-27.

- Goodman, S. H., Simon, H. F. M., Shambraw, A. L., & Kim, C. Y. (2020). Parenting as a Mediator of Associations between Depression in Mothers and Children's Functioning: A Systematic Review and Meta-Analysis. *Clinical Child and Family Psychology Review*, 23(23). <https://doi.org/10.1007/s10567-020-00322-4>
- Gormez, V., Kılıç, H. N., Oregul, A. C., Demir, M. N., Demirlikan, Ş., Demirbaş, S., ... & Semerci, B. (2018). Psychopathology and associated risk factors among forcibly displaced Syrian children and adolescents. *Journal of Immigrant and Minority Health*, 20(3), 529-535.
- Graham, J. W. (2009). Missing Data Analysis: Making It Work in the Real World. *Annual Review of Psychology*, 60(1), 549-576. <https://doi.org/10.1146/annurev.psych.58.110405.085530>
- Gredebäck, G., Haas, S., Hall, J., Pollak, S., Karakus, D. C., & Lindskog, M. (2021). Social cognition in refugee children: an experimental cross-sectional study of emotional processing with Syrian families in Turkish communities. *Royal Society Open Science*, 8(8), 210362. <https://doi.org/10.1098/rsos.210362>
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2019). Multivariate data analysis (8th ed.). Cengage Learning Emea.
- Hatem, C., Lee, C. Y., Zhao, X., Reesor-Oyer, L., Lopez, T., & Hernandez, D. C. (2020). Food insecurity and housing instability during early childhood as predictors of adolescent mental health. *Journal of Family Psychology*, 34(6), 721.
- Hazer, L., & Gredebäck, G. (2023). The effects of war, displacement, and trauma on child development. *Humanities and Social Sciences Communications*, 10(1), 1-19. <https://doi.org/10.1057/s41599-023-02438-8>

- Heberle, A. E., & Carter, A. S. (2015). Cognitive aspects of young children's experience of economic disadvantage. *Psychological Bulletin*, 141(4), 723–746. <https://doi.org/10.1037/bul0000010>
- Hedstrom, E., Kovshoff, H., Hadwin, J. A., & Kreppner, J. (2021). Exploring parenting narratives in asylum seeking populations in Sweden: Examining the effect of post-migration stress on families through grounded theory. *Journal of Refugee Studies*, 34(3), 3381–3398. <https://doi.org/10.1093/jrs/feaa126>
- Heflin, C. M., & Iceland, J. (2009). Poverty, material hardship, and depression. *Social science quarterly*, 90(5), 1051-1071.
- Heintz-Martin, V., Recksiedler, C., & Langmeyer, A. N. (2021). Household Debt, Maternal Well-Being, and Child Adjustment in Germany: Examining the Family Stress Model by Family Structure. *Journal of Family and Economic Issues*. <https://doi.org/10.1007/s10834-021-09777-1>
- Hou, W. K., Liu, H., Liang, L., Ho, J., Kim, H., Seong, E. & Hall, B. J. (2020). Everyday life experiences and mental health among conflict-affected forced migrants: A meta-analysis. *Journal of Affective Disorders*, 264, 50-68.
- Huang, R., Chazan-Cohen, R., & Carlson, D. (2024). Early Family Conflict and Behavioral Outcomes in Children from Low-Income Families: The Indirect Effects of Parental Depression and Parenting Practices. *International Journal of Environmental Research and Public Health*, 21(12), 1664–1664. <https://doi.org/10.3390/ijerph21121664>
- Huntley, F., Ulph, F., El-Khani, A., & Calam, R. (2021). The parenting process in Syrian refugees: A grounded theory study. *Peace and Conflict: Journal of Peace Psychology*, 27(1), 67–80. <https://doi.org/10.1037/pac0000533>

- IBM Corp. (2021). IBM SPSS Statistics for Windows (Version 27.0) [Computer software]. IBM Corp.
- Iruka, I. U., LaForett, D. R., & Odom, E. C. (2012). Examining the validity of the family investment and stress models and relationship to children's school readiness across five cultural groups. *Journal of Family Psychology*, 26(3), 359–370. <https://doi.org/10.1037/a0028290>
- Ivanova, M. Y., Achenbach, T. M., & Turner, L. V. (2022). Associations of parental depression with children's internalizing and externalizing problems: Meta-analyses of cross-sectional and longitudinal effects. *Journal of Clinical Child & Adolescent Psychology*, 51(6), 827–849. <https://doi.org/10.1080/15374416.2020.1867988>
- Jannesari, S., Hatch, S., Prina, M., & Oram, S. (2020). Post-migration Social–Environmental Factors Associated with Mental Health Problems Among Asylum Seekers: A Systematic Review. *Journal of Immigrant and Minority Health*, 22(5). <https://doi.org/10.1007/s10903-020-01025-2>
- Jespersen, A., Madden, R. A., Whalley, H. C., Reynolds, R. M., Lawrie, S. M., McIntosh, A. M., & Iveson, M. H. (2025). Socioeconomic status and depression—a systematic review. *Epidemiologic Reviews*, mxaf011.
- Jiang, Q., Wang, D., Yang, Z., & Choi, J. (2022). Bidirectional relationships between parenting stress and child behavior problems in multi-stressed single-mother families: A cross-lagged panel model. *Family Process*, 62(2). <https://doi.org/10.1111/famp.12796>
- Kamps, P. (2019). The Effects of Prolonged Economic Stressors in Minority Low-Income Neighborhoods on Family Functioning and Child Developmental Outcomes.

