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Postmigration Stress Compromises Refugee Parents’ Self-Efficacy and Autonomy-Supportive Parenting: An Experience Sampling Study

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Refugee parents raise their adolescent children in a world that is different from the world they themselves grew up in, often experiencing postmigration stress. This may hamper parents’ confidence in their parenting skills and make it difficult for them to grant adolescent children the autonomy they desire and need. In this preregistered study, we aimed to advance our understanding of this process by examining, in daily life, whether postmigration stress contributes to less autonomy-supportive parenting through compromised feelings of parental self-efficacy. Fifty-five refugee parents of adolescent children resettled in the Netherlands (72% Syrian; M_age_children = 12.81) reported on their postmigration stress, parental self-efficacy, and parental autonomy support up to 10 times a day for 6–8 days. We fit a dynamic structural equation model to test whether postmigration stress predicted reductions in parental autonomy support, and whether parental self-efficacy explained this link. Results showed that when parents experienced more postmigration stress, they granted their children less autonomy at a later timepoint, in part, through parents feeling less efficacious after having experienced postmigration stress. Findings held after controlling for parents’ posttraumatic stress symptoms, and when controlling for all possible temporal and lagged associations. Our results highlight that postmigration stress shapes parenting practices, above and beyond symptoms of war-trauma, in the daily lives of refugee families.

Keywords: refugee postmigration stress, parental self-efficacy, parental autonomy support, experience sampling method, dynamic structural equation modeling

Supplemental materials: https://doi.org/10.1037/fam0001059.supp

In 2021, around seven million refugees were resettled in regions such as the United States, Canada, or Europe (United Nations High Commissioner for Refugees, 2020). While all parents experience challenges, refugee parents face extra challenges due to loss of social networks, discrimination, adapting to a new culture (Merry et al., 2017), and the need to socialize their adolescent children in a world that is different from the one they grew up in. This may lead parents to question the efficacy of their parenting above and beyond the natural dip in parental self-efficacy (PSE) that parents may experience as their children transition into adolescence (Glatz & Buchanan, 2015). These feelings of uncertainty might make parents struggle with how much autonomy they should encourage in their children (Eltanamly et al., 2022; Este & Tachble, 2009). To discern this process on a microlevel, we used experience sampling method (ESM) to understand the moment-to-moment interplay between postmigration stress, PSE, and autonomy support.

Refugee parents resettling in countries different from their own often face postmigration stress (PMS) on a daily basis (e.g., Merry et al., 2017). Parents have to deal with understanding a new culture, learning a new language, not working in their fields of expertise, facing difficulties getting their certificates recognized or competing with natives in the labor market, and living with a diminished social status in comparison to before the war (Aroian et al., 1998). In addition, refugee parents might miss people they left behind in their home countries or face difficulties in doing ordinary things because of language barriers. Refugee parents might experience varying levels of these difficulties at different moments throughout the day. When these experiences are more pronounced, parents might feel less in control over their unfamiliar environments and might struggle with a sense of loss of power, status, and being (Merry et al., 2017).

Feeling less in control might compromise parents’ perceptions of their skills and abilities as competent parents, that is, their PSE (Bandura, 1982; Hamilton et al., 2015). For example, children might adapt to the host culture at a faster rate than their parents (Eltanamly et al., 2022; Timshel et al., 2017), giving rise to acculturation gaps between parents and children which could reverse roles within families (Timshel et al., 2017), threatening parents’ authority, and consequently, their feelings that they are capable parents. Moreover, parents’ perceptions of their mastery over their new contexts and over their skills at providing adequate parenting for their children may be jeopardized (El-Khani et al., 2016). Specifically, to suit their new
contexts, refugee parents might feel compelled to adopt different parenting practices than what they were used to before migration (Este & Tachble, 2009; Merry et al., 2017), but they might not know how to do it otherwise (Betancourt et al., 2015). Parents might therefore question their capability of parenting their children in a way that they positively appraise, in those new contexts (Ali, 2008).

PSE can be pivotal in deciding how much autonomy they grant their children (Mabbe et al., 2018; Mouton & Roskam, 2015). For example, when parents feel threatened in their authority, and therefore doubt their capability as parents, they might engage less in parenting that supports a child’s autonomous development, in an attempt to regain hierarchical status (James, 2010). Moreover, when parents feel less capable of influencing their children’s behaviors they are more likely to view their efforts as worthless (Bandura, 1982) and might therefore engage less in activities that characterize parental autonomy support (PAS), such as listening to a child’s viewpoint or engaging with their children in a way that allows their children to exercise agency, control, or self-expression (Mabbe et al., 2018).

