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The impact of maternal insecurity on child social-emotional competence among Syrian refugees in Jordan: Findings from the FIERCE project

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ABSTRACT

Syrians constitute the largest percentage of the world's refugee population (UNHCR, 2021a). After 11 years, the conflict is still ongoing, forcing millions of civilians to flee Syria. The majority find refuge in neighbouring countries, such as Jordan.

While the effects of conflict and war trauma have received much attention from the scientific community, researchers and clinicians have overlooked the stressors that Syrians face following displacement (Miller & Rasmussen, 2017). A growing body of research has shown that the impact of post-displacement stressors on mental health can equal or exceed the effects of war exposure (Miller & Jordans, 2016).

The present study aims to investigate the impact of post-displacement stressors in children's social-emotional competence. In a sample of 169 Syrian mothers and their 4-8-year-old children displaced in Jordan, we investigate the association between maternal insecurity and child social-emotional competence, measured by self-concept and empathy. In particular, we examine whether the quality of mother-child interaction mediates this relationship and whether maternal self-efficacy moderates the relationship between mothers' insecurity and the quality of mother-child interaction.

To answer this study's research questions, we analyse data from the Family Intervention for Empowerment through Reading and Education (FIERCE) project. This is a longitudinal project conducted in the capital of Jordan, Amman, and Za'atari, the country's largest Syrian refugee camp. The data analysed in this study were collected through direct assessment, survey, and two observational tasks: a reading activity and a free-play activity.

The current thesis comprises five chapters. The first chapter introduces the Syrian refugee crisis in Jordan, focusing on the post-displacement stressors that most families experience and their adverse effects on parental and child well-being.

The second chapter presents the Ecological Model of Refugees Distress by Miller and Rasmussen (2017) and reviews the literature on parenting and parent-child interactions following displacement. The construct of socio-emotional competence is then introduced, focusing on empathy and self-concept and how parenting shapes these aspects.

The third chapter describes the current study, outlining the research questions, procedure, and analytic plan.

Results are then described in the fourth chapter and discussed in the final chapter, together with the study limitations and implications for future research.

SOMMARIO

I siriani costituiscono la più grande popolazione rifugiata al mondo (UNHCR, 2021a). Dopo 11 anni il conflitto è ancora in corso, costringendo milioni di civili a fuggire dalla Siria e cercare protezione nei paesi vicini, come la Giordania.

Mentre gli effetti del trauma di guerra hanno ricevuto molta attenzione dalla comunità scientifica, i fattori di stress che i rifugiati affrontano nella fase post-migratoria sono stati meno approfonditi da ricercatori e psicologi (Miller & Rasmussen, 2017). Un numero crescente di studi dimostra che l'impatto psicologico dello stress post-migratorio può eguagliare o superare gli impatti traumatici dell'esposizione alla guerra (Miller & Jordans, 2016). Questo studio si propone di esaminare l'impatto dei fattori di stress post-migratori sulla competenza socio-emotiva dei bambini.

In 169 madri siriane e dei loro bambini di 4-8 anni rifugiati in Giordania viene esplorata l'associazione tra la percezione di insicurezza delle madri e la competenza socio-emotiva dei figli, misurata dal concetto di sé e dall'empatia. In particolare, si ipotizza che la qualità dell'interazione tra madri e bambini medi questa relazione, e che l'autoefficacia genitoriale moderi la relazione tra percezione di insicurezza materna e qualità dell'interazione.

Per rispondere alle domande di ricerca di questo studio sono stati analizzati i dati del progetto "Family Intervention for Empowerment through Reading and Education" (FIERCE). Si tratta di uno studio longitudinale condotto ad Amman e Za'atari, il più grande campo profughi della Giordania. I dati analizzati in questo studio sono stati raccolti attraverso una valutazione diretta, un questionario e due attività osservative:

un'attività di lettura e un'attività di gioco libero.

Questa tesi comprende cinque capitoli. Il primo capitolo introduce la situazione dei rifugiati siriani in Giordania, concentrandosi sui fattori di stress post-migratori e sull'impatto psicologico di questi nei genitori e bambini Siriani.

Il secondo capitolo presenta l'*Ecological Model of Refugees Distress* di Miller e Rasmussen (2017) e riporta la letteratura sulla genitorialità in contesti di migrazione forzata. Viene poi introdotto il costrutto della competenza socio-emotiva, concentrandosi sull'empatia e sul concetto di sé e su come i genitori modellino questi aspetti.

Il terzo capitolo descrive lo studio, delineando le domande di ricerca, la procedura e le analisi dei dati.

I risultati vengono presentati nel quarto capitolo e discussi nel capitolo finale, insieme ai limiti dello studio, le implicazioni e le prospettive future.

CHAPTER 1
INTRODUCTION

1.1 Global perspective on the situation of refugees

This thesis and research project developed following the Russian invasion of Ukraine in February 2022, which has caused the fastest and largest movement of refugees (UNHCR, 2022e). The European Union has reacted to this conflict and refugee crisis with unprecedented solidarity, empathy, and humanitarianism. Media coverage worldwide continues to inform the public about the developments of the conflict and echoes the dissents of the broader population (Lichterman, 2022).

While the situation in Ukraine seems to have increased the awareness and compassion of the European population toward the experiences of refugees, it has also highlighted the contradictory and discriminatory approach reserved for the millions of refugees coming from non-European countries (De Coninck, 2022).

At the end of 2021, the United Nations High Commissioner for Refugees (UNHCR) has registered 27.1 million refugees fleeing non-European countries, such as the Syrian Arab Republic, Afghanistan, Iraq, Eritrea, South Sudan, to name a few. Of these, more than 7 million are hosted in Europe (UNHCR, 2021a). People displaced from these countries were not welcomed with the same level of concern and solidarity expressed toward the Ukrainian population and instead had to face strict border controls, pushbacks, and institutional discrimination (Rosstalnyj, 2022).

The formal definition of refugee status provided by the 1951 Refugee Convention does not justify nor explain this double standard. Anyone who is forced to flee their

country of origin because of organised violence or because of the risk of persecution due to their religion, race, nationality, political opinion, or membership in social groups, has the right to seek and receive refuge (UN General Assembly, 1951). Considering that globally the number of refugees is expected to increase due to the climate crisis and the upsurge of new and existing conflicts (UNHCR, 2021a), it is important to untangle the roots of these diverging reactions toward refugees and avoid discrimination.

Additionally, it is crucial to have a comprehensive understanding of the experience of refugees, tackling the different types of stressors that characterise the three distinct stages: pre-migration, migration journey, and post-migration. If in the past the refugee status was considered to be short-term, nowadays protracted displacement is becoming the norm, and new strategies are needed to handle the conditions of refugees long-term (Bowman, 2016).

This thesis and research project will focus on the Syrian population displaced in Jordan, particularly addressing the experiences of mothers and children constrained in this situation of protracted displacement.

1.2 Introduction to the Syrian refugee crisis: migration history and statistics

The Syrian Arab Republic became an independent country officially in 1946. However, a state of political stability was reached only 20 years after with the presidency of Hafez al-Assad. Through a dictatorial government, the self-proclaimed president controlled the country for 30 years.

Although in Syria there are several religious, ethnic, and social groups, throughout

his regime Hafiz al-Assad favoured the religious group he belonged to, the Shia Alawite (Erum, 2021). This constituted a minority in Syria in contrast to the Sunni Muslims, who were, and still are, the largest Muslim sect in the country (Baltes, 2016).

In 2000, Hafiz al-Assad was followed by his son Bashar al-Assad, who left the disparities of the nation unaddressed and did not bring the change and modernisation that was expected from him (Zisser, 2005). This condition provided a fertile ground for the beginning of the Arab Spring in Syria, which took the form of a protest against the regime in the city of Dara'a in 2011 (Hove & Mutanda, 2015). Bashar al-Assad commanded cruel repression of the protests, causing the death of millions of civilians and marking the beginning of the civil war and humanitarian and refugee crisis (Leenders & Heydemann, 2012). After 11 years, the conflict continues to this day.

The ongoing conflict, the unstable economy, the constrained access to public services, and the general sense of hopelessness over the future of Syria forced about 60% of its population to leave the country (Alrababa'h et al., 2021). The UNHCR reports that 5.7 million civilians were displaced by the end of 2021(UNHCR, 2022d). Of these, 48% are minors (UNHCR, 2022b).

Nowadays, Syrians constitute the largest percentage of the world's refugee population (27%) (UNHCR, 2021a). The majority found refuge in the neighbouring countries, especially Turkey, which is the country that hosts the largest number of Syrian refugees, followed by Lebanon and Jordan (UNHCR, 2022d).

1.3 The Syrian refugee crisis in Jordan: statistics and demographics

Nowadays, the Jordanian government counts over one million resettlements of Syrians (Tobin et al., 2022), of whom 676,684 are registered with the UNHCR (UNHCR, 2022a). However, the challenging registration process and documentation issues do not make it possible to estimate the number of Syrian refugees in Jordan with precision (Krafft et al., 2018). Since 2012, the registration trend has been in decline. However, in 2021, almost 10,000 more refugees have been registered compared to the previous year (UNHCR, 2022b).

The Syrian refugee population in Jordan is young (Krafft et al., 2018). Elders constitute only 4.2% of the total, while children are estimated to be 48.6% (UNHCR, 2022c). The proportion of women and men in the adult population is almost equal, with slightly more males than females (Tobin et al., 2022).

The Syrian refugee families registered in Jordan are 3,229 (UNHCR, 2022c). On average, the households consist of five people and are guided by both parents (Krafft et al., 2018). The percentage of single parents is instead estimated to be 2.3% (UNHCR, 2022c). More than a quarter of the heads of households deal with a condition of vulnerability, such as chronic illness or disability, that impacts their daily lives (UNHCR, 2022c).

The majority of Syrians seek refuge in Jordan because of the geographic closeness and the cultural similarities between the two countries. Staying in Jordan allows for closer contact with relatives who remained in Syria and better chances of navigating the uncertainty of living in a different country (Tobin et al., 2022). Three other factors that

drive a large percentage of Syrians' to flee to this country are the higher sense of safety, the economic stability of Jordan, and the reunion with other family members who migrated before the conflict (Tobin et al., 2022).

A large percentage of Syrian refugees come from Dara'a, the city where the first conflict erupted (Tiltnes et al., 2019). Although 70% of Syrians wish to return to their cities of origin, the protraction of the conflict in Syria precludes such aspiration (UNHCR, 2021b). This, and the inability to relocate to a third country due to legal and socio-economic constraints, as well as the unwillingness of some to do so, force many refugees to remain in a state of limbo in Jordan (Tobin et al., 2022).

In 2016, the UNHCR defined the Syrian refugee crisis in Jordan as a protracted refugee situation, given that for at least five consecutive years, more than 25,000 refugees from Syria have been in exile in the country (UNHCR, 2021a). In fact, the probability of a Syrian refugee to stay in Jordan for at least five years varies between 42 and 46 percent (Bowman, 2016; UNHCR, 2021a).

1.3.1 The Jordanian response

Before the Syrians, the demographics of Jordan had been shaped by the influx of refugees from several countries, particularly by the Palestinians (1948) and Iraqis (1990). Nowadays, Jordan welcomes refugees from Syria, Yemen, Somalia, Sudan, and Libya (Krafft et al., 2018). The legal framework for the treatment of refugees in Jordan is regulated by the Memorandum of Understanding, signed with UNHCR in 1998. Refugees registered with the UNHCR are allowed to reside in Jordan until they find a stable

solution and are granted humanitarian assistance (Tobin et a., 2021).

Confronted with the large influx of refugees from Syria, in 2012, Jordan set up two camps, Za'atari, the largest Syrian refugee camp in the world, and Azraq (Obi, 2021). Until 2015, the Kafala system regulated who could leave the refugee camp based on the permission of a Jordanian national. Nowadays, only 19% of the refugee population lives in these camps, while the majority has moved to urban areas, especially in the cities of Amman and Mafraq (Tolbin et al., 2022).

Initially, Jordanians welcomed the Syrian refugees warmly. However, with the protraction of the conflict, accessing the country and public services became increasingly more challenging (Human Rights Watch, 2018). In 2016, the government closed all informal borders and the refugees caught entering the country irregularly were moved to the camps (Bank, 2016). However, in 2018, to extend the aid benefits and assistance, prevent arrests and deportations, and facilitate the integration of Syrians in Jordan, the government regularised all Syrian refugees in the country, including those who entered Jordan through the informal borders and those who left the camps irregularly (Alrababa'h et al., 2021).

With the support of UNHCR, the Jordanian government provides the registered refugees with cash support, informally called "*the retina"* by Syrians, which attempts to cover up to 80 percent of a family's needs. Registered refugees are also provided with in-kind aid from the World Food Programme (Alfadhli & Drury, 2018; Majewski et al., 2018). For refugees living inside the camp, health care is free, while those living outside the camps have to pay the costs of the services and medications (Rizkalla & Segal, 2018).