- International Conference on Poverty and Sustainable Development, 5.  
<https://doi.org/10.33422/fshconf.2019.06.343>
- Keenan-Miller, D., Hammen, C. L., & Brennan, P. A. (2007). Health outcomes related to early adolescent depression. *Journal of Adolescent Health, 41*(3), 256-262.
- Khamis, V. (2021). Psychological distress and neuroticism among Syrian refugee parents in post-resettlement contexts. *Journal of Health Psychology, 27*(5), 135910532098832. <https://doi.org/10.1177/1359105320988321>
- Khawaja, N. G., Ibrahim, O., & Schweitzer, R. D. (2017). Mental wellbeing of students from refugee and migrant backgrounds: The mediating role of resilience. *School Mental Health, 9*(3), 284-293.
- Khraisha, Q., Abujaber, N., Carpenter, S., Crossen, R. J., Kappenberg, J., Kelly, R., ... & Hadfield, K. (2024). Parenting and mental health in protracted refugee situations: A systematic review. *Comprehensive Psychiatry, 152*536.
- Kim, S., Engel, R. J., Goodkind, S., & Shook, J. J. (2024). Diverging Trajectories of Child Externalizing Behavior by Family Economic Status at Birth: The Mediating Role of Neighborhood Poverty. *Journal of Social Service Research, 51*(2), 1–17.  
<https://doi.org/10.1080/01488376.2024.2435345>
- Kimbrow, R. T., & Denney, J. T. (2015). Transitions Into Food Insecurity Associated With Behavioral Problems And Worse Overall Health Among Children. *Health Affairs, 34*(11), 1949–1955. <https://doi.org/10.1377/hlthaff.2015.0626>
- Kline, R. B. (2015). *Principles and practice of structural equation modeling* (4th ed.). The Guilford Press.

- Knitzer, J., Theberge, S., & Johnson, K. (2008). *Reducing maternal depression and its impact on young children: Toward a responsive early childhood policy framework*. The National Center for Children in Poverty.
- Kroenke, K., & Spitzer, R. L. (2002). The PHQ-9: A New Depression Diagnostic and Severity Measure. *Psychiatric Annals*, 32(9), 509–515.  
<https://doi.org/10.3928/0048-5713-20020901-06>
- Kurt G, Ventevogel P, Ekhtiari M, Ilkkursun Z, Erşahin M, Akbiyik N and Acarturk C (2022) Estimated prevalence rates and risk factors for common mental health problems among Syrian and Afghan refugees in Türkiye. *BJPsych Open*, 8(5), e167.
- Lee, H. (2022). Family economic hardship and children's behavioral and socio-emotional outcomes in middle childhood: Direct and indirect pathways. *Children and Youth Services Review*, 138, 106527.
- Leung, C. W., Epel, E. S., Willett, W. C., Rimm, E. B., & Laraia, B. A. (2015). Household food insecurity is positively associated with depression among low-income supplemental nutrition assistance program participants and income-eligible nonparticipants. *The Journal of Nutrition*, 145(3), 622-627.
- Li, S. S. Y., Liddell, B. J., & Nickerson, A. (2016). The Relationship between Post-Migration Stress and Psychological Disorders in Refugees and Asylum Seekers. *Current Psychiatry Reports*, 18(9). <https://doi.org/10.1007/s11920-016-0723-0>
- Liebe, R. A., Porter, K. J., Adams, L. M., Hedrick, V. E., Serrano, E. L., Cook, N., & Misyak, S. A. (2024). "I'm doing the best that I can": Mothers' Lived Experience with Food Insecurity, Coping Strategies, and Mental Health Implications.