The adaptation to a new cultural context may be especially challenging for refugee parents when their children are transitioning into adolescence, which is a developmental stage marked by increased parent–child conflict and a general reorganization of communication patterns (Granic & Patterson, 2006; Smetana et al., 2006). Refugee parents might experience this transition and reorganization as a threat to family cohesion, especially as many fear losing their children to the host culture (Eltanamly et al., 2022), which can make them more restrictive in how much autonomy they grant their children. Therefore, postmigration stressors might further hamper refugee parents’ PSE, above and beyond the naturally occurring dip during adolescence (Ali, 2008; Glatz & Buchanan, 2015) which might make parents grant their children less autonomy.

Some theorists have argued that in collectivist and hierarchical cultures, such as Syria—the home country of many recently resettled refugees in Canada, the United States, and Europe—the interest of the group comes before that of the individual (Hofstede Insights, n.d.). While that reasoning suggests that parenting behaviors that promote a child’s autonomy might not fit well with the general culture, and therefore might not have positive effects on children’s development (e.g., Chao, 1994), it actually seems that children, across countries and cultures, benefit from autonomy-supportive parenting which allows them to express their opinions and take decisions on their own (Cheung et al., 2016). So while children from countries like Ghana and the United States benefit to varying degrees from such practices, overall, they show better well-being, academic achievement, higher self-worth, and less depression (Marbell-Pierre et al., 2019). Parenting that supports children’s autonomy might be even more essential for recently resettled refugee children who seem to suffer from mental health adversity (Fazel et al., 2012) at higher rates than children from a nonrefugee background (Michel et al., 2012). Moreover, supporting children’s autonomy might be especially important as they transition into a critical developmental stage marked by a pile-up of stressors (e.g., mental health adversity, adolescent-related identity development), as is the case with refugee children (Ellis et al., 2008). It is therefore vital to understand the interplay between moment-to-moment PMS, PSE, and autonomy-supportive practices, among refugee parents of children transitioning into adolescence.

One way to understand how parental cognitions and behaviors are affected by postmigration stressors is to assess the moment-to-moment within-person variations among these constructs. Specifically, having many repeated measures that are frequent enough to allow for changes in levels of experienced momentary stressors, cognitions, and behaviors to naturally unfold, can allow us to understand how these constructs influence each other, within-individual refugee parents (Bolger & Laurenceau, 2013). Stressors in daily life are not stable throughout the day (Bolger et al., 2003). The levels of postmigration stressors experienced by refugee parents such as feelings of social isolation or problems managing life in the new country, as forms of daily stressors, can also be expected to vary from moment to moment. Self-efficacy is similarly context-dependent and can show fluctuations over time (Bandura, 1982; Hiemstra et al., 2011). Additionally, and especially during phase transitions, real-time behavior is more flexible and sensitive to contextual changes (Granic & Patterson, 2006). Settling in a new country as a refugee can be considered a phase transition and therefore we can assume that real-time parenting (e.g., autonomy-supportive parenting) is flexible and sensitive to levels of PMS. Those postmigration stressors, and their recurring nature, predict mental health, and behavior (Steel et al., 1999), sometimes even more so than prior stressful life events (Miller & Rasmussen, 2010). It may be the cumulative impact of minor, yet recurring, postmigration stressors that these families go through that shape their constant reappraisals of themselves as parents (Cmic & Low, 2002) and their parenting behavior, before leading to more stable interaction patterns between parents and children (Granic & Patterson, 2006). Despite such knowledge and the need to understand how psychological processes unfold over time, most research-to-date focuses on static, out-of-context, assessments of constructs (Granic & Patterson, 2006; Hamaker & Wichers, 2017). We, therefore, need more fine-grained, dynamic assessments of these constructs in real life.

The Present Study

We aimed to uncover the role of moment-to-moment PMS in shaping how much autonomy refugee parents give their children, and if this association can be explained by parents’ feelings of self-efficacy. Specifically, we expected that the association between moment-to-moment PMS and PAS can be partially explained by PSE. That is, higher levels of PMS (at time point t − 1) will predict lower levels of PSE (at time point t), which would be simultaneously associated with lower levels of PAS (at time point t), controlling for war-trauma. To this end, we used ESM with recently resettled refugee parents of early adolescent children. We also took parents’ war-trauma symptoms into account, because trauma symptoms can trigger hypersensitivity, likely confounding the correlations between momentary stressors and parenting (Cmic & Low, 2002; Neuner et al., 2010). Our study advances our understanding of the daily family life of refugee parents and their children by providing insight in how, on a microlevel, minor, yet recurring, postmigration stressors predict PSE and autonomy-supportive parenting.