All refugee children have access to education up to 12th grade (Wells et al., 2016).

In 2016, work permits became easier to obtain (Mencütek & Nashwan, 2021). However, since the permits restrict refugees to have only one job, many refugees work informally to compensate for the low income and the financial strains (Alfadhli & Drury, 2018).

Despite these attempts of the government to support Syrian refugees, there are three main issues with the assistance provided in Jordan: most Syrians do not know about these support systems, or they are not able to access the service provider, or they are considered not eligible for support (El-Khatib et al., 2013; S. Tobin et al., 2021).

1.3.2 Beyond the statistics: The everyday challenges of Syrian refugees in Jordan

Although Jordan is considered a much safer option than staying in Syria, most displaced Syrians live in conditions of insecurity and below the poverty line (Alrababa'h et al., 2021).

Refugee camps are built to create temporary and safe sites for refugees (De Montclos & Kagwanja, 2000). However, the reality of Za'atari and Azraq does not seem to match these premises. In fact, the benefits and assistance received inside these camps are hampered by the high levels of surveillance and the limitation in physical mobility. Many Syrian refugees who live inside the camps also report a sense of fear and distrust over the other refugees and associate living inside the camp with low social status (Tobin et al., 2021). Consequently, only a small percentage of Syrians choose to live inside the refugee camps, and most of those who live inside the camps express the desire to relocate

outside (Obi, 2021). Obi's study (2021) found that Syrians who relocated to urban areas reported a higher quality of life.

Nonetheless, the freedom of living outside the refugee camps comes at a cost. Living in urban areas very often implies financial hardships, since the high influx of refugees has caused a spike in the rent prices that many refugees cannot afford (UNHCR, 2022c). As a consequence, most Syrians live in houses that are too small for the size of their household (Krafft et al., 2018), and 58% live without electricity (UNHCR, 2022c). In 2022, 64% of Syrian refugees had to move to cheaper accommodations due to the accumulation of debts, inability to meet their basic needs, or forced by eviction (UNHCR, 2022c).

The weak economy of Jordan makes it difficult to meet the needs of all the refugees that the country hosts (Barron et al., 2021). As a consequence, the majority of Syrians live in poverty, experience moderate to severe food insecurity (87%), and declare having debts (90%) (UNHCR, 2022c). In 2022, more than two-thirds of refugees perceived their financial situation to be worse than the previous year, and the majority expect it to worsen in the future (UNHCR, 2022c).

Overall, the two most common sources of income for refugees are institutional income, provided by international agencies or charities, and wage income. The UNHCR's cash assistance reaches 30,000 Syrian refugee families. However, due to limited funding, 12,000 eligible families are on the waitlist (UNHCR, 2022a). Those who manage to receive cash assistance report that they cannot live off this, but at least two sources of

income are necessary to make it through the financial challenges experienced in Jordan (Tiltnes et al., 2019).

Unemployment is another pressing concern for Syrian refugees, recently aggravated by the COVID-19 pandemic (UNHCR, 2022a). Before 2016, Syrians were denied the right to work and were primarily involved in informal jobs. Nowadays, those who manage to find a job and receive a work permit are often poorly remunerated and work in less secure jobs than their Jordanian counterparts (Mencütek & Nashwan, 2021). Almost all (90%) of the working heads of households have only a temporary job (UNHCR, 2022c). Syrian men, who constitute 41% of the refugee workforce, generally work as professionals, frequently in the construction sector, while working in the education and health sector is most common among women (Krafft et al., 2018). Women, however, constitute only 6% of the refugee workforce population (UNCHR, 2022c)

The economic hardship and insecure living conditions experienced by Syrians are associated with increased rates of child marriage, as compared to pre-conflict rates. Early marriage is conceived as a form of protection and safeguarding of both the woman and the traditional Syrian societal norms (El Arab & Sagbakken, 2019). Early marriage often implies early pregnancy, which puts the lives of the young girls at risk, also due to the restricted access of Syrian refugees to the health care system (Alrababa'h et al., 2022).

Hattar-Pollara (2019) links the phenomenon of early marriage and pregnancy to low school retention among Syrian youth in Jordan. In fact, almost all children up to 11 years of age are enrolled in school, but with age, the rates of enrolment decrease steeply, with only 12% of young adults (19 years old) attending school. Promising data suggest

that this trend is decreasing as Syrian youth remain in school for longer (Alfadhli & Drury, 2018).

Jordanians have been praised for their generosity and solidarity toward refugees (Barron et al., 2021). However, the positive relationships between Syrians and Jordanians seem to have changed with the increased influx of refugees (Alfadhli & Drury, 2018). Some refugees perceive a materialistic interest and a sense of exploitation in their interactions with Jordanians, in contrast to the first years after the onset of the conflict when Syrians perceived a greater sense of solidarity (Alfadhli & Drury, 2018).

Interestingly, according to some authors, the similarities in language, culture, and religion between the two countries facilitate the integration of Syrian refugees in Jordan (Tobin et al., 2022), while according to other authors, these similarities are perceived as a cultural threat for Jordanians and drive their negative attitudes toward the Syrian refugees (Alrababa'h et al., 2021).

Family networks are the primary source of emotional and practical support among Syrians (Hassouneh, 2019). However, more than one-third of refugees are separated from a family member (Bank, 2016). Considering the strong value that Syrians attribute to the family, separation is a major source of distress experienced by refugees (Chandler et al., 2020). In addition, according to some authors, the condition of prolonged displacement challenges the traditional fabrics of Syrian families, causing more distress, conflict, and violence within the unit (Syam et al., 2019). However, not all researchers agree with this position, contesting that, for many Syrians, changes in family dynamics were already

taking place before the displacement and therefore have equipped them with coping skills that facilitate their adjustment to the new context (Lokot, 2018).

1.4 Mental health among Syrian refugees

In the Syrian community, the experience of displacement stressors is referred to with the term *Sudme* (صدمة). *Sudme* is generally translated in English with the word "trauma", but the Arabic term encompasses a broader range of experiences and outcomes related to displacement (Wells et al., 2016). At the psychological level, *sudme* commonly results in feelings of worry for the self and the family, fear from environmental threats, as well as somatic and more impairing psychological conditions.

Among the multiple roots and facets of *sudme*, studies confirm that Syrians perceive economic hardship, unemployment, and poor living conditions as the major obstacles for their well-being and adjustment (Rizkalla & Segal, 2018; Wells et al., 2018). These concerns manifest in high anxiety, depression, and feelings of insecurity (Alfadhli & Drury, 2018; PeConga & Høgh Thøgersen, 2020; Rizkalla & Segal, 2018). Studies also report above-average rates of post-traumatic stress disorder, affective disorders, and psychosis in the Syrian community (Al-Shagran et al., 2015; Rizkalla & Segal, 2018; Rizkalla et al., 2020). Women seem at higher risk of living with these mental conditions (Yasmine & Moughalian, 2016). The physical health of many Syrian refugees is also at risk, especially for hypertension, cardiovascular diseases (Al Rousan et al., 2018), and the somatisation of mental disorders (Rizkalla et al., 2020).

At the social level, *sudme* undermines *karama* (كرامة), dignity, another central construct for the Syrian community. *Karama* is a socially determined phenomenon related to one's identity, family, social networks, and social position. For refugees, to have *karama* means to face displacement stressors with patience, resilience, and self-reliance (Wells et al., 2016).

Unfortunately, despite the clear need for mental health services, Syrians do not receive the psychological support they deserve due to the socio-economic constraints, the lack of access and deficiency of the Jordanian health care system, and the stigma around mental health services (Rizkalla et al., 2020).

Importantly, the psychological and social impact of displacement on the well-being of Syrians should be understood as the result of the ongoing exposure to potentially traumatic experiences and stressors, from the pre-displacement to the post-displacement stages (Purgato et al., 2017). Although this thesis aims to focus on the effects of post-displacement stressors, it cannot deny the many years of the oppressive regime and political terror experienced in Syria, which contribute to the depletion of resources and add up to the stressors experienced in Jordan (Bunn et al., 2022).

1.4.1 The impact of displacement on Syrian refugee children

The experience of displacement has a toll also on children's mental health and development. Around 80% of the children born in Syria have been directly exposed to at least one traumatic event (Rizkalla et al., 2020), and 45.6% of children and adolescents experience post-traumatic stress disorder, which appears to be in comorbidity with

emotion dysregulation (Khamis, 2019). In a cross-sectional study, about half of Syrian children suffered from secondary traumatisation as a consequence of living with a parent exposed to traumatic events (Dehnel et al., 2022), suggesting that also Syrian children born in Jordan are not exempted from the memory of war (Eltanamly et al., 2022).

The poor living conditions in Jordan deprive children of basic material needs, such as shelter, food, healthcare, education, and safety (Yayan, 2018). Their social, emotional, and psychological needs are also likely not being met, with repercussions on their development and well-being (Save the Children, 2015). Accordingly, exposure to psychosocial stressors in the exile environment has been associated with high rates of insecurity, depression, and anxiety disorders among Syrian children and adolescents (Panter-Brick et al., 2018; Rizkalla et al., 2020).

Importantly, refugee studies suggest that the well-being of children is closely related to the relationships and experiences of their parents and families (Sangalang & Vang, 2017). Therefore, the focus of the following chapter is how the challenges of displacement affect parenting and child development.

CHAPTER 2
PARENTING AND GROWING UP IN A REFUGEE CONTEXT

The challenges experienced by Syrian refugees in the post-displacement stage compound with the stress experienced in the pre-displacement stage and during the migration journey. Together, they undermine the resources and resilience of Syrian refugees, hindering their adjustment to the new country (Alami, 2019). Through the socio-ecological perspective proposed by Miller and Rasmussen (2016), the following section introduces the concept of post-displacement stressors and their impact on refugees' mental health.

2.1 Post-displacement stressors

Post-displacement stressors, also called *secondary stressors,* are defined in the literature as the ongoing or chronic problems that result from or are exacerbated by armed conflict and forced migration and that affect the living conditions in the exile environment (Miller & Rasmussen, 2017; Panter-Brick et al., 2018). Examples of secondary stressors frequently experienced by refugees worldwide are poverty, unemployment, separation from family and family conflicts, marginalisation, and discrimination (Miller & Rasmussen, 2017).

This category of stressors is also commonly defined as "*daily stressors*" in the literature. Alfadhli and Drury (2018) suggest avoiding this term because some of these struggles are not present every day and because the term "daily" devalues the potentially traumatic impact of these stressors. In fact, contrary to what is assumed, the toxicity of

secondary stressors has been found to equal or exceed the impact that direct war exposure has on mental health (Miller & Jordans, 2016).

Accordingly, many Syrian refugees report that the psychological impact of the stressors experienced in Jordan has come to outweigh the impact of the exposure to war and situations of conflict in Syria (Hassan et al., 2016). Nonetheless, the psychological toll of post-displacement stressors has been overlooked in refugee studies and interventions, most of which focused on war trauma (Alami, 2019).

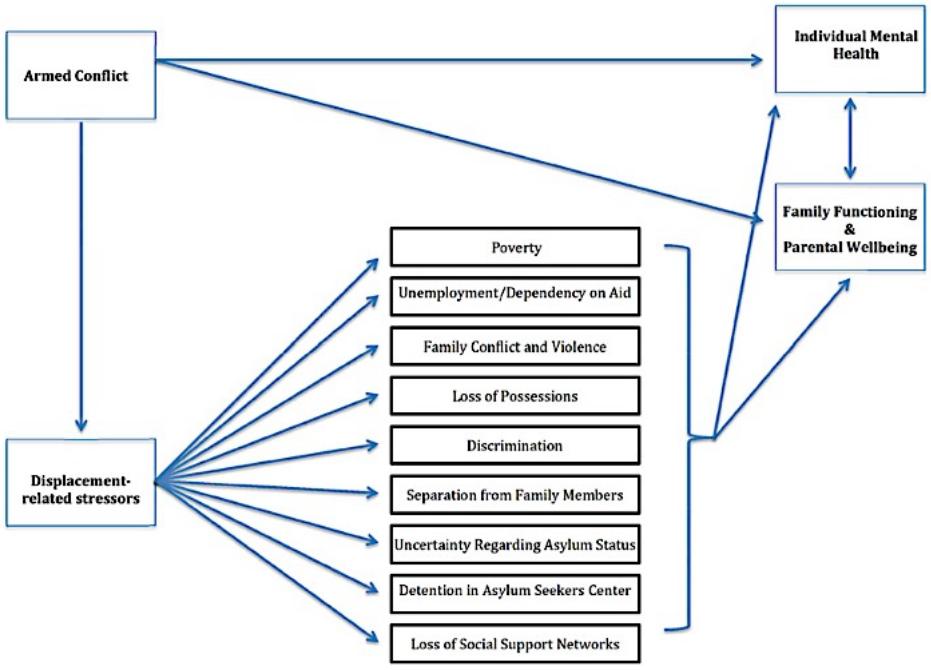
To shift this pattern, a growing body of research is adopting the socio-ecological perspective to understand and portray the complexity of the refugee experience. Indeed, this framework, which assumes a transactional relationship between the environment and the individual, allows researchers and clinicians to consider and address the numerous psychosocial stressors affecting refugees' well-being across the three displacement stages (Bronfenbrenner, 1979; Silove, 1999).