- Current Developments in Nutrition*, 8(4), 102136–102136.  
<https://doi.org/10.1016/j.cdnut.2024.102136>
- Little, R. J. (1988). A test of missing completely at random for multivariate data with missing values. *Journal of the American statistical Association*, 83(404), 1198-1202.
- Little, R. J. A., & Rubin, D. B. (2019). *Statistical Analysis with Missing Data* (3rd ed.). John Wiley & Sons, Inc.
- Lok-Dessallien, R. (1999). *Review of poverty concepts and indicators*. UNDP Soc Dev Poverty Elimination Div Poverty Reduct Ser. <http://www.undp.org/poverty/publications/povReview.pdf>, 21.
- Lovejoy, M. Christine., Graczyk, P. A., O'Hare, E., & Neuman, G. (2000). Maternal depression and parenting behavior. *Clinical Psychology Review*, 20(5), 561–592.  
[https://doi.org/10.1016/s0272-7358\(98\)00100-7](https://doi.org/10.1016/s0272-7358(98)00100-7)
- Low, N., & Mounts, N. S. (2021). Economic stress, parenting, and Adolescents' Adjustment during The COVID-19 Pandemic. *Family Relations*, 71(1).  
<https://doi.org/10.1111/fare.12623>
- Lund, C., Breen, A., Flisher, A. J., Kakuma, R., Corrigall, J., Joska, J. A., ... & Patel, V. (2010). Poverty and common mental disorders in low and middle income countries: A systematic review. *Social Science & Medicine*, 71(3), 517-528.
- MacKinnon, D. P., Fairchild, A. J., & Fritz, M. S. (2007). Mediation analysis. *Annual Review of Psychology*, 58, 593–614.  
<https://doi.org/10.1146/annurev.psych.58.110405.085542>
- Magnuson, K., Yoo, P., Duncan, G., Yoshikawa, H., Trang, K., Gennetian, L. A., Halpern-Meekin, S., Fox, N., & Noble, K. (2022). Can a Poverty Reduction

- Intervention Reduce Family Stress Among Families with Infants? An Experimental Analysis. *SSRN Electronic Journal*.  
<https://doi.org/10.2139/ssrn.4188131>
- Maguire-Jack, K., & Sattler, K. (2022). Neighborhood Poverty, Family Economic Well-Being, and Child Maltreatment. *Journal of Interpersonal Violence*, 38(5-6), 088626052211195. <https://doi.org/10.1177/08862605221119522>
- Masarik, A. S., & Conger, R. D. (2017). Stress and child development: A review of the Family Stress Model. *Current Opinion in Psychology*, 13, 85-90.
- Masarik, A. S., Fritz, H., & Lazarevic, V. (2022). Stress and resilience among resettling refugee youth: An illustrative review and new applications for the family stress model. *Journal of Family Theory & Review*, 14(2).  
<https://doi.org/10.1111/jftr.12454>
- Mattelin, E., Söderlind, N., & Korhonen, L. (2024). “You cannot just stop life for just that”: a qualitative study on children’s experiences on refugee journey to Sweden. *European Child & Adolescent Psychiatry*, 33(9), 3133-3143.
- Maynard, M., Andrade, L., Packull-McCormick, S., Perlman, C. M., Leos-Toro, C., & Kirkpatrick, S. I. (2018). Food Insecurity and Mental Health among Females in High-Income Countries. *International Journal of Environmental Research and Public Health*, 15(7), 1424. <https://doi.org/10.3390/ijerph15071424>
- Mazza, J. R. S., Boivin, M., Tremblay, R. E., Michel, G., Salla, J., Lambert, J., ... & Côté, S. M. (2016). Poverty and behavior problems trajectories from 1.5 to 8 years of age: Is the gap widening between poor and non-poor children?. *Social Psychiatry and Psychiatric Epidemiology*, 51(8), 1083-1092.

- Mazza, J. R., Pingault, J.-B., Booij, L., Boivin, M., Tremblay, R., Lambert, J., Zunzunegui, M. V., & Côté, S. (2016). Poverty and behavior problems during early childhood. *International Journal of Behavioral Development*, 41(6), 670–680. <https://doi.org/10.1177/0165025416657615>
- McConnell, D., Breitkreuz, R., & Savage, A. (2010). From financial hardship to child difficulties: main and moderating effects of perceived social support. *Child: Care, Health and Development*, 37(5), 679–691. <https://doi.org/10.1111/j.1365-2214.2010.01185.x>
- McEwen, F. S., Moghames, P., Bosqui, T., Kyrillos, V., Chehade, N., Saad, S., Abdul Rahman, D., Popham, C., Saab, D., Karam, G., Karam, E., & Pluess, M. (2020, January). Validating screening questionnaires for internalizing and externalizing disorders against clinical interviews in 8-17 year-old Syrian refugee children. Technical working paper. <http://dx.doi.org/10.31234/osf.io/6zu87>
- Mendes-Sousa, M. M., Perrone, M. B., de Melo, R. B., Ribeiro, M. V. V., Chao, Q., Torres, C., Sanchez, Z. M., Surkan, P. J., Martins, S. S., Fidalgo, T. M., & Caetano, S. C. (2025). The impact of family stress and resilience on child development: a scoping review. *Trends in Psychiatry and Psychotherapy*, 47, e20220556. <https://doi.org/10.47626/2237-6089-2022-0556>
- Michalek, J. E., Qtaishat, L., von Stumm, S., El Kharouf, A., Dajani, R., Hadfield, K., & Mareschal, I. (2024). Maternal Trauma and Psychopathology Symptoms Affect Refugee Children's Mental Health But Not Their Emotion Processing. *Research on Child and Adolescent Psychopathology*, 52(8), 1233-1246.
- Miller, K. E., & Rasmussen, A. (2010). War exposure, daily stressors, and mental health in conflict and post-conflict settings: Bridging the divide between trauma-focused