Method

Participants

Participants were 73 parents (70% mothers; age range = 29–63; M = 40.95, SD = 6.26), with children between 10 and 15 years of age (M = 12.81, SD = 1.75). Participants were primarily Syrian (72.4%, 6.9% Palestinians, 1.7% Libyans) and identified as 93.2% Sunni, 4.0% Christians, 1.4% Alawites, and 1.4% nonreligious.
Participants had an average, of 13.86 years of education, higher than the expected 9 years of education in Syria (Central Intelligence Agency, 2018), but similar to the average education level of Syrians in the Netherlands (Dagevos et al., 2018). Participants had been in the Netherlands on average for over 3 years; 41% had a residence permit, and 59% were still in the process of seeking asylum. Thirty-eight percent had clinical levels of posttraumatic stress disorder symptoms (i.e., a score higher than 33 on the Posttraumatic Stress Disorder Checklist for Diagnostic and Statistical Manual of Mental Disorders, fifth edition—see under Measures), a percentage similar to the prevalence rate of mental health problems among Syrian refugees in the Netherlands (Dagevos et al., 2018) and comparable to rates found in studies with refugee parents (Bryant et al., 2018). None of the demographic variables correlated with the study variables. In line with the preregistration (https://osf.io/4m37p/), we therefore did not control for them in our models.

Although we did not systematically ask about parents’ working situations, informal conversations with different participants informed us that most of them were professionally active, either working or doing internships to allow them to find later employment, or were volunteering. Others were staying at home, especially women with young children, and older parents. A few (n = 2–3) were unable to work and were even exempted from the Dutch language exam required for the official stay in the Netherlands. A small minority spoke English prior to moving to the Netherlands.

Participants were included if they (a) were parents of at least one child between 10 and 15 years of age, (b) were refugees of war, (c) had relocated to the Netherlands within the past 5 years, and (d) were Arabic-speakers. Participants were excluded if they (a) were illiterate as this would have hindered the text-based ESM data collection and (b) were not coexposed to the war along with their children.

Procedure

The study was approved by the institutional review board of The University of Amsterdam, the Netherlands. We published our study protocol and data analysis prospectively, before data collection was finished, on Open Science Framework (https://osf.io/4m37p/). Participants were recruited through language schools for adults, organizations and volunteers working with refugees, and Facebook groups created by and for refugees. At different events or in Facebook posts, either the first author or a trained research assistant introduced the study, its objectives, and what participants would be expected to do. Parents who actively expressed interest, either in person or through responding to Facebook posts, were contacted and given more details about the study. Upon agreeing to participate, a date and time for the first home visit were set. Of the 145 parents who expressed interest in participating, 50% declined participation. Reasons for not participating were either that their spouse did not agree to their participation (10%), not having enough time (7%), or being concerned about privacy (3%). Others (81%) either did not state reasons for declining participation or stopped responding to our calls.

Participants were visited at home twice by either the first author or one of six trained research assistants. In the first visit, we informed parents about the study procedures, emphasizing confidentiality, and the voluntary nature of participation. Parents signed informed consent and filled in baseline questionnaires, including trait measures of PMS, PSE, and PAS. When participants had more than one child between 10 and 15 years of age, we randomly chose a child for the parents to report on, both, for the trait measurement and later, for the momentary (i.e., state) measurements. To prevent the baseline procedures from influencing parents’ responses to momentary assessments, the second visit took place at least 4 weeks later. During this second visit, we installed the Ethica app to collect ESM data on participants’ smartphones. We used pseudoe-mail accounts to grant participant anonymity. The researcher walked the participant through the application, and together they responded to a sample questionnaire on the participant’s phone to practice the procedure, emphasizing that responses must pertain to the child chosen in the first visit.

The duration of the ESM data collection varied as this study is part of a larger study of parenting in refugee families in the Netherlands which included multiple baseline periods. Participants were therefore randomly assigned to one of three baseline periods (6, 7, or 8 days). The present study presents analyses pertaining to data collected during the baseline. For the 6, 7, or 8 days following the second visit, participants received ten notifications per day, on their smartphones, signaling momentary questionnaires to be filled in. This took place between 7:30 a.m. and 10:30 p.m., and participants were asked to respond to questions about thoughts and behaviors on a visual analog 10-point scale at quasirandom moments. This means that the time span between 07:30 and 10:30 was split into 10 slots of 90 min each, and we randomly picked a moment within each timeslot. There was no minimum interval between measurement points. In addition, participants were asked whether, since the last assessment, they tried to connect with their child. This enabled us to identify at which data points parents either attempted to or actually got in contact with their children. When parents answered “no” we retained data about PMS and PSE and treated responses on PAS as missing values. Questions were presented in Arabic, and in the same order every time, with a single question per screen. Each ESM survey had 37 questions.

After the momentary data collection was over, participants completed an End of Study survey about the upsides and downsides of taking part in the study and received gift cards to compensate for their participation. The amount of money on the gift cards increased when more ESM questionnaires were completed, with a minimum of €15 and a maximum of €45.

Measures

Postmigration Stress

We used the Arabic version of the “Demands of Immigration Scale” (DIS; Aroian et al., 1998, 2008). The DIS has 23 items loading on six subscales reflecting difficulties with Loss, Novelty, Occupation, Language, Discrimination, and Feeling at Home. Whenever there was a reference to the United States or English in the original measure, we changed that to the Netherlands or Dutch, respectively, to make it suitable for our study purposes. The scale has excellent internal consistency (Cronbach’s α = .92) and in our sample (Cronbach’s α = .82). Participants rated the extent to which they experienced different difficulties (e.g., I miss people I left behind in my original country) on a 4-point scale (range = 0–3). Higher scores indicated more PMS.