2.1.1 Ecological Model of Refugee Distress

Following this rationale, The Ecological Model of Refugee Distress by Miller and Rasmussen (2017) proposes two pathways through which war and forced migration may impact the well-being of refugees. The direct pathway, in which first-hand exposure to conflict situations impacts the individual's well-being, and the indirect pathway, in which the stressors in the post-displacement stage become the source of psychological suffering. Therefore, the model suggests a mediating effect of post-displacement stressors on the

well-being of refugees and calls for inter-sectoral interventions that address both the traumatic memories and the daily struggles of refugees (see Figure 1).

Figure 1. *Ecological Model of Refugee Distress by Miller & Rassmussen (2017)*



Miller and Rasmussen (2010; 2016) outline four explanatory factors for the association between post-displacement stressors and mental health.

First, in some cases, post-displacement stressors may be stronger predictors of psychological disorders than pre-migratory experiences because of their *temporal proximity.* In contrast to pre-migratory experiences, which are more distant in time, post-displacement stressors are ongoing and salient concerns for refugees. The temporal dimension is particularly relevant to the protracted situation of Syrian refugees in Jordan, in which for many at least five years have passed since the pre-migration stage. The

prolonged post-displacement period may facilitate the natural process of psychological recovery from the pre-displacement traumatic experiences while making the secondary stressors become pressing.

Second, refugees have *limited or no control* over psychosocial stressors, as they are often the consequence of broader, socio-structural issues. For instance, the protracted nature of Syrians' displacement is strongly determined by political and contextual scenarios that are beyond the individual's control (Etzold & Fechter, 2022). The external locus of control reduces refugees' sense of agency and self-efficacy, causing anger and frustration (Sim et al., 2018).

Third, post-displacement stressors are *pervasive.* In both low and high-income countries (Herati & Meyer, 2020), these stressors are experienced by almost all refugees (Wells et al., 2016), in contrast with the lower rates of direct exposure to armed conflict (Hassan et al., 2016).

Fourth, secondary stressors vary in *nature* and *intensity*. Some of these stressors are chronic and low in intensity, while others can be acute and traumatic. The heterogeneity of these stressors increases the chances of adverse effects on refugees' well-being.

In addition to these four explanatory factors, Wells et al. (2016) suggest that the toxicity of secondary stressors is strengthened by their *interaction* with the consequent psychological outcomes. Specifically, the psychological suffering and symptomatology that stem from secondary stressors may limit the individual's capacity to function and confront these secondary stressors, which may, in turn, worsen the severity of their living

condition. In the absence of resources and protective factors, this continuously reinforcing feedback between secondary stressors and psychological outcomes may consolidate into severe mental health conditions.

2.2 Displacement stressors and parenting challenges

The Ecological Model of Refugee Distress by Miller and Rasmussen (2017) suggests that in addition to the direct and indirect pathways through which war and forced migration impact mental health, there is a third pathway that can potentially harm the well-being of refugees: parental and family functioning (Miller and Rasmussen, 2017). These factors appear to be especially relevant for children, who, due to the reduced access to school, contact with peers, and separation from grandparents, have fewer protective systems external to their family and are confronted with stressors beyond their coping capacity (Arakelyan & Ager, 2020).

Thus, parents are in the position of either buffering or exacerbating the impact of displacement stressors on their children's well-being and development (Havighurst & Kehoe, 2017). However, being a buffer for their children is a challenging task, given the numerous stressors parents face following displacement.

El-Khani and colleagues (2016) and Sim and colleagues (2018) have identified four sets of challenges faced by Syrian parents that are likely to hinder their capacity to protect and support their children. First, *economic hardship* and *poor living conditions* prevent many parents from providing their children a decent quality of life, forcing some to accept child marriage and child labour (Hattar-Pollara, 2019). Second, being a

caregiver in a refugee context means to parent in a foreign environment, which many report as being *unsafe* for children. In refugee camps and urban areas, Syrian refugee children are at risk of facing potentially traumatic experiences, such as discrimination, bullying, and physical abuse (Rizkalla et al., 2020). Third, parents are also confronted with their own *emotional and psychological difficulties* that hinder their emotional availability with their children and their overall parenting capacity. This condition is exacerbated when parents are separated from family members and friends and lack support (Chandler et al., 2020). Finally, parenting is experienced as more arduous following displacement due to the changes in their *children's behaviour.* Many Syrian refugee parents report that their children have become more disrespectful, behave inappropriately for their age, and are short-tempered (El-Khani et al., 2016).

Due to these challenges, parenting practices and parent-child relationships are likely to change following displacement (Williams, 2010). These changes are the result of the attempts of parents to adapt and adjust to the post-displacement ecology. In some cases, this process of adjustment, which requires an assessment and a trade-off between the individual's resources and the demands of the environment, may result in maladaptive outcomes (Bryant et al., 2018; Sim et al., 2018).

2.2.1 Parenting and parent-child interaction following displacement

Several theoretical frameworks outline the mechanisms through which parental stress may affect child development. Of relevance is the *Family Stress theory,* which shifts the focus from trauma to the daily stressors and environmental concerns parents face (Conger

et al., 1994). According to this theory, psycho-social stressors have the potential to strain the family functioning and the well-being of their children via harsher parenting and reduced quality of parent-child interactions (Hill, 1958). Support for this assumption can be found in the literature on parenting in displacement contexts.

Arakelyan and Ager (2020) report that the stress, fear, exhaustion, and mental health conditions of refugee parents may affect child adjustment and development via two pathways. First, parents may openly share their struggles and concern, over-arousing their children and leading to parent-child role reversal (Dalgard & Montgomery, 2017). Accordingly, Rizkalla and colleagues (2020) report that Syrian refugee mothers exposed to traumatic events reflected and projected their symptomatology onto their children, with adverse effects on their well-being.

Second*, parental mental health* may influence child outcomes indirectly by reducing parenting competence (Arakelyan and Ager., 2020). Studies consistently find that following displacement, refugee parents who suffer from psychological conditions become short-tempered and adopt more punitive and harsh practices (Byrant et al., 2018; Scharpf, 2021; van Ee et al., 2012), which increase the risk of internalising and externalising behaviours in children, as well as direct or secondary traumatisation (Byrant et al., 2018). Many parents also report feeling guilty and hopeless, perceiving themselves as less capable parents following displacement (Dalgard & Montgomery, 2017)

Parents' emotional states spill over the quality of *parent-child interactions*. Studies consistently find that refugee parents find it harder to manage their emotions, and consequently, they tend to respond in less sensitive and warm ways toward their children

(Eruyar et al., 2020; Sharpf et al., 2021; Van Ee et al., 2013). Decreased parental sensitivity and responsiveness seem to have adverse effects especially in child social–emotional development (Kim-Cohen et al., 2004; Whittaker et al., 2011), while responsive and secure parent-child interactions foster child post-traumatic growth (Sleijpen et al., 2016).

Importantly, changes in children's behaviour may also determine parental mental health and the quality of the interaction by increasing intergenerational conflict and communication problems (Arakelyan & Ager, 2020; Van EE et al., 2013), and by further provoking harsh parenting practices (Byrant et al., 2018).

Finally, secondary stressors and related duties may also reduce the *consistency* and quantity, other than the quality, of parent-child interactions. For instance, Syrian parents report that finding a job to sustain the economic expenses is only partly relieving since this often implies leaving their children alone and unsupervised, which increases emotional and behavioural problems and deteriorates parent-child relationships (Sim et al., 2018).

2.3 Social and emotional competence: empathy and self-concept

Social and emotional competence is an important asset of child development. This construct encompasses a variety of intrapersonal and interpersonal skills (Malti & Noam, 2016) that allow to children understand, regulate, and express one's emotions, as well as to form secure relationships with others (Metwally et al., 2016).

Empathy is a fundamental domain of social-emotional competence, often considered the basis of interpersonal relationships (Rousseau & Foxen, 2010). This construct includes two psychological phenomena, *cognitive empathy*, which is the awareness of others' emotions, beliefs, and intentions, and *affective empathy*, which is the concern and emotional reaction to others' suffering (Maxwell & DesRoches, 2010).

Thus, empathy allows children to have a refined understanding of others' experiences and needs, and, as a consequence, it guides moral action (Maxwell & DesRoches, 2010). Empathy seems to foster socially appropriate and prosocial behaviours (Eisenberg & Fabes, 1990). On the other hand, deficits in empathy are associated with externalising symptoms and aggressive and antisocial behaviours (Zhou et al., 2002).

Some studies suggest that exposure to adverse experiences, such as displacement, increases levels of empathy toward others (Lim & DeSteno, 2016; Saylor et al., 1992). However, Quas et al. (2017) suggest that children living in high-risk contexts show lower empathic concern due to altered patterns of emotion recognition, particularly for anger and sadness. Overall, very few studies have focused on empathy in children growing in insecure environments (Frens, 2019). Empathy is, in fact, more widely discussed as directed toward refugee populations (e.g., Glen et al., 2020) instead of within refugee populations.

Self-concept is another salient indicator of children's emotional health. This concept encompasses the individual's construction of the self across several life areas. It captures the perception and awareness of the self and others, and the understanding and

beliefs about the environment and life experiences (Harter & Leahy, 2001; Marsh & Shavelson, 1985). The fundamental domains that build one's self-concept are family, academic/intellectual ability, physical appearance, social-emotional awareness, and ability (Bracken, 1992).

Positive self-concept in children is associated with better academic outcomes (Marsh et al., 2002), emotion regulation, and self-worth (Hay & Ashman, 2003). Low levels of self-concept are instead associated with higher behavioural and mental health concerns (Cheong et al., 2016). Finally, self-concept seems to be linked with social functioning and the development of empathy (Ferreira et al., 2022).

Self-concept is a malleable construct that changes across development and life experiences and is primarily shaped by family relationships (Harter, 1996). With age, children internalise the feedback and insights they receive from significant others and through social comparison (Tannenbaum, 2008). The physical environment is another determinant of one's self-concept (Prince, 2014), suggesting the importance of addressing this construct in refugee children, whose perception of the self may alter with the experiences of displacement from their original environment. However, little is known about how children's self-concept varies and structures following displacement.

Altogether, social-emotional competences are considered life skills (Arslan & Demirtas, 2016) because they facilitate navigating through life challenges and adapting to contextual demands (Malti & Noam, 2016). Being this a skill, the process of learning and refining social-emotional competence begins in early childhood, continues throughout the lifespan, and can be targeted through intervention programs (Alegre,

2011). Accordingly, various programs have been implemented in recent years with promising results (Savina & Wan, 2017). However, few programs have been conducted and evaluated in low-middle income and non-Western contexts (Tubbs Dolan et al. 2022).

The following paragraphs outline the link between child social-emotional competence and parenting, particularly focusing on the constructs of empathy and self-concept. This discussion then focuses on children growing up in refugee contexts.

2.3.1 Parenting and social-emotional competence

The term social and emotional learning (SEL) refers to the process of acquiring and effectively applying social-emotional competence (Weissberg et al., 2015). Several variables influence child social-emotional competence, such as nutrition, genetics, prenatal and perinatal factors, parental well-being, and the social context, such as family, peers, school, neighbourhoods, socio-economic status, and culture (Metwally et al., 2016). Among these factors, the processes occurring in interaction with significant others within the micro-systems seem to be the most influential (Durbin et al., 1993), and parent-child interactions are often considered the first learning ground for social-emotional skills (Nguyen et al., 2020).

Children learn to regulate their emotions and relate to others in part by observing their parents' expressions of emotions, coping mechanisms, and ways of interacting with others. Caregivers constitute the first models that children are exposed to, and it is likely that they will replicate them in their own interactions with others (Nguyen et al., 2020).

Therefore, *parental modeling* and *parental stimulation* are two factors influencing children's social-emotional competence (Metwally et al., 2016).