- and psychosocial frameworks. *Social Science & Medicine*, 70(1), 7–16.  
<https://doi.org/10.1016/j.socscimed.2009.09.029>
- Miller, K. E., & Rasmussen, A. (2017). The mental health of civilians displaced by armed conflict: an ecological model of refugee distress. *Epidemiology and Psychiatric Sciences*, 26(2), 129–138. <https://doi.org/10.1017/s2045796016000172>
- Miller, K. E., & Rasmussen, A. (2024). War exposure, daily stressors, and mental health 15 years on: implications of an ecological framework for addressing the mental health of conflict-affected populations. *Epidemiology and Psychiatric Sciences*, 33. <https://doi.org/10.1017/S2045796024000830>
- Miller, K. E., Arnous, M., Saade, J., Tossyeh, F., & Jordans, M. J. D. (2022). Worlds of Pain: A process evaluation of the Caregiver Support Intervention with Syrian refugees in Lebanon. *SSM - Mental Health*, 2, 100164.  
<https://doi.org/10.1016/j.ssmmh.2022.100164>
- Miller, M., & Csizmadia, A. (2022). Applying the family stress model to parental acculturative stress and Latinx youth adjustment: A review of the literature. *Journal of Family Theory & Review*, 14(2), 275-293.
- Mistry, R. S., & Elenbaas, L. (2021). It's All in the Family: Parents' Economic Worries and Youth's Perceptions of Financial Stress and Educational Outcomes. *Journal of Youth and Adolescence*, 50(4). <https://doi.org/10.1007/s10964-021-01393-4>
- Mistry, R. S., Vandewater, E. A., Huston, A. C., & McLoyd, V. C. (2002). Economic well-being and children's social adjustment: The role of family process in an ethnically diverse low-income sample. *Child Development*, 73(3), 935-951.
- Muthén, L. K., & Muthén, B. O. (2017). Mplus Version 8 user's guide. Los Angeles, CA: Muthén & Muthén.

- Nagy, E., Moore, S., Silveira, P. P., Meaney, M. J., Levitan, R. D., & Dubé, L. (2020). Low socioeconomic status, parental stress, depression, and the buffering role of network social capital in mothers. *Journal of Mental Health, 31*(3), 1–8. <https://doi.org/10.1080/09638237.2020.1793118>
- Naja, F., Hwalla, N., Fossian, T., Zebian, D., & Nasreddine, L. (2015). Validity and reliability of the Arabic version of the Household Food Insecurity Access Scale in rural Lebanon. *Public Health Nutrition, 18*(2), 251–258. <https://doi.org/10.1017/S1368980014000317>
- National Academies of Sciences, Engineering, and Medicine. (2019). *A roadmap to reducing child poverty*. National Academies Press.
- Neppl, T. K., Senia, J. M., & Donnellan, M. B. (2016). Effects of economic hardship: Testing the family stress model over time. *Journal of Family Psychology, 30*(1), 12–21. <https://doi.org/10.1037/fam0000168>
- Newland, R. P., Crnic, K. A., Cox, M. J., & Mills-Koonce, W. R. (2013). The family model stress and maternal psychological symptoms: Mediated pathways from economic hardship to parenting. *Journal of Family Psychology, 27*(1), 96–105. <https://doi.org/10.1037/a0031112>
- Noonan, R. J., Boddy, L. M., Knowles, Z. R., & Fairclough, S. J. (2016). Cross-sectional associations between high-deprivation home and neighbourhood environments, and health-related variables among Liverpool children. *BMJ open, 6*(1), e008693.
- Okur-Ataş, Ş., & Berument, S. K. (2022). School Readiness of Turkish Children Living in Poverty: The Mediating Roles of Home Environment and Maternal Behaviors. *Early Education and Development, 34*(8), 1–20. <https://doi.org/10.1080/10409289.2022.2127291>