State Postmigration Stress. We used items from each subscale of the DIS except for occupation because we expected that difficulties with occupation (e.g., finding a job) did not vary on a momentary basis. We used a single item from each subscale, which had the highest factor loading on its subscale (i.e., language, novelty,
discrimination, and not feeling at home; e.g., right now, I have difficulty doing ordinary things because of a language barrier) and two items from the Loss subscale, namely, missing people and missing special places back home, and we used parallel phrasing between these two items (e.g., “right now, I miss people I left behind in my country”). As our data had a nested structure, the internal reliability of state items was tested at the within-person and the between-person levels using multilevel confirmatory factor analysis (i.e., omega reliability coefficient, $\omega$; Geldhof et al., 2014). The between-person $\omega = .81$ and the within-person $\omega = .49$. The six items sufficiently converged and that at the between-person level they reliably captured dynamic shifts in reports of PMS. Internal consistency was lower at the within-person level meaning that there was a moderate moment-to-moment correlation between the different items measuring PMS. This was expected as each item was drawn from a single subscale of the original trait measure. State PMS scores correlated moderately with trait PMS ($r = .508$, $p < .000$), meaning that parents’ moment-to-moment experiences of PMS moderately reflected their general level of PMS.

### Parental Self-Efficacy

We used the “Me as a Parent” scale (MaaP; Hamilton et al., 2015). The MaaP has 16 items loading on four subscales reflecting Self-Efficacy, Personal Agency, Self-Sufficiency, and Self-Management. The scale has good internal consistency (Cronbach’s $\alpha = .85$) and in our sample (Cronbach’s $\alpha = .62$). Participants rated how much they agreed with different statements (e.g., my parenting skills are effective) on a 5-point scale (range $1–5$). Negatively phrased items were reverse coded so higher scores indicated more PSE.

**State Parental Self-Efficacy.** We used two items from the Self-Efficacy subscale and two items from the Personal Agency subscale to capture efficacy items mapped well onto parents’ appraisals of themselves as efficacious parents, and agency items tapped into efforts parents are willing to exert while parenting (e.g., “right now, I feel confident as a parent” and “right now, my child is getting their own way, so why try?”). We chose items with the highest factor loadings on their respective subscales. We did not use items from the self-sufficiency and the Self-Management subscales, because we expected they did not vary on a momentary basis. The between-person $\omega = .72$ and the within-person $\omega = .49$. PSE state scores correlated moderately with trait PSE ($r = .457$, $p < .000$), indicating that parents’ reports of moment-to-moment PSE moderately reflected their general perception of PSE.

### Parental Autonomy Support

We used the Autonomy Support subscale of the Perception of Parents Scale (POPS; Grolnick et al., 1991). The POPS, which is targeted at children, was previously adapted and successfully used with parents (Mabbe et al., 2018). The original scale has adequate internal consistency (Cronbach’s $\alpha$ ranging between .58 and .70) and in our sample (Cronbach’s $\alpha = .69$). Participants rated the extent to which they engaged in different behaviors with their children (e.g., whenever possible, I allow my child to choose what to do) on a 7-point scale (range 1–7). Negatively phrased items were reverse coded so higher scores indicated more autonomy support.

**State Parental Autonomy Support.** We did not have item factor loadings on subscales, we, therefore, chose items based on face-validity: autonomy support items mapped on either supportive or attentive behaviors. We chose two items that mapped on supportive behavior and two items that mapped on attentive behavior. For example, parents were asked, “right now, I am considering things from my child’s point of view.” The between-person $\omega = .92$ and the within-person $\omega = .77$. Autonomy support state scores did not correlate with trait PAS ($r = .142$, $p = .288$), thus parents’ reports of how much autonomy they provided their children seem unrelated to the general levels of autonomy they report granting their children. More details on the translation procedure and the creation of State items can be found in the Supplemental Materials.

### War-Trauma Symptoms

We used the Arabic version of The Posttraumatic Stress Disorder Checklist for Diagnostic and Statistical Manual of Mental Disorders, fifth edition (Blevins et al., 2015; Ibrahim et al., 2018). The Post-traumatic Stress Disorder Checklist for Diagnostic and Statistical Manual of Mental Disorders, fifth edition has 20 items. The scale has good internal consistency (Cronbach’s $\alpha = .85$) and in our sample (Cronbach’s $\alpha = .87$). Participants rated the extent to which they experienced different symptoms during the previous month (e.g., repeated, disturbing, and unwanted memories of the stressful experience) on a 5-point scale (range 0–4). Higher scores indicated more posttraumatic stress symptoms. See Supplemental Table 1, for correlations between all study variables.