Along with the observational learning process are *parental competences*, which, in this case, refer to parents' skills and efforts in guiding children's social-emotional development (Ndengeyingoma et al., 2022). Parental competences that foster the social-emotional skills of children include parents' awareness of their own and their child's emotions, parental emotional expressiveness (Zhang et al., 2021), emotional validation and support (Eisenberg & Fabes, 1990; Perry et al., 2020), and emotional coaching, which refers to the direct instruction of behavioural and emotion regulation strategies (Ştefan & Miclea, 2013). Accordingly, Goleman (2001) reports that parents' emotional habits toward their children and emotional coaching practices foster empathy toward others. Moreover, parents' active participation in child social-emotional learning is also likely to promote a positive family climate, which is paramount for the development of a positive self-concept (Zhang et al., 2021).

The quality of *parent-child interactions* is also of significant importance for children's socio-emotional development. Overall, parental warmth, sensitivity, and responsiveness are key to promote social-emotional competence in children (Sheridan et al., 2010). Parent-child interactions characterised by these three factors allow children to practice the emerging skills and favour the cognitive scaffolding and development of the neural architecture responsible for children's social-emotional development (Rodrigues et al., 2021). Relatedly, Kiang and colleagues (2004) have found that mothers' sensitivity predicts greater empathy and prosocial behaviour in children. Reciprocal and nurturing

relationships and constructive feedback are central elements that promote the development of positive self-concept in children (Banham et al., 2000).

This brief review of the literature outlines the mechanisms through which parents promote the construction of a positive self-concept and foster empathy in their children. It shows that, among other factors, positive parent-child interactions, characterised by parental sensitive responding and warmth, foster children's social-emotional skills. However, linking these findings with the literature on parenting in refugee contexts, it appears that warmth, responsiveness, and sensitivity are likely to be undermined by the stressors of displacement. Indeed, parents are likely to become harsher and more controlling with their children (Arakelyan and Ager., 2020). This confirms the importance of focusing on parental well-being and the quality of parent-child interaction to foster social-emotional competence among refugee children. The following paragraph outlines why focusing on social-emotional competence among refugee children is crucial.

2.3.2 Social-emotional competence among refugee children: benefits and challenges

There are more refugee studies that address children's mental health and risk factors than studies and interventions that focus on the factors that support their positive development, such as social-emotional competence (Emerson et al., 2022). Furthermore, most studies and interventions on social-emotional competence have been conducted with Western, Educated, Industrialised, Rich, Democratic (WEIRD: Henrich et al., 2010) populations or with refugees who resettled in high-income countries (Tubbs Dolan et al., 2022). This leads to a limited understanding of the variability of this construct among refugees, the

majority of whom are displaced in low-and middle-income countries (UNHCR, 2021a). There is a need for more studies and evidence-based programs that address and foster social and emotional competence among refugee populations. The following section outlines three arguments in support of this claim.

First, social and emotional competence is heavily influenced by the socio-cultural context. This shapes what emotions prevail, how they are expressed, and through what strategies they are managed (Savina & Wan, 2017). For instance, self-concept structures differently depending on whether the culture where he or she grows is individualistic or collectivistic (Klassen, 2004). Therefore, culturally-grounded socio-emotional studies and programs are needed to target and capture the actual reality of refugee children, whose socio-cultural context of origin differs from the WEIRD contexts where most studies and programs have been conducted.

Second, the benefits of social-emotional skills may address the risk factors and challenges that many refugee children experience. For instance, a positive self-concept is associated with better academic outcomes and achievements in the labour market (Heckman & Raut, 2016). In the context of Syrian refugees in Jordan, these outcomes can contrast the issues of low school retention and adult unemployment. Social-competence, and empathy in particular, improve the quality of one's relationships (Denham & Brown, 2010) through the ability to understand others' emotions and needs, communicate emotions in positive ways, and provide emotional support (Ashdown & Bernard, 2012; Murphy et al., 1999). Meaningful and supportive relationships within the household and among peers foster resilience, a sense of belonging, and contrast the isolation,

marginalisation, and bullying that some Syrian refugee children experience in Jordan (Barron et al., 2021; Emerson et al., 2022). Relatedly, empathy is important for preventing violence and externalising symptoms, which are likely to result following displacement (Maxwell & DesRoches, 2010). Finally, high levels of self-concept and empathy promote mental health and positive development (Ferreira et al., 2022; Malti, 2020; Speidel et al., 2020), while low levels of social-emotional competences are associated with self-destructive tendencies (Allemand et al., 2015), conduct disorders, antisocial and violent behaviours (Whittaker, 2010). Therefore, social-emotional competence overall has the potential to act as a buffer against the numerous risk factors of a child's post-displacement ecology.

A third reason to focus on and foster social-emotional skills in refugee children is that growing in contexts characterised by economic insecurity has been associated with lower social-emotional abilities (Raver et al., 2007). This is partly explained by parental stress and parental mental health (Zhu, 2018). According to the findings reported by Gershoff and colleagues (2007), material hardship and low-income impact child cognitive and social-emotional skills indirectly through the high levels of parental stress, low money and time investment in children's development, harsh discipline, and lack of warm and sensitive parent-child interactions. In fact, fear and stress limit access to one's executive functions, decreasing parents' emotional awareness and ability to regulate their own and their children's emotions (Suchy, 2011). Loss of temper, non-contingent responses to children's emotions (Anthony et al., 2005), emotional suppression (Havighurst & Kehoe, 2017), and greater use of violence (Zhu, 2018) are other

consequences of parental stress that have a detrimental impact on child social and emotional development. However, to our knowledge, the study by Gershoff and colleagues (2007) has not been replicated in refugee populations, leaving unanswered the question of whether and how secondary stressors affect child social-emotional competence.

To address the gap in the literature on social-emotional skills among refugee populations, the present study aims to investigate how post-displacements stressors impact children's social-emotional competence, measured by empathy and self-concept. Given the important and challenging role that parents play in fostering such skills, the question will be addressed by examining the link between perceived maternal insecurity, mother-child interaction quality, and child social-emotional competence.

CHAPTER 3
THE CURRENT STUDY

3.1 The Family Intervention for Empowerment through Reading and Education (FIERCE)

The present study analyses data from the Family Intervention for Empowerment through Reading and Education (FIERCE) project. This is a longitudinal study coordinated by Dr. Kristin Hadfield, Dr. Isabel Mareshal, and Dr. Amal El kharouf, and conducted in the capital of Jordan, Amman, and Za'atari, the country's largest Syrian refugee camp. It involves 322 Syrian refugee mothers and their 4-8-year-old children who were recruited as part of an evaluation of a shared book reading intervention, called We Love Reading[1]. The reading intervention is delivered by Taghyeer Foundation, a Jordanian NGO.

The FIERCE project, which extends over three time points, collected numerous measures to assess mental health, child development, and family dynamics. In this study, we will analyse the data on maternal insecurity and quality of mother-child interaction, which were collected at time point 1 (T1; February, 2021), and the data on child social and emotional competence and maternal self-efficacy, which were collected at time point 2 (T2; May, 2021) about four months later.

[1] We Love Reading (Taghyeer Foundation) was founded by Rana Dajani, a professor of molecular biology in Jordan, to foster children's interest in reading through a read-aloud program. Nowadays, the NGO trains national volunteers to conduct a story-telling program for groups of children aged 4-to-12. The reading program extends for two months and can be delivered in a variety of contexts, such as community centres, houses, and schools. Source: https://welovereading.org/

3.2 Study design and research questions

This study used observational, direct assessment, and survey data from 169 Syrian refugee mothers and their 4-8-year old children in Jordan to investigate the relationship between maternal feelings of insecurity, child social and emotional competence, and the quality of mother-child interaction. We also investigated the role of parenting self-efficacy in moderating the relationship between mothers' insecurity (fear/worry) and the quality of mother-child interaction. Precisely, the questions guiding the present study were:

R.Q. 1: *How are mothers' feelings of insecurity associated with their child social and emotional skills?*

Following the Ecological Model of Refugee distress by Miller & Rasmussen (2017), the present study aims to investigate the impact of secondary stressors on Syrian refugee parents and their children. Refugee families in Jordan are exposed to a wide variety of stressors for a prolonged period. Many parents struggle to support their children's development and well-being, and report being concerned for their safety and that of their children (Bjørneseth et al., 2019; Syam et al., 2019). In order to assess the indirect effect of secondary stressors on parenting and child outcomes, we examined the concept of maternal insecurity, which measures the feelings of fear and worry that Syrian refugee mothers experience following displacement (Ziadni et al., 2011).

Given the children's dependency on their caregivers, the mothers' psycho-emotional state contributes to the perception and understanding that the child has of the environment and the displacement experiences, which may influence their social-

emotional development (Gershoff et al., 2007). Children are in fact at higher risk of internalising the distress and insecurity of their mothers (Alami, 2020), and are more receptive to fear learning from negative and threatening family environments (LoBue et al., 2019).

While the link between parental mental health and child social-emotional skills is established in the literature (Zhu, 2018), to our knowledge, no study has investigated how maternal insecurity influences child social-emotional competences. Based on the available evidence, we expected maternal feelings of insecurity to be associated with lower social and emotional skills in children.

R.Q. 2: *Does the quality of mother-child interactions mediate the expected relationship between maternal insecurity and child social and emotional skills?*

According to the Family Stress Model, parental stress harms child development through harsh and inconsistent parenting behaviours (Conger et al., 1994). This is supported by a wide breadth of studies that have explored this link by focusing on parental mental health (e.g. Byrant et al., 2018; Rizkalla et al., 2020; Sim et al., 2018). However, the effects of maternal insecurity have not been explored.

Following the findings from similar studies, it is reasonable to expect that, in the absence of internal and external coping mechanisms, feelings of insecurity may cause mothers to be harsher and less sensitive when interacting with their children (Dekel, 2004; Leyendecker et al., 2018), and that this will, in turn, have adverse effects on the social-emotional development of children (Gershoff et al., 2007; Sheridan et al., 2010).

In this study, we hypothesised that the quality of mother-child interactions mediated the relationship between mothers' insecurity and child social and emotional competence. Specifically, we anticipated more maternal feelings of fear and worry to be associated with poorer quality interactions with the child which, in turn, were linked to less child social emotional competence.

R.Q. 3: *Does parenting self-efficacy moderate the relationship between mothers' insecurity and mother-child interaction quality?*

The construct of self-efficacy depends on contextual factors, which may either enhance or reduce it (Eltanamly et al., 2022). According to Bandura et al. (1999), self-efficacy relates to greater cognitive flexibility, internal locus of control, and perseverance in facing challenges. For parents, this translates into a greater capacity to remain engaged and adjust to parenting challenges and contextual adversity (Eltanamly et al., 2022). Accordingly, in general populations, it was found that low parental self-efficacy leads to greater use of harsh and controlling parenting practices (Jones & Prinz, 2005). Moreover, parental self-efficacy was found to influence several domains of child development, including social-emotional competence, via parenting competence and warmth (Izzo et al., 2000).

Based on these findings, and because many Syrian refugee parents perceive themselves as being less capable parents than before displacement (El-Khani et al., 2016), we hypothesized that the expected association between mothers' insecurity and the quality of mother-child interactions would be stronger for mothers reporting low (vs. high) self-efficacy.

3.3 Participants

The FIERCE project involves Syrian refugee mothers and their 4-8-year-old children living in Jordan. Overall, the FIERCE dataset counts 322 dyads at T1, 317 dyads at T2, and 102 dyads at T3.

The initial sample of this study included 169 dyads. For 86 of these dyads, observational data on the play activity were coded. This constitutes 26.3% of all the play data included in the FIERCE database. Instead, for the remaining 83 dyads, 25.4% of the total, observational data on the reading activity were coded.

The socio-demographic characteristics of the study's participants are outlined in Table 1.

Table 1. *Summary table of participants' socio-demographic characteristics*

	%	***M***	***SD***	***Range***
Child age		6.26	1.22	4-9
Mother age		32.61	7.01	20-55
Household size		6.77	2.22	3-15
Relative poverty		7.92	1.88	3-12
Child in school	70.8%			
Living in Amman	73.3%			
Maternal employment	89.1%			
Child female	50.2%			

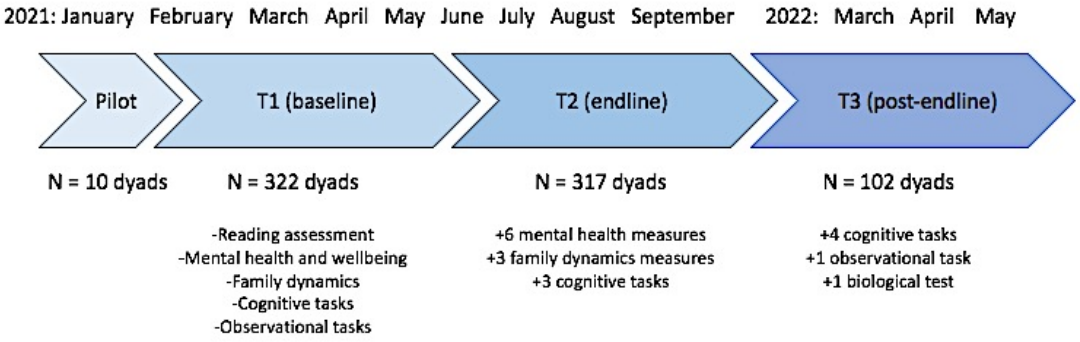
3.4 Procedure

The FIERCE project aims to evaluate whether the We Love Reading program improves children's educational trajectories and to explore what leads to effective development and implementation of an educational intervention in a humanitarian crisis-context. Therefore, a wait-listed cluster randomized controlled trial (RCT) was used.