- Pachter, L. M., & Coll, C. G. (2009). Racism and Child Health: A Review of the Literature and Future Directions. *Journal of Developmental & Behavioral Pediatrics*, 30(3), 255–263. <https://doi.org/10.1097/dbp.0b013e3181a7ed5a>
- Panter-Brick, C., Hadfield, K., Dajani, R., Eggerman, M., Ager, A., & Ungar, M. (2018). Resilience in context: A brief and culturally grounded measure for Syrian refugee and Jordanian host-community adolescents. *Child development*, 89(5), 1803-1820.
- Parke, R. D., Coltrane, S., Duffy, S., Buriel, R., Dennis, J., Powers, J., French, S., & Widaman, K. F. (2004). Economic Stress, Parenting, and Child Adjustment in Mexican American and European American Families. *Child Development*, 75(6), 1632–1656. <https://doi.org/10.1111/j.1467-8624.2004.00807.x>
- Peltonen, K. (2024). Children and war – vulnerability and resilience. *European Journal of Developmental Psychology*, 1–13. <https://doi.org/10.1080/17405629.2024.2382410elt>
- Peltonen, K., Gredebäck, G., Pollak, S. D., Lindskog, M., & Hall, J. (2023). The role of maternal trauma and discipline types in emotional processing among Syrian refugee children. *European Child & Adolescent Psychiatry*, 32(8), 1487-1495.
- Perez-Escamilla, F., & Vianna, R. P. (2012). Food insecurity and the behavioral and intellectual development of children: A review of the evidence. *Journal of Applied Research on Children*, 3(1), 9.
- Pires, A. J., de Matos, M. B., Scholl, C. C., Trettim, J. P., Coelho, F. T., da Cunha Coelho, F. M., ... & de Avila Quevedo, L. (2020). Prevalence of mental health problems in preschoolers and the impact of maternal depression. *European Child & Adolescent Psychiatry*, 29(5), 605-616.

- Pluess, M., Brown, F. L., & Panter-Brick, C. (2025). Supporting the mental health of forcibly displaced children. *Nature Reviews Psychology*, 1-18.
- Polat, S., & Kröner, S. (2023). The resilience of school-age immigrant children: A scoping review. *Journal of Human Behavior in the Social Environment*, 33(3), 329-347.
- Popham, C. M., McEwen, F. S., Karam, E., & Pluess, M. (2024). The important role of mothers during displacement: Direct and indirect effects of the refugee context on Syrian refugee children's mental health. *Child Development*, 95(3). <https://doi.org/10.1111/cdev.14055>
- Raver, C. C., Blair, C., Garrett-Peters, P., & Family Life Project Key Investigators. (2015). Poverty, household chaos, and interparental aggression predict children's ability to recognize and modulate negative emotions. *Development and Psychopathology*, 27(3), 695-708.
- Redmond, G. (2008). *Children's perspectives on economic adversity: A review of the literature* (Innocenti Discussion Paper No. IDP 2008-01). UNICEF Innocenti Research Centre. [https://www.unicef-irc.org/publications/pdf/idp\\_2008\\_01.pdf](https://www.unicef-irc.org/publications/pdf/idp_2008_01.pdf)
- Reesor-Oyer, L., Marshall, A., & Hernandez, D. C. (2023). Examination co-parenting support and parenting stress as mediators of the food insecurity-maternal depression/anxiety relationship. *Journal of Affective Disorders*, 341, 96–103. <https://doi.org/10.1016/j.jad.2023.08.094>
- Refugees Association (2025). *Türkiyedeki Suriyeli Sayısı Mart 2020 – Mülteciler Derneği*. <https://multeciler.org.tr/turkiyedeki-suriyeli-sayisi/>
- Ridley, M., Rao, G., Schilbach, F., & Patel, V. (2020). Poverty, depression, and anxiety: Causal evidence and mechanisms. *Science*, 370(6522), eaay0214.

- Rijlaarsdam, J., Stevens, G. W., van der Ende, J., Hofman, A., Jaddoe, V. W., Mackenbach, J. P., Verhulst, F. C., & Tiemeier, H. (2013). Economic disadvantage and young children's emotional and behavioral problems: mechanisms of risk. *Journal of Abnormal Child Psychology*, 41(1), 125–137. <https://doi.org/10.1007/s10802-012-9655-2>
- Rizkalla, N., Arafa, R., Mallat, N. K., Soudi, L., Adi, S., & Segal, S. P. (2020). Women in refuge: Syrian women voicing health sequelae due to war traumatic experiences and displacement challenges. *Journal of Psychosomatic Research*, 129, 109909. <https://doi.org/10.1016/j.jpsychores.2019.109909>
- Roubinov, D. S., & Boyce, W. T. (2017). Parenting and SES: relative values or enduring principles?. *Current Opinion in Psychology*, 15, 162-167.
- Ruhnke, S. A., Hertner, L., Köhler, J., & Kluge, U. (2024). Social ecological determinants of the mental distress among Syrian refugees in Lebanon and Turkey: A transnational perspective. *Social Science & Medicine*, 346, 116700. <https://doi.org/10.1016/j.socscimed.2024.116700>
- Sá, F. H. de L., Waikamp, V., Freitas, L. H. M., & Baeza, F. L. C. (2022). Mental health outcomes in Syrian refugees: A systematic review. *International Journal of Social Psychiatry*, 68(5), 933–953. <https://doi.org/10.1177/00207640221099404>
- Şafak-Ayvazoğlu, A., Kunuroglu, F., & Yağmur, K. (2021). Psychological and socio-cultural adaptation of Syrian refugees in Turkey. *International Journal of Intercultural Relations*, 80, 99–111. <https://doi.org/10.1016/j.ijintrel.2020.11.003>
- Şahin, E., Dagli, T. E., Acarturk, C., & Dagli, F. S. (2020). Vulnerabilities of Syrian refugee children in Turkey and actions taken for prevention and management in terms of health and wellbeing. *Child Abuse & Neglect*, 104628.