### Data Analysis Strategy

We used dynamic structural equation modeling (DSEM) in Mplus Version 8.4, combining time-series analysis with multilevel data (Asparouhov et al., 2018). This approach takes the nested structure of the data into account (assessments nested within persons), facilitates the modeling of autocorrelation structures (i.e., how one rating predicts the next rating), accounts for the unequal spacing of assessments using the TINTERVAL option (participants are triggered at random points per day and are not triggered during the night), and deals with missing data using Bayesian statistics using a Markov Chain Monte Carlo (MCMC) algorithm (McNeish & Hamaker, 2020).

At the within-person level, a recent simulation study (see Schmiedek & Neubauer, 2020), discusses that, while fixing participant numbers equal to observations at $N = T = 50$, the power to detect small–medium effects was at least (.80). To detect between-person regression slopes, a recent simulation study (see Schultze & Muthén, 2018) shows that when $N = T$ a total number of observations $(N \times T = 4,000)$ yields a power over (.80). Our design with $N = 55$ and $T = 75$ affords us enough $(N \times T = 4,125)$ observations to detect between-person processes. Our hypotheses, sample size and a priori power estimation, as well as the data analysis strategy, were preregistered (https://osf.io/4m37p/).

First, to investigate whether PMS, PSE, and PAS fluctuated on a moment-to-moment basis, we estimated three basic models without predictors. This means we examined mean levels, variances, and intraclass correlation coefficient (ICC) for each construct. In addition, we calculated the root of mean squared successive difference (rMSSD). The variance of a construct only captures the magnitude of the fluctuation, rMSSD, however, captures both the magnitude...
and the temporal dependency of the fluctuation. A high \( r_{MSSD} \), therefore, reflects a high degree of momentary variability.

Second, to test whether PSE mediated the relation between PMS\(_{-1} \) and PAS\(_{t} \), we used Baron and Kenny’s approach (1986) in two models. We ran a model with the direct-effect where PMS\(_{-1} \) predicted PAS\(_{t} \) at the next assessment. In the same model, PSE was included as a predictor for PAS\(_{t} \), all accounting for previous levels of PAS\(_{-1} \). We then ran a model including the indirect effect, where PMS\(_{-1} \) predicted PSE at a later time point, which in turn was used to predict PAS\(_{t} \), accounting for previous levels of PSE\(_{-1} \) and PAS\(_{-1} \), see Supplemental Figure 1. Models were tested with and without controlling for war-trauma symptoms.

Finally, we tested a model with all possible temporal and lagged associations. This model provides a more stringent, yet less parsimonious, test of the direct and indirect associations. This means that we ran a model that controlled for all autoregressive, cross-lagged, and concurrent paths to test whether (a) PMS\(_{-1} \) predicted PAS\(_{t} \) (direct effect); and then we ran another model with the mediator testing (b) whether PMS\(_{-1} \) predicted PSE, which in turn predicted PAS\(_{t} \), while controlling for all autoregressive paths within constructs (i.e., PMS\(_{-1} \) and PMS\(_{t} \) and PSE\(_{t} \) and PSE\(_{-1} \)), cross-lagged paths between constructs (e.g., PMS\(_{-1} \) and PSE\(_{t} \)), and concurrent paths between constructs (e.g., PMS\(_{t} \) and PSE\(_{-1} \), at the same time point), in a single DSEM model. Models were tested with and without controlling for war-trauma symptoms. In both models, mediation was concluded if both the path from predictor to mediator (PMS\(_{-1} \) to PSE\(_{t} \)), and the path from mediator to outcome variable (PSE\(_{t} \) to PAS\(_{t} \)) was significant (Hayes, 2009).

To run our models, we ran at least 1,000 iterations in Mplus and two MCMC chains. This means that Mplus printed the output after at least 1,000 iterations. To control the amount of memory Mplus uses to run the model, we used a thinning of 10 iterations, which means that our results are based on at least 100 iterations. We checked model convergence by making sure the potential scale reduction factor stayed below 1.1, even after doubling the number of iterations it took the model to converge automatically. We also checked the trace plots for signs of lack of convergence such as spikes or the two chains drifting away from each other. If that happened, we doubled the number of iterations.

Data were missing completely at random using Little MCAR’s test, specifically, for momentary PMS, \( \chi^2(13) = 9.604, p = .726, \) for momentary PSE, \( \chi^2(5) = 6.016, p = .305, \) and for momentary PAS, \( \chi^2(6) = 12.370, p = .054. \) MCMC modeling deals with missing data. Specifically, model estimation was based on MCMC algorithm which arranges all model parameters, including missing data, into blocks. A new value for block elements, including missing data, is constantly generated, which is conditional on all the other blocks and the data. This keeps repeating until a stable posterior distribution is obtained (Asparouhov et al., 2018).