For the RCT, participants were randomly assigned to either the treatment group or to the control group. Those in the treatment group took part in the We Love Reading sessions for 12 weeks, while the control group did not participate in the reading intervention. Data were collected at three time points: before the intervention (T1), immediately after (T2), and about a year later (T3; March-May, 2022). Since recruitment was done on a rolling basis, data collection followed a rolling format, with T1 beginning in February 2021 and T2 beginning at least three months after the first data collection. A pilot study was conducted with ten dyads before each time point, since new measures were added also at T2 and T3. Figure 2 shows the timeline of the RCT of the FIERCE project.

In this study, we analysed the data of participants who completed the survey on maternal insecurity and the two observational tasks at T1, and the data of children who took part in the social and emotional competence assessment and mothers who completed the self-efficacy survey at T2.

Figure 2. *Timeline of the randomised control trial of the FIERCE project*



Parents and children were asked to volunteer for the research. The only exclusion criterion for the children to participate was age (children under 7 and over 12 years of age were not selected). The recruitment of participants living in Amman was done through community-based organisations by presenting the project to a list of people who asked to take part in services provided by these organisations. The recruitment of participants living in Za'atari was conducted by two We Love Reading ammbassadors who presented the project to those living in the camp's sectors they had access to. The researchers contacted the people who expressed their interest in the project via WhatsApp, the most commonly used communication platform in the Middle East. The acceptance rate was high (91%).

The recruited participants were provided with an information sheet in Arabic describing the research and aims, the data processing and protection, and the possibility of interrupting participation without any consequences. Because of potential low literacy levels among both the mothers and the children, the information sheet was read aloud by the fieldworkers, who were native Arabic speakers and were based in Jordan. The informed consent was also explained orally, and fieldworkers input the participants' responses into Qualtrics platform. Physical consent forms were not collected due to COVID public health reasons and to further ensure data protection. Consent was collected from the adults for their participation and their child's participation. The study was also explained verbally to the children, who were then asked to complete the consent if they would like to take part.

The informed consent and information sheet were provided at least seven days before the data collection. On the day of the data collection, the study was explained orally again to ensure participants' understanding.

All the data collected in the FIERCE project are securely stored on Queen Mary University of London's researcher data storage server. The study received ethical approval from the Health Policy and Management / Centre for Global Health Research Ethics Committee of Trinity College Dublin, and the Data Protection Impact Assessment was declated to comply with data protection legislation, specifically the EU General Data Protection Regulation 2016 ('GDPR'), Data Protection Acts 1988-2018 and Health Research Regulations 2018 from Trinity College Dublin.

Data from the mother and the child were collected by four Jordan-based fieldworkers in the participants' homes. All fieldworkers were native Arabic speakers and were trained on all the measures before collecting. Data collection consisted of surveys, behavioural/cognitive tasks, and observational tasks. On average, the data collection lasted 1 hour for each household.

The survey data were collected verbally, in Arabic, using KoBoToolbox offline survey tool. Visual scales were also used to facilitate the participants' understanding of the Likert scales. Behavioural assessments (go/no go task for inhibitory control; face task for attention bias) were conducted through Matlab platform on a laptop. Observational tasks were video-recorded through a mobile phone.

Whenever possible, locally developed measures in Arabic or measures that were previously validated in Arabic were used. Measures developed and validated in English

were translated and back-translated by members of the research team to ensure that all items were understandable and valid in Arabic and were relevant to the local context.

3.5 Measures

To address the research questions of this study, we used the measures described below.

- *Human Insecurity Scale* (Ziadni et al., 2011):

This is a 10-item survey that captures the material, psychological, and social components of insecurity. It assesses the perception of fear and threats to the individual and family's safety, the concern to provide the necessities for the family, the sense of hope, and the fear for the future. Sample questions for the human insecurity scale include the following: "To what extent do you fear for yourself in your daily life?", 'To what extent do you feel worry/fear of not being able to provide your family with daily life necessities?", and "To what extent does your family feel fear for your personal safety?". Each question is rated on a Likert Scale, with responses ranging from 1 (least insecure) to 5 (most insecure). All items were summed to yield the total insecurity score, which can range from 10 to 40, with higher scores indicating more fear and worry for their life and livelihood. Prior studies have translated and validated the scale on Arabic-speaking, displaced and war-affected participants, highlighting good psychometrics properties (Ziadni et al., 2011). In the current research, Cronbach's Alpha for the Human Insecurity scale was .78.

- *Parental Self-Agency Measure (PSAM)* (Dumka et al., 1996):

Through 5 statements, this measure assesses mothers' confidence in their ability to parent their children and deal with parenting challenges. Sample items for the parental self-agency measure include the following: "I feel sure of myself as a mother", "I know things about being a mother that would be helpful to other parents", and "I can solve most problems between my child and me". The 7-point Likert scale ranges from 1 (*rarely*) to 7 (*always*). The total score was calculated by summing all items and can range between 5 and 35, with higher scores indicating that mothers' felt they had more self-efficacy as a parent. A review of parental self-efficacy measures conducted by Purssell and While (2013), reveals good psychometric properties of the PSAM, which was found to be strong for its construct validity and internal consistency. In this study, Cronbach's Alpha was .78.

- Observation of mother-child interaction:

The FIERCE project collected observational video data on mother-child interactions by involving the dyads in two tasks: the "shared book reading" and the "free play". Both tasks took place in participants' homes. At T3, observational data was collected through a puzzle task, to measure child perseverance (grit). Since this data has not been coded yet and will not be included in this study, it will not be discussed.

At the beginning of the reading and play observational tasks, the fieldworker informed the mother-child dyad that the interaction would be videotaped through a camera placed in front of them and instructed them to act as usual. For the free play task, the dyad was given two sets of toys (wooden farm animal toys and wooden coloured

shapes) to play with. For the shared book reading task, the dyad was asked to choose between two children's books. Both books narrate a story that teaches socio-emotional skills. The free play activity lasts a maximum of 5 minutes, while the shared book reading activity lasts 10 minutes. An alarm set by the fieldworker marked the end of the interaction. If the interaction ended before the time limit, the participants could leave the room and inform the fieldworker, who would stop the recording and end the assessment.

To code the videos, the lead researcher had to select an observational scheme that best suited the video data of the FIERCE project. The only two instruments that have been used to code data within refugee populations are the Dyadic Parent-Child Interaction Coding System (DPICS) (Eyberg, 2000), a micro-coding system, and the Emotional Availability Scales (EAS) (Biringen et al., 2008), a macro-coding system. However, the observational data collected in this project did not meet the requirements for either of these instruments. Therefore, by expanding the search to any coding system that addresses the emotional component of the parent-child relationship, the *Short-Form Coding of Attachment-Related Parenting* (S-CARP) was selected (Bennetts et al., 2021).

The S-CARP derives from the *Coding of Attachment-Related Parenting* (CARP): a framework developed to code interactions between parents and children aged 5-to-6-years (Matias et al., 2014). Compared to the CARP, the S-CARP is shorter and has been adapted for children from 7-to-8-years of age. While the CARP measures six domains of parent-child interaction, the S-CARP measures only two domains, namely sensitive responding and positive mutuality. The CARP was validated on a British cohort, while the S-CARP was validated on an Australian cohort (Bennetts et al., 2021).

As the S-CARP aligns better with the characteristics of the sample in the FIERCE project, it has been adapted to these observational data, which presented several challenges.

First, since many of the families involved in the project are conservatively religious, for ethical reasons, only a female could access and observe the unblurred version of the videos. The lead researcher, who is a male, could thus observe the interactions between mothers and children only when the videos were blurred, covering the mother's face and body and leaving the child fully visible. As a consequence, the adjustment of the coding scheme has been a collaborative process involving several female research assistants who would code and discuss the quality and patterns of these interactions. This required an initial training stage, followed by iterative stages of revision and adjustment of the coding scheme and procedure.

Second, since the data collection took place in 2021, when a significant number of COVID-19 cases was registered in Jordan, about half of the sample wore a surgical mask partly covering their face, while about 20% of the sample wore a burqa covering their whole body. Consequently, some of the constructs, such as warmth, which requires, among other aspects, coding the frequency of the smiles, had to be modified.

Third, while the lead researcher speaks Arabic, all of the research assistants coding the videos, except for one, did not understand the language. Therefore, the coding scheme had to be adapted by removing the need to rely on the verbal aspect of the interaction.

In addition to these necessary changes, the lead researcher introduced a third domain of parent-child interaction, namely disruptive responsiveness, and modified the structure of the S-CARP coding scheme to reduce the subjectivity of the coding process and the potential inference of the observers' biases. For instance, when coding the interaction, instead of providing only a categorical rating for the presence or absence of a certain construct ("yes" vs "no"), the research assistant would also report how frequently a certain construct was observed, or not observed, throughout the video ("*most of the time", "about half of the time", "rarely"*), and the exact timestamp of the first observation.

Thus, observations were coded via the adapted version of the S-CARP, which assessed three domains of parent-child interaction: *Sensitive Responding, Positive Mutuality,* and *Disruptive Responsiveness.* Following the S-CARP coding scheme, these domains were operationalised into several sub-domains, as explained in the subsequent paragraphs.

Sensitive Responding focuses on the mother's behaviours in interaction with her child. It captures the mother's awareness of the child's needs and interests and whether she adjusts the interaction accordingly. To code the videotaped interactions, this domain is measured through a series of sub-domains: mother's responsive engagement; promotion of child's autonomous behaviour; guidance of the child during the activity; nonverbal expression of warmth; mother's displayed mood.

Positive Mutuality focuses on the mutual reciprocation of nonverbal behaviour during the dyadic interaction. To code the videotaped interactions, this domain is

measured through the following sub-domains: child's level of involvement of the parent in the activity; mother and child shared attention on the same activity and attention to each other's nonverbal behaviour; the number of shared eye contact; matched displays of positive affect; child's level of distraction; the fluidity of the conversation, distinguished as cold, warm or tense; turn taking during the conversation; shared body orientation.

Disruptive Responsiveness focuses on the mother's hostile behaviours in interaction with her child. To code the videotaped interactions, this domain is measured through two sub-domains: contradictory signs in the mother's behaviour (in her actions and emotional states) and forceful communication.

The coders rated whether each of these sub-domains were *present, absent*, or if it could not be scored due to reasons that must be specified ("*undetermined*" option) or due to the lack of opportunity to display the related behaviours during the interaction ("*no opportunity"* option). Additionally, the coders reported the first instance when the sub-domain is observed and how frequently it was observed throughout the video (*"rarely", "about half of the time", "most of the time").* Therefore, the presence or absence of the sub-domains and their frequency throughout the video informed the global assessment of *Sensitive Responding, Positive Mutuality*, and *Disruptive Responsiveness* in the videotaped mother-child interactions. Precisely, based on the frequencies, for each sub-domain scores could range from 1 (*rarely*) to 3 (*most of the time*). The scores were summed to yield the total score for each domain, which, for Sensitive Responding could range from 0 to 9, for Positive Mutuality from 0 to 12, and for Disruptive Responsiveness from 0 to 6. Percent agreement was calculated between coders to measure inter-rater

reliability (IRR). Coders' agreement for Sensitive Responding was 39%, for Positive Mutuality was 47%, and for Disruptive Responsiveness was 60%. When IRR was calculated by including minimum disagreement (1-point difference) between coders, the agreement score for Sensitive Responding was 76%, for Positive Mutuality was 78%, and for Disruptive Responsiveness was 92%.

- *Holistic Assessment of Learning and Development Outcomes* (HALDO), *Socio-Emotional Learning Measure* (D'Sa et al., 2019):

This assessment tool was designed to capture the learning process of 4-to-12-year-old children in humanitarian crisis contexts. It has previously been validated on Syrian refugee populations in Lebanon (Krupar, 2019). However, since it has been translated into Lebanese Arabic and some terms were found to differ from the Arabic spoken by Jordanians and Syrians, some minor linguistic adjustments were made to fit the local context.

The social-emotional scale includes two sub-domains: *self-concept* (11 items), and *empathy* (5 items).

Sample questions for the self-concept assessment include the following: "Please tell me the name of the village that you are living in", "Please tell me the name of one person who takes care of you at home", and "Please tell me one thing you hope/wish will happen in your life in the future".