- Santiago, C. D., Wadsworth, M. E., & Stump, J. (2011). Socioeconomic status, neighborhood disadvantage, and poverty-related stress: Prospective effects on psychological syndromes among diverse low-income families. *Journal of economic psychology*, 32(2), 218-230.
- Scharpf, F., Kaltenbach, E., Nickerson, A., & Hecker, T. (2021). A systematic review of socio-ecological factors contributing to risk and protection of the mental health of refugee children and adolescents. *Clinical Psychology Review*, 83(1), 101930. <https://doi.org/10.1016/j.cpr.2020.101930>
- Schenck-Fontaine, A., & Panico, L. (2019). Many kinds of poverty: Three dimensions of economic hardship, their combinations, and children's behavior problems. *Demography*, 56(6), 2279-2305.
- Schick, M., Zumwald, A., Knöpfli, B., Nickerson, A., Bryant, R. A., Schnyder, U., Müller, J., & Morina, N. (2016). Challenging future, challenging past: the relationship of social integration and psychological impairment in traumatized refugees. *European Journal of Psychotraumatology*, 7(1), 28057. <https://doi.org/10.3402/ejpt.v7.28057>
- Shaw, D. S., Connell, A., Dishion, T. J., Wilson, M. N., & Gardner, F. (2009). Improvements in maternal depression as a mediator of intervention effects on early childhood problem behavior. *Development and Psychopathology*, 21(2), 417-439.
- Silva-Rodrigues, A. P. C., Oliveira, M. R. E., Silva, T. B. F., & Loureiro, S. R. (2022). Positive parenting of mothers with depression and children's behaviors: A systematic review. *Trends in Psychology*, 30(2), 400-423.

- Sim, A., Fazel, M., Bowes, L., & Gardner, F. (2018). Pathways linking war and displacement to parenting and child adjustment: A qualitative study with Syrian refugees in Lebanon. *Social Science & Medicine*, 200, 19–26. <https://doi.org/10.1016/j.socscimed.2018.01.009>
- Simons, L. G., & Steele, M. E. (2020). The Negative Impact of Economic Hardship on Adolescent Academic Engagement: An Examination Parental Investment and Family Stress Processes. *Journal of Youth and Adolescence*, 49(5). <https://doi.org/10.1007/s10964-020-01210-4>
- Simons, L. G., Wickrama, K. A. S., Lee, T. K., Landers-Potts, M., Cutrona, C., & Conger, R. D. (2016). Testing Family Stress and Family Investment Explanations for Conduct Problems Among African American Adolescents. *Journal of Marriage and Family*, 78(2), 498–515. <https://doi.org/10.1111/jomf.12278>
- Slopen, N., Fitzmaurice, G., Williams, D. R., & Gilman, S. E. (2010). Poverty, Food Insecurity, and the Behavior for Childhood Internalizing and Externalizing Disorders. *Journal of the American Academy of Child & Adolescent Psychiatry*, 49(5), 444–452. <https://doi.org/10.1016/j.jaac.2010.01.018>
- Solantaus, T., Leinonen, J., & Punamaki, R. L. (2004). Children's mental health in times of economic recession: replication and extension of the family economic stress model in Finland. *Developmental psychology*, 40(3), 412–429. <https://doi.org/10.1037/0012-1649.40.3.412>
- Solmaz, F., Karataş, H., Kandemir, H., & Solmaz, A. (2021). Depression, loneliness and factors influencing in Syrian refugee children. *International Journal of Clinical Practice*, 75(5), e14039.

- Sosu, E. M., & Schmidt, P. (2017). Economic Deprivation and Its Effects on Childhood Conduct Problems: The Mediating Role of Family Stress and Investment Factors. *Frontiers in Psychology*, 8(8). <https://doi.org/10.3389/fpsyg.2017.01580>
- Sousa, C., Stein, A., Shapiro, J., G. Shanfeld, K. Cristaudo, Siddiqi, M., M. Haffield, & Reddy, H. (2023). “Life becomes about survival”: Resettlement, integration, and social services among refugee parents. *Children and Youth Services Review*, 155, 107191–107191. <https://doi.org/10.1016/j.childyouth.2023.107191>
- Stevenson, K., Alameddine, R., Rukbi, G., Chahrouri, M., Usta, J., Saab, B., Bennett, P., Glover, V., & Reynolds, R. M. (2019). High rates of maternal depression amongst Syrian refugees in Lebanon - a pilot study. *Scientific Reports*, 9(1), 11849. <https://doi.org/10.1038/s41598-019-48247-5>
- Tabachnick, B. G., & Fidell, L. S. (2018). *Using multivariate statistics* (7th ed.). Boston Pearson.
- Thompson, A. J., & Henrich, C. C. (2022). Cross-lagged effects between parent depression and child internalizing problems. *Journal of Family Psychology*, 36(8). <https://doi.org/10.1037/fam0001012>
- Turkish Red Crescent, & International Federation of Red Cross and Red Crescent . (2023). Türkiye - TRC/IFRC: *Intersectoral vulnerability study round 2 - 2022: Living on bare minimum: an exploration of the vulnerability of refugees in Türkiye*. UNHCR Operational Data Portal (ODP). <https://data.unhcr.org/en/documents/details/100357>
- Turkish Statistical Institute. (2023). *Poverty and living conditions statistics, 2022*. <https://data.tuik.gov.tr/Bulten/Index?p=Poverty-and-Living-Conditions-Statistics-2022-49746&dil=2>

