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RESEARCH ARTICLE

Status and predictors of the psychological well-being of mothers of children receiving early childhood intervention following the 2022 Russian invasion of Ukraine

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Abstract

Background: The Russian invasion of Ukraine on February 24, 2022 resulted in millions of Ukrainians being displaced from their homes and communities. The majority were women and most were mothers and their children. Among the negative consequences of displacement is attenuated psychological well-being.

Aim: The purpose of this study was to ascertain (1) the well-being of mothers (81%) of children receiving early childhood intervention before and/or after displacement and (2) the correlates and predictors of variations in positive well-being.

Method: The participants completed a survey that included well-being, social connectedness, family support, family resources, and early childhood intervention measures. Correlational and regression analyses were used to identify the predictors of variations in mothers' positive well-being.

Results: Results showed that social connectedness with Ukrainian family and friends and satisfaction with early childhood intervention were the best predictors of variations in mothers' positive well-being and that difficulties and challenges in locating family and child resources in displaced locations were related to attenuated positive well-being.

Conclusion: The results are consistent with systems theories and models that include the tenet that psychological well-being is multiply determined by factors within and outside the family.

Keywords: *Ukraine, war, displacement, positive well-being, mothers, social connectedness, family resources, early childhood intervention*

The Russian invasion of Ukraine in February 2022 caused the displacement of millions of Ukrainians from their homes and communities to places within Ukraine and in other European countries (Maidanik, 2023). More than 80% of internally and externally displaced individuals are women and nearly two-thirds are mothers and other primary

caregivers (e.g., grandmothers) and their children and adolescents (Ueffing et al., 2023).

The displacement of Ukrainians within and outside of Ukraine had negative effects on displaced individuals' psychological health and well-being (Timmer et al., 2023). The displacement has included parents of children and adolescents whose psychological health and well-being have been negatively affected by displacement from their homes and communities. The sources of these negative effects include, but are not limited to, separation from family and friends (Tavrovestska & Veldbrekht, 2022), weak or nonexistent social ties in displaced locations (Sereda, 2023), the need for basic family and child resources (Shyroka et al., 2023), challenges in navigating unfamiliar social service systems (Foti & Eurofound, 2024), and difficulties obtaining health care, employment, and adequate living accommodations (Kapinus et al., 2023).

Villalonga-Olives et al. (2023) describe two types of social support needed by mothers displaced within and outside Ukraine as a result of the Russian invasion of their country: (1) the need to stay connected with family and friends and (2) "forming new friendships for social cohesion and support" (p. 206). The former is described as social connectedness (Haslam et al., 2016) and the latter as social network building (Wills & Ainette, 2012).

Social connectedness refers to the sense of belonging and feelings of closeness to family members, friends, and other social network members. Findings from research reviews of studies of social connectedness show that social relations are an important determinant of positive well-being (Hoffmann et al., 2023; Hui et al., 2020; Wickramaratne et al., 2022). Social network building refers to the creation of new relationships with individuals, social groups, and organizations that are sources of both informal and formal social support. Research reviews of studies of social network building show that establishing social relationships with new social network members is an important determinant of the psychological well-being of displaced persons (e.g., Dawson et al., 2025; Song et al., 2024) and is especially important for the maternal well-being of displaced mothers and other caregivers (Balaji et al., 2007; Hirani et al., 2024). Both types of relationships therefore were the focus of analysis to identify the predictors of the psychological well-being of mothers and their children displaced from their homes and communities as a result of the Russian invasion in 2022 (e.g., Michael & Tanculescu-Popa, 2024; Minora et al., 2023). Meta-analyses of different dimensions of social support include evidence that socially supportive relationships are robust predictors of psychological well-being (Dunst, 2022a; Gutierrez-Sanchez et al., 2024; Harandi et al., 2017) including meta-analyses and systematic reviews of displaced persons (Dawson et al., 2025; Hirani et al., 2024; Song et al., 2024). Waldinger and Schulz (2023) in their study spanning more than 70 years, found that socially supportive relationships were the best predictor of positive psychological well-being.