Empathy is assessed through two tasks. First, the child is shown a picture card of a girl crying and is asked to name the emotions experienced by the girl in the picture ("How does the child feel") and possible actions that could improve the girl's emotional

state ("What would you do to help her feel better?"). Second, the child is told a story about the girl and is asked to name the feelings of the other characters involved in the story ("How do you think the other child felt after the girl started crying?").

The assessment follows a linear progression: the child is presented with a moderate skill level task, and depending on the ability of the child to solve the task, the question that follows assesses either a higher or a lower level skill. When the child demonstrates the assessed skill, the responses are marked 1 (*correct response*), 0 (*incorrect response*), or 999 (*refused/skipped*). The scores were summed to yield the total score, which ranges from 0 to 16, with higher scores indicating higher levels of socio-emotional competence. Interrater reliability was performed using the interclass correlation coefficients (ICC). Interrater reliability for the empathy component was .97, while for the self-concept component was .98. The HALDO scale was developed and piloted in Uganda with 4-12 years old children living in refugee resettlements (D'Sa et al., 2019), and it has been administered to refugee children in Lebanon (Krupar, 2019) indicating good psychometrics properties.

Following the HALDO scale, which sums the two components' scores to determine child social-emotional competence, we used the composite score to address the research questions in this study.

- *Household wealth Index* (Panter-Brick et al., 2009; 2018):

The household wealth index measures relative poverty by asking mothers which among the 12 listed items (*yes/no*) are present in their house. Precisely, participants report that their households have the following items: TV, satellite, smartphone, car,

refrigerator, computer, oven with gas, bedframe (not only a mattress), washing machine, heater, fan, and water heater. The total score is calculated by summing all items and can range from 0 to 12, with higher scores indicating greater relative wealth. This measure was used and validated by Panter-Brick and colleagues (2018) on a cohort of Syrian refugees in Jordan.

3.6 Analytic plan

The analytic plan was pre-registered on the Open Science Framework (OSF) page of the FIERCE project [2]. Data were analysed using IBM® SPSS® Statistics software.

In preliminary analyses, the total scores for all variables were computed using listwise deletion. Therefore, if any value was missing from a given measure, the total score for that measure was a system missing value. From the survey and assessment measures, 25% of data were missing. Since this study used secondary data from the FIERCE project, a post-hoc power analysis was conducted.

Next, we computed descriptive statistics and bivariate correlations between the study variables.

The following control variables were included: child gender, child age, maternal age, their living location (Amman or Za'atari), household wealth, household size, and the mother's employment status (employed v. not employed). In fact, in previous research, the magnitude of the associations between parenting behaviour and social-emotional competence was found to differ based on the child's gender (Zhu et al., (2018). Maternal

[2] Retrievable at: https://osf.io/e4r3s

employment and relative poverty were found to be related to feelings of insecurity (Ziadni et al., 2011), and together with household size, they inform on parental time investment and mothers' levels of stress (Bjørneseth et al. 2019), which are known to be related to child social-emotional competence (Moroni et al., 2019).

To answer the first research question of whether maternal insecurity was associated with child social-emotional competence, we ran a regression analysis with the control variables described above.

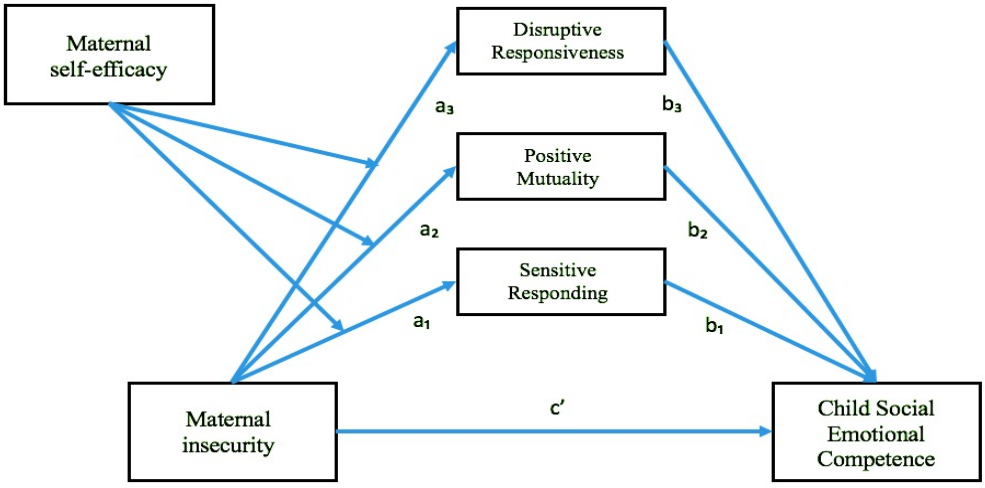
Then, to assess the level of congruency of mother-child interaction across the two types of activities captured in the videos (the shared book reading activity and the free play activity), we ran a correlation analysis prior to the regression analyses. Since .60 is considered a moderate-to-strong correlation, we established a cutoff score of $r = .60$; meaning that if the correlations between the mother-child interaction displayed in the free play and book reading tasks were .60 or greater, the data from the two activities would be averaged, and if the correlations were less than .60, separate analyses would be run for the shared book reading activity data and the free play activity data.

To address the second research question, a simple mediation analysis was conducted. The PROCESS macro model 4 on the IBM SPSS Statistics software (Hayes, 2012) was used to test this mediation. Maternal insecurity was the independent variable; sensitive responding, positive mutuality, and disruptive responsiveness were the three mediating variables; child social-emotional competence was the dependent variable.

Finally, a moderated multiple mediation analysis was conducted using Hayes' PROCESS Macro 7 (Hayes, 2012) to examine whether parenting self-efficacy moderated

the relationship between mothers' insecurity and mother-child interaction quality. A graphical representation of the hypothesised model is provided in Figure 3.

Figure 3. *Moderated mediation model*



CHAPTER 4
RESULTS

4.1 Descriptive statistics

This chapter presents the results of statistical analyses. Descriptive statistics and Pearson's correlations between study variables are reported in Table 2.

Table 2. *Correlations and descriptive statistics for study variables*

	1.	2.	3.	4.	5.	6.	7.	8.	9.
1. Maternal insecurity	-								
2. Socio-emotional competence	-.004	-							
3. Maternal self-efficacy	.08	-.01	-						
4. Sensitive responding - play	.02	.16	-.05	-					
5. Mutual positivity - play	-.17	.04	.04	.51**	-				
6. Disruptive responsiveness - play	-.14	-.24*	.03	-.12	-.08	-			
7. Sensitive responding - reading	.08	-.16	-.04	.36*	.33	-.41*	-		
8. Mutual positivity – reading	.17	-.18	-.09	.07	.39*	-.18	.49**	-	
9. Disruptive responsiveness – reading	.13	-.41**	-.06	.02	-.16	-.07	.18	.08	-
M *(SD)*	34.34 (4.95)	8.46 (3.45)	30.70 (4.19)	7.53 (1.39)	6.84 (1.37)	.80 (.823)	7.70 (1.29)	6.55 (1.55)	.77 (.78)

Note. $N = 327$. * $p < .05$; ** $p <. 01$.

4.2 Maternal insecurity and child social-emotional competence

A simple linear regression analysis was conducted to assess whether maternal insecurity was associated with child social and emotional competence. Since this analysis did not involve any observational measure, data from all participants in the FIERCE database who completed these measures were included (n = 249). The control variables included in the model were child gender, mother and child age, geographical location, household size, household wealth, and employment.

The model reached significance, meaning that it predicted child social-emotional competence ($F(8,240) = 5.23$, $p < .05$). The model explained 15% of the variance in child social-emotional competence scores. However, child social-emotional competence was not predicted by maternal insecurity ($\beta = .004$, $t = .06$, $p = .90$). Results are presented in Table 3.

Table 3. *Regression coefficients of maternal insecurity on social-emotional competence*

Variable	*B*	*SE*	*β*	*t*
Constant	1.97	2.50		.79
Maternal Insecurity	.003	.04	.004	.06
Child gender	.17	.42	.02	.40
Child age	1.00	.17	.36	5.80
Mother age	.04	.03	.07	1.13
Location	.11	.23	.03	.48
Household wealth	.05	.12	.03	.47
Household size	-.23	.10	-.14	-2.23
Employment status	-.21	.63	-.02	-.34
R^2	.15			

Note. N = 249.

4.3 Correlations between observational tasks

Correlation analyses between the reading and play activity were run to see how these two observational activities correlated with the mediating variables of sensitive responding, positive mutuality, and disruptive responsiveness. Because some of the data were not normally distributed, Spearman's correlation test was used. The analyses revealed a weak-to-moderate correlation between the reading and play activity for sensitive responding (r_s = .36, p = .04), and a moderate correlation for positive mutuality (r_s = .49, p = .004). In contrast, no correlation was found between the two observational tasks for disruptive responsiveness (r_s = -.04, p = .83). Table 4 shows the correlation coefficients.

Thus, none of these correlations met the previously established threshold of .60. As a consequence, the mediation and moderation analyses were run separately for the reading activity and the play activity groups.

Table 4. *Correlations between observational tasks and mediating variables*

	1	2	3	4	5	6
1. Sensitive Responding, R	-					
2. Sensitive Responding, P	.36*	-				
3. Positive Mutuality, R	.52***	.12	-			
4. Positive mutuality, P	.33	.48***	.49**	-		
5. Disruptive responding, R	.16	.10	.09	-.08	-	
6. Disruptive responding, P	-.42*	-.10	-.17	-.11	-.04	-

Note. play task n = 86; reading task n = 33; P: play activity; R: reading activity
* $p < .05$; ** $p < .01$; *** $p < .001$.

In presenting the results, the term "play-data" will be used to refer to the group for which the observational data on the play activity was coded, while the group for which the observational data on the reading activity was coded will be denominated "reading-data".

4.4 Mediation: quality of mother-child interaction

For the second research question, we examined whether maternal insecurity was associated with child social and emotional competence through the pathway of mother-child interaction quality. To test this mediation, a series of regression analyses were carried out separately for the play-data group and the reading-data group.

Results of the play-data group (n = 64) (see Table 5; Figure 4) showed that the indirect effects of maternal insecurity on child social-emotional competence through the pathways of mother-child interaction quality were not significant: sensitive responding (b < .001, 95% CI [-.06, .05]), positive mutuality (b < .001, 95% CI [-.04, .07]), disruptive responsiveness (b = .01, 95% CI [-.05, .05]). The direct effect of maternal insecurity on child social-emotional competence was also not significant (b = -.08, 95% CI [-.28, .13]).

A significant association was found between the independent and control variables together and positive mutuality. However, the association between maternal insecurity and positive mutuality was not significant (b = -.06, p = .11), instead, the associations between child gender and positive mutuality (b = .84, p = .01) and mother's employment status and positive mutuality (b = .83, p = .05) were significant. In other words, higher levels of positive mutuality were found between mothers and daughters and when mothers were employed.

Table 5. *Mediation analyses with play-data*

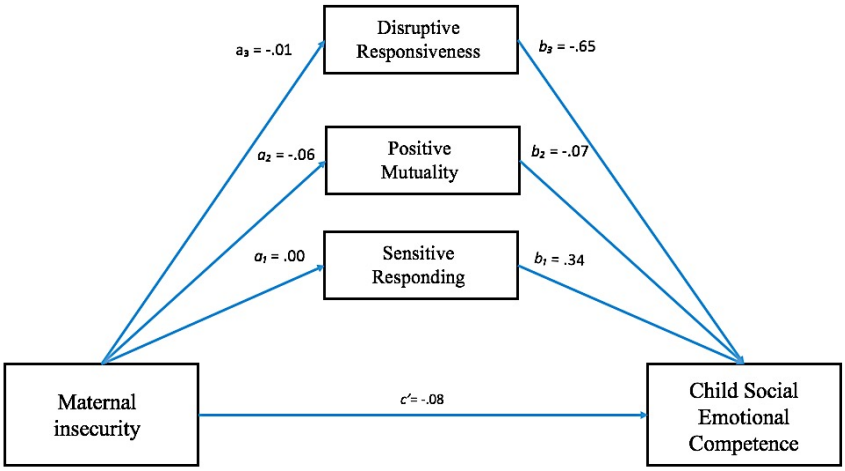
Independent variable		M_1 (Sensitive responding)			M_2 (Positive mutuality)			M_3 (Disruptive responsiveness)		
		β	***SE***	***p***	***β***	***SE***	***p***	***β***	***SE***	***p***
X (Maternal Insecurity)	*a*	.00	.04	.91	-.06	.04	.11	-.01	.03	.74
Child age		.15	.15	.34	.15	.13	.25	-.12	.09	.16
Child gender		.53	.38	.17	.84	.33	.01*	-.01	.22	.95
Mother age		.00	.03	.87	-.01	.03	.79	-.02	.02	.29
Location		-.34	.20	.10	-.24	.18	.19	-.01	12	.91
Household size		-.02	.10	.88	-.12	.09	.18	-.03	.06	.55
Household wealth		-.01	.12	.94	.05	.10	.60	.00	.07	.96
Employment		.60	.47	.21	.83	.42	.05*	-.23	.27	.40
		R^2 = .11			R^2 = .24			R^2 = .12		

Independent variable		***Y*** (Child social emotional competence)		
		β	***SE***	***p***
X (Maternal Insecurity)	*c'*	-.08	.10	.46
M_1 (Sensitive responding)	b_1	.34	.35	.34
M_2 (Positive Mutuality)	b_2	-.07	.40	.86
M_3 (Disruptive responsiveness)	b_3	-.65	.53	.23
Child age		.78	.35	.03*
Child gender		.02	.89	.98
Mother age		.05	.07	.46
Location		.21	.47	.65
Household size		-.37	.22	.10
Household wealth		-.10	.26	.70
Employment		-.40	1.10	.72
			R^2 = .24	

Indirect Effects:			95% CI	
Pathways	**Effect**	***SE***	**LLCI**	**ULCI**
MI → SR → SEC	.00	.03	-.06	.05
MI → PM → SEC	.00	.03	-.04	.07
MI → DR → SEC	.01	.02	-.05	.05

Note. n = 64; M = mediator; MI = maternal insecurity; SEC = socio-emotional competence; SR = sensitive responding; PM = positive mutuality; DR = disruptive responsiveness; * $p < .05$.