- Turkish Statistical Institute. (2023). *Statistics on child, 2022*.  
<https://data.tuik.gov.tr/Bulten/Index?p=Statistics-on-Child-2022-49674>
- Turunç, G., & Kisbu, Y. (2025). Effects of pre- and post-displacement difficulties on parenting behaviors of refugee fathers. *International Journal of Behavioral Development*. <https://doi.org/10.1177/01650254251322426>
- UNCHR, & UNDP. (2023). *3RP Syria Crisis – In Response to the Syria Crisis*. 3RP.  
<https://www.3rpsyriacrisis.org/>
- UNHCR. (2024a). *Ninth Regional Survey on Syrian Refugees' Perceptions and Intentions on Return To Syria*. UNHCR Operational Data Portal (ODP).  
<https://data.unhcr.org/en/documents/details/109624>
- UNHCR. (2024b, March 13). *Syria Refugee Crisis Explained*. *Unrefugees.org*; *The UN Refugee Agency*. <https://www.unrefugees.org/news/syria-refugee-crisis-explained/>
- UNHCR. (2025). *Key information for Syrians - UNHCR Türkiye*. UNHCR Türkiye.  
<https://help.unhcr.org/turkiye/information-for-syrians/>
- United Nations High Commissioner for Refugees. (2022, October 10). *COVID-19 in Türkiye and livelihoods of vulnerable people and refugees: A synthesis report*.
- Vasilyeva, M., Dearing, E., Ivanova, A., Shen, C., & Kardanova, E. (2018). Testing the family investment model in Russia: Estimating indirect effects of SES and parental beliefs on the literacy skills of first-graders. *Early Childhood Research Quarterly*, 42, 11–20. <https://doi.org/10.1016/j.ecresq.2017.08.003>
- Wachs, T. D., Black, M. M., & Engle, P. L. (2009). Maternal depression: a global threat to children's health, development, and behavior and to human rights. *Child Development Perspectives*, 3(1), 51-59.

- Wadsworth, M. E., Wolff, B., Santiago, C. D., & Moran, E. G. (2008). Adolescent coping with poverty-related stress. *The Prevention Researcher*, 15(4), 13-17.
- Weissman, M. M., Wickramaratne, P., Nomura, Y., Warner, V., Pilowsky, D., & Verdelli, H. (2006). Offspring of depressed parents: 20 years later. *American journal of Psychiatry*, 163(6), 1001-1008.
- Whitaker, R. C., Phillips, S. M., & Orzol, S. M. (2006). Food Insecurity and the Risks of Depression and Anxiety in Mothers and Behavior Problems in their Preschool-Aged Children. *Pediatrics*, 118(3), e859–e868.  
<https://doi.org/10.1542/peds.2006-0239>
- White, R. M. B., Roosa, M. W., Weaver, S. R., & Nair, R. L. (2009). Cultural and Contextual Influences on Parenting in Mexican American Families. *Journal of Marriage and Family*, 71(1), 61–79. <https://doi.org/10.1111/j.1741-3737.2008.00580.x>
- Wodzinski, A. M. (2023). The relationship between poverty and behavior problems: Examining the role of family and parental factors from an ecological systems perspective (Unpublished master's thesis). Montclair State University.
- Yang, M., Carson, C., Creswell, C., & Violato, M. (2023). Child mental health and income gradient from early childhood to adolescence: Evidence from the UK. *SSM Population Health*, 24, 101534.  
<https://doi.org/10.1016/j.ssmph.2023.101534>
- Yu, L., Renzaho, A. M. N., Shi, L., Ling, L., & Chen, W. (2020). The Effects of Family Financial Stress and Primary Caregivers' Levels of Acculturation on Children's Emotional and Behavioral Problems among Humanitarian Refugees in Australia.

*International Journal of Environmental Research and Public Health*, 17(8), 2716.