**Model Convergence**

Participants completed on average six momentary assessments per day with an adherence percentage of 58% (range: 3%–94%). We did not preregister to exclude participants based on adherence percentages; however, participants with too few responses were causing the model not to converge. A recent simulation study shows that for within-person associations for a similar design, the model functions well with missing values up to 85% (Asparouhov et al., 2018).

In our design, as in the simulation study, participants received assessments at unequal time intervals (e.g., during the night they received no assessments, so the last assessment at night and the next assessment in the morning had a much larger space between them than two assessments during the day). To deal with that in Mplus, we used the TINTERVAL set to 90 min (the time span from which we extracted a random moment for an assessment to be sent). Doing so, we created six extra missed assessments for the night lag, which did not actually exist in the data. This reflected “induced” missing data of 37.5% for all parents. To retain a total percentage of missing data that does not exceed 85%, participants with up to 75% of missed daytime assessments were included (because we induced six missing data points to the data to account for the night lag). We, therefore, excluded participants (n = 17) who completed less than 25% of the questionnaires. Also, one participant was excluded from the analyses as she reported that she randomly chose one of her children to report on, instead of the child fitting the inclusion criteria of the study. This resulted in a final sample of 55 participants, who were more likely to be younger (\( M = 39; SD = 5.63; p = .001 \)) mothers (81%; \( p = .001 \)). We report how we determined our sample size, all data exclusions, all manipulations, all measures in the study and more details on a-priori power estimations in our online preregistration (https://osf.io/4m37p/).

Data and Mplus code can be made available upon discussion with the first author.

**Results**

**Descriptives**

All constructs fluctuated on a momentary basis (see Supplemental Table 2, for means, variances, and R\( \text{MSSD} \) for each construct). Paired sample \( t \) tests showed that PMS and PAS fluctuated more than PSE, \( t(54) = 3.00, p = .004 \) and \( t(53) = -3.44, p = .001 \), respectively. PMS did not fluctuate less or more than PAS (\( p = .156 \)). Scores on each construct varied at both the between- and the within-person level. ICC calculations showed that 23% of the variance in PMS, 37% of the variance for PSE, and 61% of the variance of PAS occurred at the within-person level. Trait levels of war-trauma symptoms did not correlate with any of the study variables (see Supplemental Table 1).

**Do Refugee Parents Grant Their Children Less Autonomy When They Experience More PMS?**

We ran a direct effects model to test whether PMS at one time point predicted PAS at the next time point. This model also tested whether PSE predicted PAS at the same time point, controlling for previous levels of PAS and trait war-trauma symptoms. We found evidence for our hypothesis that the more PMS parents experienced at one time point, the less autonomy they granted their children at the next time point (\( \beta = -0.102, p = .004 \)), and that more feelings of PSE co-occurred with refugee parents granting their children more autonomy (\( \beta = 0.175, p < .000 \)). This model controlled for previous levels of autonomy support and war-trauma symptoms. Results were the same without controlling for war-trauma symptoms (Table 1 and Supplemental Table 3).


Table 1
Mediation Model: Postmigration Stress Predicting Parental Self-Efficacy and Parental Autonomy Support

<table>
<thead>
<tr>
<th>Path</th>
<th>Controlling for war trauma symptoms</th>
<th>Without controlling for war trauma symptoms</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Standardized estimate 95% CI p value</td>
<td>Standardized estimate 95% CI p value</td>
</tr>
<tr>
<td>Direct effects model</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PMS_{t−1} → AS_{t}</td>
<td>−0.102 [−0.162, −0.037] .004</td>
<td>−0.101 [−0.166, −0.032] .004</td>
</tr>
<tr>
<td>PSE_{t} → AS_{t}</td>
<td>0.174 [0.114, 0.228] .000</td>
<td>0.172 [0.114, 0.229] .000</td>
</tr>
<tr>
<td>AS_{t−1} → AS_{t}</td>
<td>0.186 [0.119, 0.251] .000</td>
<td>0.190 [0.121, 0.258] .000</td>
</tr>
<tr>
<td>Indirect effects model</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PMS_{t−1} → PSE_{t}</td>
<td>−0.055 [−0.105, −0.003] .044</td>
<td>−0.053 [−0.106, 0.002] .054</td>
</tr>
<tr>
<td>PSE_{t−1} → PSE_{t}</td>
<td>0.239 [0.181, 0.293] .000</td>
<td>0.241 [0.185, 0.295] .000</td>
</tr>
<tr>
<td>PMS_{t−1} → AS_{t}</td>
<td>−0.097 [−0.162, −0.027] .008</td>
<td>−0.098 [−0.165, −0.033] .004</td>
</tr>
<tr>
<td>AS_{t−1} → AS_{t}</td>
<td>0.191 [0.119, 0.258] .000</td>
<td>0.191 [0.123, 0.260] .000</td>
</tr>
<tr>
<td>PSE_{t} → AS_{t}</td>
<td>0.159 [0.102, 0.215] .000</td>
<td>0.165 [0.109, 0.221] .000</td>
</tr>
<tr>
<td>Total indirect effect</td>
<td>0.001 [0.000, 0.003] .000</td>
<td>0.001 [0.000, 0.003] .000</td>
</tr>
<tr>
<td>Total direct and indirect effect</td>
<td>0.048 [0.016, 0.102] .000</td>
<td>0.050 [0.017, 0.104] .000</td>
</tr>
</tbody>
</table>