Displaced mothers of children with identified disabilities or developmental delays may be especially affected psychologically by the added demands associated with their children's special needs (Kurylo et al., 2023). Early childhood intervention for infants, toddlers, and preschoolers with disabilities or delays may be especially important for displaced Ukrainian mothers and their children since parents view early childhood intervention practitioners as both a source of support and helpful in locating needed family and child resources (Karbowniczek et al., 2022; Kukuruza et al., 2022).

Aim of the Study

The purpose of the study described in this paper was to ascertain the psychological well-being status of mothers of young children receiving early childhood intervention following their initial displacement from their homes and communities and to identify the predictors of variations in their psychological well-being. Psychological well-being was assessed in terms of the presence of positive health indicators rather than the absence of negative indicators (e.g., American Psychological Association, 2018; Huppert, 2009; World Health Organization, 1998). Positive well-being indicators include scale items measuring optimism, hopefulness, a sense of purpose, contentment, etc., whereas negative well-being indicators include scale items measuring anxiety, helplessness, stress, depression, etc. (see especially Karademas, 2007).

Psychological well-being was assessed by the World Health Organization-Five Item Well-Being Index scale which has been widely used to measure positive well-being (Topp et al., 2015). The focus of predictor analyses was social connectedness with Ukrainian family and friends, the family and child support and resources in their displaced locations, and satisfaction with early childhood intervention in terms of assistance with obtaining needed support and resources. The predictor analyses were guided by systems models and theories where mothers' psychological well-being was expected to be multiply determined (Carter, 2017; McGregor et al., 2003). Social systems models and

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Table 1:
Selected Characteristics of the Study Participants

Participant Characteristics	Number	Percentage
Participants		
Mothers	50	80.6
Other Caregivers (Not specified)	12	19.4
Current Residence		
Norway	15	24.2
Czech Republic	14	22.6
Poland	13	21.0
Ukraine [a]	10	16.1
Latvia	5	8.1
Portugal	2	3.2
Other [b]	3	4.8
Length of Current Residence		
<Less than 1 month	3	4.8
1 to 2 months	2	3.3
2 to 3 months	3	4.8
3 to 4 months	2	3.2
4 to 5 months	1	1.6
5 to 6 months	6	9.7
More than 6 months	45	72.6
Child Gender		
Male	36	58.1
Female	26	41.8
Early Childhood Intervention		
Less than 12 months	13	21.0
12 to 24 months	9	14.5
24 to 36 months	6	9.7
36 to 48 months	16	25.8
48 to 60 months	7	11.3
60 to 72 months	4	6.5
More than 72 months	7	11.3
Location of Early Childhood Intervention		
Ukraine Only [c]	31	50.0
Host Country Only	22	35.5
Both Ukraine and Host County	9	14.5

[a] New location within Ukraine after displacement; [b] Germany (N=1), Spain (N=1), and Not specified (N=1);
[c] Includes early childhood intervention both before and after displacement.

theories and models include the tenet that human behavior and functioning, including health and well-being, are influenced by people, experiences, and events in different social environments (e.g., Karelina & DeVries, 2011; Nicholas & Gobble, 1991). The main aim of the study was the identification of the predictors and correlates of mothers' positive psychological well-being while experiencing traumatic event exposure (Carmassi et al., 2024; Hirschberger, 2018; Scharbert, 2024). This aim is consistent with applied positive psychology which emphasizes the life experiences that contribute to positive human functioning (e.g., Aspinwall & Staudinger, 2003; Donaldson et al., 2011).