Figure 4. *Mediation diagram with play-data*



The same analyses were carried out for the reading-data group (n = 67). Results (Table 6; Figure 5) indicated that the indirect effects of maternal insecurity on child social-emotional competence through the pathway of mother-child interaction quality were non-significant: sensitive responding (b = .01, 95% CI [-.03, .07]), positive mutuality (b =-.03, 95% CI [-.11, .02]), disruptive responsiveness (b = -.04, 95% CI [-.11, .01]). The direct effect of maternal insecurity on child social-emotional competence was also not significant (b < .001, 95% CI [-.16, .17]).

The association between the predictor variables and child social-emotional competence was significant. However, disruptive responsiveness was the only mediator that was found to be significant (b = -1.50, p = .01), while the other significant variables were controls, namely household size (b = .55, p = .02) and child age (b = 1.13, p < .001). In other words, higher levels of parental disruptive responsiveness were linked to lower child social-emotional competence, and older children and children in larger households showed greater social-emotional competence.

Table 6. *Mediation analyses with reading-data*

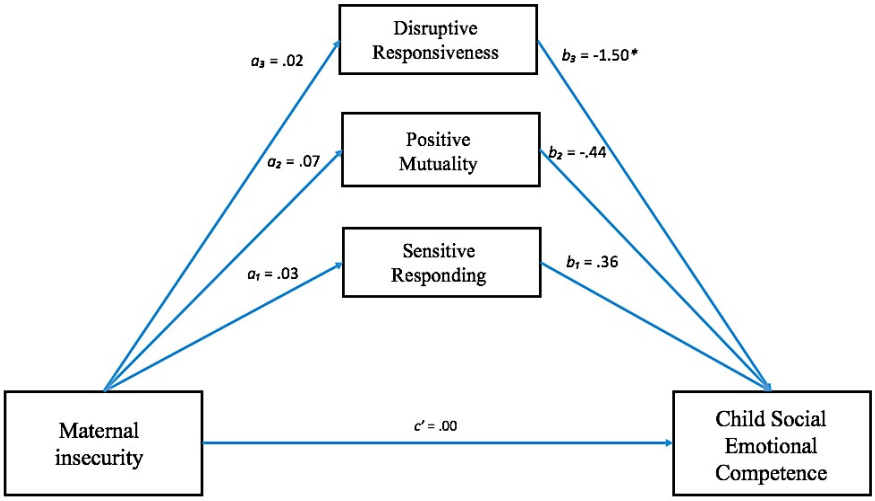
Independent variable		M_1 (Sensitive responding)			M_2 (Positive mutuality)			M_3 (Disruptive responsiveness)		
		β	***SE***	***p***	***β***	***SE***	***p***	***β***	***SE***	***p***
X (Maternal Insecurity)	*a*	.03	.03	.42	.07	.04	.07	.02	.02	.18
Child age		-.09	.13	.52	-.08	.16	.62	-.29	.07	.00*
Child gender		.10	.33	.76	.30	.39	.45	-.21	.18	.24
Mother age		.02	.03	.89	.02	.03	.51	.02	.01	.13
Location		-.41	.17	.02*	.21	.20	.30	-.14	.09	.15
Household size		.04	.07	.56	-.03	.08	.76	-.08	.04	.05*
Household wealth		-.05	.10	.59	.07	.11	.56	-.05	.05	.32
Employment		.19	.44	.66	-.41	.52	.43	-.47	.24	.05*
		R^2 = .14			R^2 = .10			R^2 = .35		

Independent variable		***Y*** (Child social emotional competence)		
		β	***SE***	***p***
X (Maternal Insecurity)	*c'*	.00	.08	.96
M_1 (Sensitive responding)	b_1	.36	.39	.36
M_2 (Positive Mutuality)	b_2	-.44	.33	.18
M_3 (Disruptive responsiveness)	b_3	-1.50	.59	.01*
Child age		1.13	.35	.00*
Child gender		-.65	.80	.42
Mother age		.03	.07	.68
Location		.81	.46	.08
Household size		.55	.23	.02*
Household wealth		-.21	.18	.24
Employment		-1.01	1.09	.36
		R^2 = .45		

Indirect effect			95% CI	
Pathways	**Effect**	***SE***	**LLCI**	**ULCI**
MI → SR →SEC	.01	.04	-.03	.07
MI → PM →SEC	-.03	.03	-.11	.02
MI → DR → SEC	-.04	.03	-.11	.01

Note. n = 67; M = mediator; MI = maternal insecurity; SEC = socio-emotional competence; SR = sensitive responding; PM = positive mutuality; DR = disruptive responsiveness; * $p < .05$.

Figure 5. *Mediation diagram with reading-data*



To test whether the control variables influenced the results, the same analyses were run without any control variable. The results were similar to the previous analyses. In the play-data group, indirect effects remained non-significant: sensitive responding (b < .001, 95% CI [-.06, .06]), positive mutuality (b = .01, 95% CI [-.05, .06]), disruptive responsiveness (b = .01, 95% CI [-.03, .06]).

Similarly, the indirect effects remained non significant in the reading-data group without the control variables: sensitive responding (b < .001, 95% CI [-.06, .04]), positive mutuality (b = -.02, 95% CI [-.10, .03]), disruptive responsiveness (b = -.04, 95% CI [-.12, .01]). Only the association between disruptive responsiveness and child social-emotional competence remained significant (b = -.1.84, p < .001)

4.5 Moderated mediation: maternal parenting self-efficacy

To investigate whether maternal parenting self-efficacy moderated the relationship between mothers' insecurity and quality of mother-child interactions, a moderated mediation model was tested using the PROCESS macro model 7 (Hayes, 2012).

For the play-data group (n = 63), maternal self-efficacy did not significantly moderate the relationship between maternal insecurity and the three mediating variables: sensitive responding (b < .001, 95% CI [-.02, .02]), positive mutuality (b < .001, 95% CI [-.01, .01]), disruptive responsiveness (b < .001, 95% CI [-.02, .01]).

Similarly, in the reading-data group (n = 62), the moderating effects of maternal self-efficacy were not significant: sensitive responding (b < .001, 95% CI [-.01, .01]), positive mutuality (b < .001, 95% CI [-.02, .01]), disruptive responsiveness (b < .001, 95% CI [-.01, .01]). Table 7 shows the results of the moderation analyses as a function of observational tasks.

Table 7. *Moderation analysis: maternal self-efficacy*

				95% CI	
		Index	*SE*	*LLCI*	*ULCI*
Play-data group	Sensitive responding	.00	.01	-.02	.02
	Positive mutuality	.00	.01	-.01	.01
	Disruptive responsiveness	.00	.01	-.02	.01
Reading-data group	Sensitive responding	.00	.00	-.01	.01
	Positive mutuality	.00	.01	-.02	.01
	Disruptive responsiveness	.00	.01	-.01	.01

Note. Play-data group: n = 63; Reading-data group: n = 62;
LLCI = lower limit confidence interval; ULCI = upper limit confidence interval.

4.5 Post-hoc power analysis

Finally, a post-hoc power analysis was conducted using GPower (Faul & Erdfelder, 1992). Given a sample size of 65 dyads, nine predicting variables, and a threshold of statistical significance from .05, for the main effects of the moderated mediation (final model), this study has a .09 power to detect a small effect, .48 power to detect a medium effect, and .89 power to detect a large effect.

CHAPTER 5
DISCUSSION AND CONCLUSION

This study is part of the FIERCE project, which aims to evaluate the effect of a shared book reading intervention among Syrian refugee mothers and their 4-8-year old children in Jordan. Specifically, secondary data from the FIERCE database were analysed to investigate the relationship between maternal insecurity and child social-emotional competence through the pathway of mother-child interaction quality. This research also explored whether maternal self-efficacy moderated the relationship between maternal insecurity and the quality of mother-child interaction.

To address the research questions of this study, self-reported, direct assessment, and observational data were analysed in a sample of 169 Syrian refugee mothers and their 4-8-year old children in Jordan.

5.1 Study findings

5.1.1 R.Q. 1: Maternal insecurity and child social-emotional competence

The first research question asked whether mothers' feelings of insecurity were associated with their children's social and emotional skills. Since the literature suggests that the parenting environment is a primary predictor of social-emotional competence in children (Kim & Kim, 2017; Nguyen et al., 2020), it was expected that maternal feelings of insecurity would be associated with lower empathy and self-concept in children. However, the results revealed that maternal insecurity was not associated with these aspects of child social-emotional competence.

The effect of maternal insecurity on child empathy and self-concept among refugees has not been investigated before, and few studies in the literature have addressed similar variables in low income countries. Findings of these studies are in contrast with our results. For instance, in rural families in China, Zhang and colleagues (2020) found support for the association between maternal distress related to economic hardship and child emotional distress and self-concept. Similarly, in a sample of mothers and their 3-year-old children in Kenya, Watts and colleagues (2018) have found that maternal distress was associated with lower child social-emotional competence, assessed through the Bayley Scales of Infant and Toddler Development (Bayley et al., 2006). However, Putnick and colleagues (2008), in line with our results, did not find support for the direct relationship between parenting stress and child socio-emotional outcomes but rather as mediated by parental behaviour. The mixed findings and the limited literature suggest that the direct association between the psycho-emotional wellbeing of mothers and child social-emotional outcomes is worth further exploration.

It is important to note that these previous studies have addressed the construct of social-emotional competence from a different angle. Child social-emotional competence is multidimensional, and in the literature, a wide variety of sub-skills are categorised under this term. These sub-skills, although interrelated, involve different characteristics and learning mechanisms. In this study, two specific dimensions were analysed: empathy and self-concept. While no effects were found for these two skills combined, it is possible that different results would be observed if other components of child social-emotional competence were analysed.

An alternative explanation for the lack of association between maternal insecurity and the levels of empathy in the child can be traced from the literature on emotion recognition of children growing up in high-risk environments (e.g., Quas et al., 2017). Theoretically, children learn to recognise the emotions that are most salient for their daily lives and that are exposed to the most (Thompson, 2001). It is possible that Syrian children in this sample, who were exposed to their mothers' fear and worry more often, may be better at recognising such emotions, and this in turn increased their tendency to respond with empathy to these emotions. Eventually, this may suggest that in high-risk contexts, fear learning may increase children's social-emotional competence in accordance with the quality of the environment. If support for this alternative hypothesis were to be found, it would highlight the influential role of the socio-cultural context on social-emotional development, confirming the importance of contextualising this construct.

Other alternative explanations are discussed in the following paragraphs.

5.1.2 R.Q. 2: Mediated path: quality of mother-child interaction

The second research question examined whether the quality of mother-child interaction mediated the relationship between maternal insecurity and child social and emotional skills. It was hypothesised that maternal insecurity would be associated with poorer quality of mother-child interaction, and that would, in turn, be associated with poorer child social-emotional competence. However, the analyses did not confirm the expected associations. Precisely, neither in the play activity nor in the reading activity was maternal

insecurity related to the mediating variables, which were in turn not related to child social-emotional competence.

Little is known about the concept of human insecurity among refugee parents and children. We selected this construct to assess the indirect effect of secondary stressors on parenting and child outcomes. The pattern observed in our results is that maternal insecurity does not affect mother-child interaction quality and child socio-emotional outcomes.