<https://doi.org/10.3390/ijerph17082716>

Yu, L., Renzaho, A. M., Shi, L., Ling, L., & Chen, W. (2020). The effects of family financial stress and primary caregivers' levels of acculturation on Children's emotional and behavioral problems among humanitarian refugees in Australia.

*International journal of environmental research and public health*, 17(8), 2716.

Zhang, Y. (2021). The role of socioeconomic status and parental investment in adolescent outcomes. *Children and Youth Services Review*, 129, 106186.

<https://doi.org/10.1016/j.childyouth.2021.106186>

Zhang, Y., He, N., & Xu, Y. (2023). Parenting and Adolescents' Subjective Psychological Well-Being: Does Immigration Background Matter? *Child Indicators Research*,

16(4). <https://doi.org/10.1007/s12187-023-10033->



## **APPENDICES**

## APPENDIX A. DEMOGRAPHICS QUESTIONNAIRE

Date of birth

Age

In which year did you arrive in Türkiye?

Education level

- I am literate (Arabic).
- Primary school graduate
- Middle school graduate
- High school graduate
- University/graduate degree

Turkish language proficiency

- A1
- A2
- B1
- B2
- C1
- C2

Number of people living in your household

How many of them are employed?

Marital status

- Married
- Divorced
- Spouse is deceased
- Spouse is missing/unknown

How many children do you have?

Do you receive financial assistance from any organization/institution?

If yes, please specify the amount. (Answering this question is optional. If you do not want to provide the exact amount, you may indicate an approximate amount.)

Do you receive any non-financial assistance from any organization/institution?

If yes, please specify the type and content of the assistance.

*“In this study, we kindly ask you to provide information about only one of your children who is currently attending primary school. Please indicate the date of birth of the child you will consider when answering the questions.”*

Date of Birth (DD/MM/YYYY): \_\_\_\_\_

Please indicate the last grade level your child completed:

Child's sex

- Female
- Male
- Prefer not to say

City you currently live in

How would you describe your economic situation in Syria before migrating to Türkiye?

- Very poor
- Poor
- Neither good nor bad
- Good
- Very good

How would you describe your current economic situation in Türkiye?

- Very poor
- Poor
- Neither good nor bad
- Good
- Very good

## **APPENDIX B. ECONOMIC STRESS SCALE EXAMPLE QUESTIONS**

This questionnaire aims to assess the financial stress you have experienced over the past 12 months. Please read the following statements and answer "yes" or "no" to each. This will help us understand your and your family's financial situation and the difficulties you have faced during this period.

- In the past 12 months, was there a time when you or anyone in your household needed to see a doctor or go to the hospital but did not go? (Yes/No)
- In the past 12 months, have you or any family members received free food or meals because there was not enough money? (Yes/No)
- In the past 12 months, have you borrowed money from friends or family to help pay bills? (Yes/No)

This questionnaire aims to assess the economic stress you have experienced over the past four weeks. Please read the following statements and answer "yes" or "no" to each. This will help us understand your and your family's financial situation and the difficulties you have faced during this period.

- In the past 4 weeks, have you or any family member living with you at home have to eat a limited variety of food due to a lack of available resources? (Yes/No)
- In the past 4 weeks, did you or any family member living with you at home have to eat some foods that you really did not want to eat because of a lack of available resources to obtain other types of food? (Yes/No)
- In the past 4 weeks, did you or any family member living with you at home have to eat a smaller meal than you felt you needed because there was not enough food available? (Yes/No)

## **APPENDIX C. POST-MIGRATION LIVING DIFFICULTIES**

### **QUESTIONNAIRE EXAMPLE QUESTIONS**

Below is a list of difficulties that refugees sometimes experience in Türkiye. Thinking about your time in Türkiye, please indicate how often you have experienced the following in the last 12 months (No, it was not a problem, or did not happen / Minor problem / Moderately serious problem / Serious problem / Extremely serious problem)

- Communication difficulties
- Discrimination
- Conflicts with your own/other ethnic groups in Turkey
- Separation from family
- Worries about family back at home



## **APPENDIX D. PATIENT HEALTH QUESTIONNAIRE EXAMPLE**

### **QUESTIONS**

During the past two weeks, how often have you experienced any of the following problems? (0 = Not at all, 1 = Several days, 2 = More than half days, 3 = Nearly every day)

- Having little interest or pleasure in doing things
- Feeling down, depressed, or hopeless
- Having trouble falling or staying asleep, or sleeping too much
- Feeling tired or having little energy



## APPENDIX E. STRENGTHS AND DIFFICULTIES SCALE EXAMPLE

### QUESTIONS

Below are a variety of statements that may be relevant to your child. For each sentence, check one of the boxes: Not True, Partially True, or Completely True. Please give your answers by considering your child's behavior in the last 6 months

- Restless and overactive, cannot sit still for long periods of time
- Frequent complaints of headaches, stomach aches, and nausea
- Frequent tantrums or excessively irritable.
- More alone, tends to play alone.