METHOD

Participants

Participants were recruited from early childhood intervention programs and organizations in Ukraine and 13 other European countries. Early childhood intervention in Europe includes the resources, supports, and services provided by social network members, both professionals and non-professionals, to enhance child learning and development, strengthen parenting confidence and competence, and promote child, parent, and family health and well-being (European Agency for Development in Special Needs Education, 2005; European Association on Early Childhood Intervention., 2019).

Early childhood intervention program directors and/or practitioners in each country were contacted and asked to invite parents and other primary caregivers displaced from their homes in Ukraine to complete an online survey of their experiences with child and family human services programs and organizations and early childhood intervention programs in their displaced location. Sixty-five surveys were submitted to the investigators by parents and other primary caregivers where 62 included enough information to be included in the present study. (Two surveys included missing data for more than half of the scale items and one survey was completed by a person who was not a parent or primary caregiver of a child with a disability or delay.) We were unable to determine how many parents or other primary caregivers were invited to complete the survey and therefore were not able to compute a return rate.

Table 1 shows selected characteristics of the study participants. Most participants (81%) were the mothers of children who received early childhood intervention. Most mothers and children (68%) were living in Norway, the Czech Republic, and Poland at the time of data collection. Sixteen percent (16%) were living in a displaced location within Ukraine. The participants were living in their displaced location for less than one month to more than seven months (M = 6.03 months, SD = 1.98).

The mothers' children currently or previously received early childhood intervention only in Ukraine (50%), only in a host country (36%), or both Ukraine and a host country (14%). Fifty-eight percent (58%) of the children were male and 42% were female. The children had been involved in either birth to age three or birth to age six early childhood intervention for less than 12 months to more than 72 months. The average number of months of early childhood intervention was 36.77 (SD = 23.46).

Survey

The participants completed an investigator-developed survey that included a psychological well-being measure, questions about child and family background characteristics, measures of connectedness with Ukrainian family and friends, the availability and adequacy of family resources and social support in the displaced location, and selected measures of early childhood intervention in Ukraine, the host countries, or both. The survey was developed in collaboration with early childhood intervention program directors and staff to identify intervention-related constructs considered essential for achieving the goals of early childhood intervention (European Agency for Development in Special Needs Education, 2005; European Association on Early Childhood Intervention., 2019). The authors identified existing scales measuring the intervention-related constructs or developed items measuring the constructs to be sure the survey content included measures considered important by European early childhood intervention practitioners. The survey was prepared in English and translated into Ukrainian by native speakers working in early childhood intervention programs who were fluent in English.

Measures

Selected characteristics of the dependent measure (psychological well-being) and independent variables (participant characteristics, social connectedness, family support, family resources, and early childhood intervention) are shown in Table 2. The dependent measure of interest was the parents' psychological well-being. Each independent variable included three predictor measures. Coefficient alpha was used to evaluate the internal consistency of the multiple-item scales (Cronbach, 1951). Alpha is a measure of the reliability of the scale items where an alpha coefficient of .70

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Table 2:
Selected Characteristics of the Study Measures

Measures	Type of Measure	No. of Items	Mean	S.D.	Range of Scores
Psychological Well-Being	5-Point Likert Scale	5	8.30	4.14	0 to 16
Participant Characteristics					
Respondents	Mothers (1) vs. Other (0)	1	.81 [a]	0.40	0 to 1
Child Gender	Male (1) vs. Female (0)	1	.54 [b]	.50	0 to 1
Months in Current Location	Number of Months	1	6.03	1.98	0 to 7
Support from Family and Friends [c]					
Social Connectedness	4-Point Likert Scale	8	16.55	7.14	0 to 27
Types of Contacts	Sum of Types of Contacts	8	3.97	1.86	1 to 8
Frequency of Contacts	5-Point Likert Scale	1	4.05	1.18	1 to 5
Host Country Support and Resources [d]					
Family Social Support	4-Point Likert Scale	8	8.71	6.77	0 to 22
Family Resource Needs	5-Point Likert Scale	30	46.42	28.10	0 to 112
Challenges Finding Resources	Sum of No. of Challenges	11	3.30	2.23	0 to 9
Early Childhood Intervention (ECI)					
Months of ECI	Number of Months	1	36.77	23.46	<12 to 72+
Location of ECI	Ukraine vs. Host Country [e]	1	NA	NA	-1 to 1
Satisfaction with ECI	5-Point Likert Scale	6	15.59	5.44	0 to 24

[a] Proportion of the study participants who were mothers.