Since no prior research addressed the topic examined in this study, the results are discussed in light of the findings of studies focusing on maternal mental health (e.g., Byrant et al., 2018; Gershoff et al., 2007; Sim et al., 2018). Relating our results to the findings of these studies, it appears that maternal insecurity does not affect mother-child interaction quality and child outcomes in the same way, or with the same strength, as maternal mental health.

For instance, Byrant et al. (2018) found evidence for the association between parents' post-traumatic stress disorder and harsh parenting styles among refugee populations which, in turn, predicted worse emotional well-being in children, among other outcomes. Sim and colleagues (2018) reported that Syrian refugee parents in Lebanon who experienced economic hardship and psychological distress and felt insecure in the community, adopted harsher parenting practices and had less positive interactions with their children, which are known to negatively impact children's socio-emotional development (Berthelon et al., 2020; Berzenski & Yates, 2013). Relatedly, Gershoff and colleagues (2007) found evidence for the mediated relationship between psychosocial

stressors (family income and material hardship) and child social-emotional competence through the pathway of parental stress, parental behaviours, and time investment, in a sample of parents and their 6-year-old children in the United States.

As mentioned above, the difference in the results may, in part, be driven by the fact that this study focused only on the effects of mother's feelings of insecurity, while the vast majority of studies investigating the effects of displacement on parenting (e.g. Byrant et al., 2018; El-Khani et al.,, 2016; Scharpf et al., 2021; van Ee et al., 2012) included a wider range of measures related to maternal mental health.

While the findings by Gershoff and colleagues (2007) are in line with a substantial body of research, there are some studies (e.g., Kiang et al., 2004; Liew et al., 2004) focusing specifically on children's empathy that found weaker support for the association between parent-child relationship and children's emotional competence. According to Moreno and colleagues (2008), this may be explained by the cognitive and social resources of the child, which in their study were found to mediate the relationship between the mother's sensitivity and child's empathy. Overall, findings from these studies suggest that parental behaviour is only one predictor of child socio-emotional competence, and that the relationship between these factors may be more complex than predicted in this study.

Some pathways in the model were statistically significant. In the play activity, the overall association between the control and independent variables together and positive mutuality was significant. However, this was not explained by maternal insecurity, which was non-significant, but by some of the control variables. Specifically,

the gender of the child was associated with positive mutuality, indicating that the interactions between mothers and daughters were characterised by greater positive mutuality than the interactions between mothers and sons, and mothers' employment, which indicates that working mothers had more positive interactions with their children than non-working mothers.

In the reading activity, the association between the predicting variables and child social-emotional competence was significant, indicating that maternal insecurity together with the mediating and control variables predicted child social-emotional competence. However, among the mediators, only disruptive responsiveness was negatively associated with child social-emotional competence. Among the control variables, as expected, child social-emotional competence was positively associated with child age and household size, indicating that older children and those living in larger households have better social-emotional competence than younger children living in smaller households. This suggests that within the household, other figures, such as siblings, may contribute to children's self-concept and empathy (Saini et al., 2019; Schmidt et al., 2002; Spilt et al., 2014).

Although not predicted by maternal insecurity, the significant association between disruptive responsiveness and child social-emotional competence is in line with the findings that non-contingent and brusque parental response to children's inputs reduce empathic responses among children (Anthony et al., 2005; Smith et al., 2001), and hinder the construction of a positive self-concept (Banham et al., 2000). However, since the overall model of this interaction was not statistically significant, and the association

between sensitive responding and child social-emotional competence was also not significant, no conclusion on the matter can be drawn from this study specifically.

5.1.3 R.Q. 3: Moderated path: parenting self-efficacy

The third question asked whether parenting self-efficacy moderated the relationship between mothers' insecurity and quality of mother-child interaction. Low maternal self-efficacy was expected to strengthen the relationship between mothers' insecurity and the quality of mother-child interactions. However, this was not confirmed by the results of this study, neither in the reading activity nor the play activity.

The rationale for our hypothesis lies in the findings of previous studies (Ali, 2008; Boruszak-Kiziukiewicz & Kmita, 2020), which indicate that following displacement, many parents lack a sense of self-efficacy, and in general populations, this was found to reduce the quality of parenting practices and impair parental psychological functioning (Jones & Prinz, 2005). Some studies also indicate that parental self-efficacy relates to child outcomes, including socio-emotional competence, both directly and indirectly, by increasing parental warmth, engagement, and competent parenting practices (Coleman & Karraker, 2003; Coyle et al., 2021; Eltanamly et al., 2022; Jones & Prinz, 2005).

Overall, the question addressed in the present study differs from these previous studies since it did not focus on parental self-efficacy as an antecedent but as a moderator of the relationship between parent measures and quality of parent-child interaction. Most studies approached this construct as a mediator, while fewer addressed parental self-efficacy as a moderator (Jones & Prinz, 2005). Therefore, more research is needed to

enlighten the effects of self-efficacy on parent functioning and parent-child interaction as a moderator.

5.2 Alternative explanations

In a recent review, Arakelyan and Ager (2021) proposed that parents are commonly aware of the adverse effects of displacement stressors and harsher parenting practices on child development and well-being, and that they adopt some strategies to amend these effects. For instance, Dalgaard and Montgomery (2017), who interviewed refugee parents with post-traumatic stress disorder, reported that to protect their children, some parents withdrew from their family when they felt unwell, or tried to engage their children in social activities. In a similar vein, Sim and colleagues (2018) reported that Syrian parents, despite their concerns and insecure conditions, attempted to meet the material and emotional needs of their children by neglecting their own needs, by denying their struggles in front of their children, or by using positive parenting practices, such as play, praise, and rewards. These findings propose an alternative hypothesis: in some parents, the perception of insecurity may promote positive and caring parenting practices, which may, in turn, improve children's social-emotional competence.

Moreover, resources such as social connection (Tobin et al., 2021), good marital relationships (Sim et al., 2018), and religious coping (El-Khani et al., 2017) may allow parents to share their concerns and receive emotional support, which allows them to better adapt to the post-displacement stressors and to avoid projecting their feelings of insecurity on the relationship with their children.

Therefore, although some mothers lack a sense of safety, these feelings may not affect child social-emotional outcomes for three possible reasons. First, mothers may put on a 'brave front' for their children, making them less conscious of the stressors in their environment. Second, mothers likely use resources and coping mechanisms that prevent them from reversing their emotions onto the relationship with their children. Finally, it is possible that feelings of insecurity constitute a driver for greater parental care and warmth.

Additionally, it is important also to note that the present study focused solely on mothers. However, Hein and colleagues (2020) have found that mothers' perception of paternal involvement reduced mothers' distress and improved the synchrony and positive affect between mothers and children. Therefore, it is possible that the presence of the father may have influenced the effect of maternal insecurity on child social-emotional development, either by directly contributing to the development of empathy and self-concept, or indirectly by improving the mother-child relationship despite the high level of maternal insecurity.

Finally, a growing body of research highlights the role of culture in shaping children's social-emotional competence. Culture influences children's socio-emotional competence by shaping the emotional quality of the relationship between parents and children and through the opportunities society provides for expressing and learning certain emotional skills (Savina & Wan, 2017). Zhu (2019) suggests that when the society offers more opportunities for practice, parents may have less of an effect on children's social-emotional competence. However, little can be found in the literature on how and

how much, in Arab cultures specifically, empathy and self-concept are shaped by the socio-cultural context and how they are transmitted through the parent-child relationship.

Therefore, it is reasonable to consider that other than the quality of mother-child interactions and mothers' emotional state, the socio-cultural context, the process of forced migration, and other external systems have had substantial effects on children's levels of empathy and self-concept.

5.3 Limitations

This study has some limitations that need to be considered when interpreting the results.

First, the initial sample of this study involved 169 dyads. For about half of these dyads, observational data for the play-activity had been coded, while for the other half, data for the reading-activity were available. Since a weak correlation was found between these two observational tasks across the three mediating variables, the observational data could not be combined, and separate analyses were carried out for the play-data group and the reading-data group. Therefore, following list-wise deletion, the final sample constituted about 65 dyads for each observational task. A post-hoc power analysis revealed that for the main effects of the moderated mediation, the current study has the power to detect only large effects. This is a major limitation of this study. Therefore, these analyses will be replicated with a larger sample once all the observational data in the FIERCE database is coded.

Second, this study included observational data. Observational studies have the advantage of directly capturing the phenomenon in analysis instead of relying on the

indirect collection of data, such as surveys. However, according to some scholars, the standard of evidence of observational studies is lower than experimental studies due to the reduced control over confounding factors (Hess & Abd-Elsayed, 2019). Another common concern is whether the observational data reflect the typical behaviour of participants or whether the participants are influenced by the presence of the observer or recording equipment (Gardner, 2000). When it comes to refugee populations, it is possible that parents become more concerned and self-aware of their behaviour and try to conceal or control any harsh reaction. Additionally, since the tasks lasted a maximum of 15 minutes in total, it is possible that the recorded interaction was too short to capture the natural behaviour of mothers and children. Relatedly, the cross-cultural validity of these observational tasks among Arabic families has not been previously explored. It is possible that the types of observational tasks used in this study are not representative of the natural relationship between mothers and children in this culture and that, therefore, these measures are less apt to capture the quality of their interaction.

Finally, this was the first study that analysed data in refugee populations coded with the adapted version of the S-CARP scheme, and it is possible that future analyses will reveal that some ameliorations are needed to best approach the observational data in the FIERCE database.

5.4 Implications for future research

The main finding of this study indicates that maternal insecurity does not affect the quality of mother-child interaction and children's empathy and self-concept in a sample of Syrian

refugees in Jordan. However, since the vast majority of refugees feel insecure about their living conditions and safety in the post-displacement stage, with repercussions on their well-being (Alfadhli & Drury, 2018; Loescher, 2002; Miller & Rasmussen, 2017; Peconga & Høgh Thøgersen, 2020), it is important that future studies and interventions continue to shed light on this construct.

In particular, given the numerous stressors that refugee parents are confronted with (El-Khani et al., 2017; Sim et al., 2018), the effect of human insecurity on parenting practices and on child outcomes should be further explored. To better understand this construct and its effects, it would also be useful to investigate whether any link and parallelism exist between feelings of insecurity and other mental health conditions.

Overall, more studies are needed on social-emotional competence among refugee children, especially since social-emotional competence has the potential to act as a buffer against the risk factors in the post-displacement environment (Emerson et al., 2022). This study focused on socio-emotional competence as measured by empathy and self-concept. However, the two components were not distinguished in our analyses. Possibly, different results would be found when assessing these constructs separately. Future studies could also explore the effects of maternal insecurity and parenting on other dimensions of child socio-emotional competence. It would also be useful to investigate what other predictors, both internal to the child (e.g. cognitive, social resources), and external, influence child social-emotional skills (Moreno et al., 2008).

Relatedly, Moon (2002) found that children whose mothers felt more confident about their parenting abilities had higher social-emotional competence. Since the causal

mechanisms of this direct relationship between parent self-efficacy and child social-emotional competence are still unclear (Coyle et al., 2021), future research should explore this association and the role of parental self-efficacy more in-depth.

A growing body of research shows that armed conflict and forced migration affect children primarily through post-displacement stressors and family factors (Miller & Rasmussen, 2017). Therefore, following the ecological perspective, this study advocates for more interventions that take a family-integrated approach instead of individual-centred interventions (Timshel et al., 2017). In this regard, interventions and structural changes that alleviate parental feelings of insecurity seem crucial, since it was found that parents who are overwhelmed with fear are less likely to engage in programs that would teach them useful skills and support their sense of confidence in their parental capabilities (Havighurst & Kehoe, 2017; Maliken & Fainsilber Katz, 2013). Finally, awareness should be spread among both refugee families and social workers on the fact that changes in parenting behaviours and parent-child interactions should not be condemned, but should be understood as a normal reaction to an abnormal situation.

5.5 Conclusion

Many Syrian refugees in Jordan live in a state of fear and insecurity (Wells et al., 2018). A growing body of research shows that the toxicity of post-displacement stressors can equal or exceed the impact of direct war exposure on mental health (Miller & Jordans, 2016). For children, the adversity of these stressors is mediated by parental and family functioning (Miller & Rasmussen, 2017). However, very few studies have explored and

addressed the construct of human insecurity among refugee families. The current research provides a first exploration of the concept. The relationship between maternal insecurity and child social-emotional competence was investigated directly and through the pathway of mother-child interaction quality. Our analyses revealed that maternal insecurity did not affect these dimensions. Parental self-efficacy, which was expected to moderate the relationship between maternal insecurity and mother-child interaction quality, was also not related to these variables. However, due to the reduced size of the sample, this study had low statistical power. Therefore, more studies are needed to understand how mothers' feelings of insecurity affect their children's development and to advance our knowledge of social-emotional competence among refugee children.

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