Note. PMS = postmigration stress; PSE = parental self-efficacy; AS = parental autonomy support; CI = confidence interval. This table presents the standardized output from two models. The direct effects model shows the lagged associations between PMS, AS, and AS at a later time point, and the concurrent association between PSE and AS. The indirect effects model shows current PSE as a mediator between previous PMS and current AS. Total indirect effects and total direct and indirect effects are calculated using the unstandardized estimates in Mplus.

Does Compromised PSE Explain Why Refugee Parents Grant Their Children Less Autonomy When They Experience More PMS?

We ran an indirect effects model to test whether the relation between PMS and PAS can be explained by PSE. We found evidence that experiences of PMS at one time point predicted reductions in PSE at the next time point (β = −0.055, p = .044), which co-occurred with less PAS at the same time point (β = 0.159, p < .000). The direct effect remained significant, yet weakened (β = −0.097, p = .008), giving evidence for a small partial mediation effect. The ratio of indirect to total direct and indirect effect is 0.021 (see Table 1). Again, this model controlled for previous levels of PSE, PAS, and war-trauma symptoms. Without controlling for war-trauma symptoms, the effect size of PMS on PSE remained the same, but was no longer significant (β = −0.053, p = .054), which co-occurred with less PAS, as in the original model (Table 1).

Does Mediation Hold in a More Stringent Test?

Given that stressors, parental cognitions, and parental behaviors do not happen in isolation, we examined the direct and indirect effects for mediation, controlling for all possible temporal and lagged associations in one model. Mediation was also supported in this model. The direct effect from PMS at one time point on PAS at a later time point was not significant (β = −0.039, p = .216; Step 3). However, experiences of PMS at one time point predicted reductions in PSE at the next time point (β = −0.061, p = .028), which in turn predicted less PAS at the same time point (β = 0.197, p < .000; Step 4). This means that, in a more stringent, less parsimonious, model, we found that PSE mediates the association between PMS and PAS. Results stayed the same without controlling for war-trauma symptoms. Statistical details are presented in the Supplemental Figure 2 and Table 3.

Additional Nonregistered Analyses

To rule out alternative models, we ran the stringent test checking whether autonomy support predicted later PMS, and that was not the case (β = 0.027, p = .448).

Discussion

There has been a strong call by social scientists to investigate the role of daily stressors, such as PMS, in the lives of refugee families, in addition to the role of war-trauma (Miller & Rasmussen, 2010). Aiming to capture such daily risk factors adds to a more comprehensive model of how armed conflict impacts the lives of individuals (Miller & Jordans, 2016). Our results suggest that indeed, above and beyond the impact of war-trauma, moment-to-moment fluctuations in PMS predicted how much autonomy refugee parents granted their children, partly because they felt less efficacious as parents after they had experienced PMS.

Our findings highlight that minor, yet recurring, daily stressors have implications on the lives of refugee parents, above and beyond war-trauma (Miller & Rasmussen, 2010). While it has been extensively researched and acknowledged that war-trauma is related to suboptimal parenting practices (for a review, see Eltanamly, Leijten, Jak, & Overbeek, 2021) the role of daily PMS in resettled refugees is less known. Proximal factors, like momentary postmigration stressors, might be pivotal in shaping how refugee parents think about themselves as parents and how they actually parent their children. In line with our expectations, we found evidence that PMS predicted later reductions in PAS through compromised PSE. Our findings support previous research showing that experiences of PMS relate to reductions in PSE among refugee parents (e.g., Ali, 2008; Sim et al., 2018) and to reductions in parental support (Miao et al., 2018), also in a stringent test including all temporal and lagged associations. Our findings are also in line with research showing that experiences
higher parental support predicts feeling efficacious across individuals, parents who generally score high on self-efficacy in both studies. Specifically, Deković et al. (2010) used between-person analyses, and we used within-person analyses. It might be that across individuals, parents who generally score high on self-efficacy also score high on parental support, but that within individuals, higher parental support predicts feeling efficacious as a parent. In addition to advancing our understanding of the processes underlying parental behavior and cognitions in refugee families, our findings shed a different light on these processes and thus highlight the need to study them also at the within-person level.