[b] Proportion of children who were male.

[c] Includes only Ukrainian family and friends before displacement.

[d] Includes Ukrainian study participants displaced within Ukraine.

[e] Orthogonal contrast coding was used to code location of early childhood intervention as Ukraine only (= 1), Host country only (= -1), and both Ukraine and Host country (= 0).

or higher indicates that the individual scale items are measuring the same scale construct (DeVellis, 2017).

Psychological Well-Being

Four World Health Organization (WHO-5) Well-Being Index items (cheerful and in good spirits, calm and relaxed, happy and upbeat, refreshed and rested) and one investigator-developed item (things will get better) were used to measure parents' well-being (Topp et al., 2015; World Health Organization, 1998). Participants were asked to indicate how often they experienced each of the scale item indicators on a 5-point scale ranging from never (0) to all the time (4). The coefficient alpha for the five scale item responses was .86. The sum of the ratings was the dependent measure of parents' psychological well-being. The parents' mean well-being score was 8.30 (SD = 4.14).

Participant Characteristics

The three participant characteristics were survey respondent (Mothers = 1 and Other Caregivers = 0), child gender (Male = 1, Female = 0), and the number of months residing in the displaced

location in Ukraine or a host country. The mean number of months the respondents were living in a displaced location was 6.03 (SD = 1.98).

Ukrainian Family and Friends Support

Participants' ability to stay connected with Ukrainian family and friends was measured using an 8-item investigator-developed scale, the number of different methods used to stay in contact with family and friends (e.g., WhatsApp, Facebook, Messenger, Viber), and the frequency of contact with Ukrainian family and friends. Social connectedness was measured by asking respondents to indicate how well they were able to stay connected with Ukrainian family and friends on a 4-point scale ranging from not-at-all (0) to all-the-time (4). The targets of appraisal of the eight items included the dependability of family and friend support in terms of (a) hopefulness, (b) remaining optimistic, and (c) dealing with challenging situations. The coefficient alpha for the eight scale item responses was .89. The sum of the ratings was used to measure social connectedness with Ukrainian family and friends. The mean total connectedness score was 16.55 (SD = 7.14). Social connectedness was a focus of investigation since it is an important determinant of different types of psychological health and well-being (Friedling et al., 2018; Hoffman et al., 2023; Wickramaratne et al., 2022).

Respondents were provided a list of eight different communication methods and asked to indicate which ones were used to stay in contact with Ukrainian family and friends. The most frequently used methods were E-mail (93.5%), WhatsApp (62.9%), Facebook (56.5%), Instagram (54.5%), and Messenger (53.5%). The total number of methods used to stay in contact with Ukrainian family and friends was the measure of the number of different types of contacts. The mean number of methods was 3.97 (SD = 1.86).

A single item was used to measure how often respondents were able to stay in contact with Ukrainian family and friends using a scale ranging from once a month or less (1) to every day (5). The mean frequency of types of contact was 4.05 (SD = 1.18).

Displaced Location Support and Resources

An 8-item investigator-adapted version of the Family Support Scale (Dunst et al., 1984; Dunst et al., 2006) was used to measure the helpfulness of social support from network members (e.g., new friends, new neighbors, parents I have met), social organizations (church, social clubs), and government and non-government organizations in the host country or a displaced location within Ukraine. Each source of support was rated on a 5-point scale ranging from not-at-all-helpful (0) to extremely helpful (4). The coefficient alpha for the eight scale item responses was .79. The sum of the ratings was used as the family social support measure. The mean social support score was 8.71 (SD = 6.77). Studies using the Family Support Scale have yielded evidence that family social support is related to different dimensions of parents' psychological health and well-being (Dunst, 2022a).