Our research extends previous work with refugee parents in three ways: First, we explain how PMS might reduce autonomy-supportive parenting, namely through reduced PSE; second, we identified the unique role of PMS in shaping parenting above and beyond war-trauma symptoms; and third, we found that PMS, PSE, and autonomy support show different temporal dynamics, with PMS and autonomy support fluctuating more than PSE. This means that both parenting constructs varied during the day; however, parents showed more variability in how they actually “do” their parenting as to how they “think” about themselves as parents. These insights also add to the broader parenting literature. Previous studies mainly captured variability on a day-to-day basis, at best (e.g., Mabbe et al., 2018), our study, pioneers in capturing variability on a momentary basis. Our finding that PSE is more variable than PSE raises the question of what other factors (e.g., children actively demanding autonomy) shape parenting behavior, in addition to PSE.

Our findings do not come without limitations. Because our study is one of the first to use momentary assessments of parenting constructs, we had to create our own state items. Our state scores showed moderate within-person internal consistency. This might be because our scales were multidimensional where we used one or two items from each subscale of the original scale. The moderate reliability might therefore reflect this multidimensional structure more so than measurement error (Green & Yang, 2015). Another limitation concerned the technical glitches in the smartphone application which sometimes made participants unable to respond to assessments when they were ready to. We tried to reduce the impact of these glitches by staying in close contact with the application providers, who were prompt in responding to our concerns. Yet, the presence of glitches meant that we missed more data than we would have otherwise. Another limitation was the repetitive nature of the questions for parents that may have compromised parents’ engagement and accuracy of their responses. Close to half of the participants who responded to our End of Study Survey reported that the momentary questions were timed too close to each other and of a repetitive nature. This is a challenge for all ESM studies—which require multiple assessments per day. We tried to reduce the burden on participants by highlighting that they did not need to change their daily routines to respond to an assessment even if that meant missing a few assessments. Finally, given the complexity of our data, we relied on Baron and Kenny’s (1986) approach to test mediation rather than the more modern technique of bootstrapping.

Despite these limitations, several factors strengthen our confidence in our findings. ESM allowed us to collect multiple assessments each day from every participant. This has several advantages over traditional survey methods (Bolger & Laurenceau, 2013). First, ESM has high ecological validity as it obtains information about people’s experiences as they occur (Bolger & Laurenceau, 2013). Our research took place in the most natural context, as assessments took place in participants’ daily life. Second, ESM has the advantage of being “in the moment.” This means that memory biases and distortions are avoided (Bolger et al., 2003). This was important for our study especially because we asked about minor stressors, which are more prone to memory distortions than major events (Monroe, 2008). In our study, we also controlled for the effect of war-trauma.
This allowed us to extract the unique role played by PMS in our model and ruled out the effects of a potentially confounding factor. Our study also capitalizes on the use of DSEM, a complex statistical technique that incorporates time-series data with multilevel extensions (Asparouhov et al., 2018). This allowed us to account for the complexity of the data, for example, dealing with missing data, autocorrelations, unequally spaced data points, and the nested structure of the data, things which are expected in ESM research. Besides, our study was well powered to test the effects we were interested in.

Given the small partial mediation effect calculated as the ratio of indirect to total direct, future research might aim to uncover mechanisms that underlie the relation between PMS and PSE. A possible mechanism could be through parental mental health. Stressors such as loneliness, discrimination, and social isolation can have a direct effect on refugee parents’ mental health and also can contribute to the maintenance of existing symptoms (Ellis et al., 2008), which in turn shape PSE (Kohlhoff & Barnett, 2013), and in turn, parenting behavior. Another mechanism could be a lack of need-satisfaction. Specifically, the more a parent feels dependent on others to teach him or her how to do something in their new context, the more language difficulties they experience, and the more they feel that they do not belong to their resettlement context, the more their basic needs of competence, relatedness, and satisfaction are hampered (Ryan & Deci, 2000). This, in turn, could mean that they are less able to feel efficacious in other areas as well, including their own parenting. Besides, since self-efficacy seems to be a link between PMS and autonomy support, future research could explore whether it is possible to strengthen PSE in refugee populations. Indeed, PSE is a modifiable construct that can positively impact parent-child interactions in community samples (Mouton & Roskam, 2015). Whether PSE is modifiable among refugee populations, and whether this can positively translate into parenting practices (e.g., more parental support) is also unknown.

For intervention workers supporting refugee families, our findings highlight the importance of understanding and, whenever possible, ameliorating the adverse effects of PMS for refugee families, in addition to attending to war-trauma (Chen et al., 2017; Miller & Rasmussen, 2010). Importantly, efforts to strengthen refugee parents’ self-efficacy might be particularly important in parents who seem to considerably doubt their parenting skills (Ali, 2008; Eltanamly et al., 2022). The momentary variability in autonomy support also means that refugee parents vary in how much autonomy they grant their children throughout the day. Clinicians and intervention workers might adopt a strength-based approach with refugee parents by reflecting with them on the moments when they are successful at granting their children autonomy, to support them in continuing to grant children autonomy, as this seems to benefit not only children but also parents themselves.

References


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