The Family Resource Scale (Dunst & Leet, 1985; Dunst et al., 2006) and investigator-developed child and family resource items were used to measure the need for child and family resources in the host country or displaced location within Ukraine. Respondents were asked to rate the need for 30 different types of resources on a 5-point scale ranging from not-needed-at-all (0) to need-all-the-time (4). The types of resources included basic resources (e.g., food for family members, clean water, dependable utilities); financial resources (e.g., money to buy necessities, financial assistance for a child with disabilities, extra money for unexpected expenses); time for self, family members, and friends; health-related resources (e.g., medical and dental care for family members, medical supplies for a child with disabilities); childcare assistance (e.g., babysitting, childcare or preschool; and everyday activities for the parents' child(ren) in and outside the home or apartment). The coefficient alpha for the 30 scale-item responses was .96. The sum of the 30-item responses was used as the measure of the need for family and child resources. The mean family resource needs scale score was 46.42 (SD = 28.10). The adequacy of family resources is related to different dimensions of parents' psychological health and well-being (Dunst, 2021)

Challenges and difficulties locating family resources in the host county or displaced location within Ukraine were measured using an investigator-developed list of 11 reasons respondents might have problems procuring needed resources. The most frequently listed problems were difficulties asking for help (64.5%), an inability to pay for needed resources (50.0%), the unavailability of an interpreter (40.3%), difficulties completing service program paperwork (40.3), and confusing and complex service delivery systems (35.5%). The mean number of challenges reported by the respondents was 3.30 (SD = 2.23).

Early Childhood Intervention

The three early childhood intervention measures were the number of months of intervention for the mothers' children with

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Table 3:
Percentage of Participant Responses to Each Psychological Well-Being Measure Items

	Psychological Well-Being Scale Responses				
How often do you experience each of the following feelings?	Never	Not Very Often	Sometimes	Most of the Time	All of the Time
Cheerful and in Good Spirits	9.8	31.1	32.8	23.0	3.3
Calm and Relaxed	16.4	37.7	27.9	16.4	1.6
Refreshed and Well Rested	26.2	36.1	27.9	9.8	0.0
Happy and Upbeat	21.3	36.1	26.2	13.1	3.3
Things Will Get Better	3.3	18.0	36.1	21.3	21.3

a disability or delay, the location of early childhood intervention supports and services, and respondent satisfaction with early intervention supports and services. The mean number of months of early childhood intervention was 37.77 (SD = 23.46). Orthogonal contrast coding was used to evaluate the effects of the location of early childhood intervention (Cohen et al., 2003). Early childhood intervention provided only in a host country was coded minus one (-1), early childhood intervention provided only in Ukraine was coded plus one (1), and early childhood intervention provided in both Ukraine and a host country was coded zero (0).

Satisfaction with early childhood intervention supports and services was measured using the Early Childhood Intervention Program Helpfulness Scale (Trivette, 2006) and one investigator-development item. Respondents were asked to indicate on a 5-point scale ranging from strongly disagree (0) to strongly agree (4) with statements like "I receive the help my child and I need," "I learn a great deal about how to help my child," and "staff help me find resources and services my child and I need." The one investigator-developed item was "I would recommend this early childhood intervention program to other families." The coefficient alpha for the scale responses was .94. The sum of the six ratings was used to measure early intervention program satisfaction. The mean satisfaction score was 15.59 (SD = 5.44).

Method of Analysis

Parents' psychological well-being was first examined in terms of the percentage of respondents who rated each of the scale items never, not-very-often, sometimes, most-of-the-time, or all-of-the-time to provide a profile of poor (never and not-very-often) to excellent (most-of-the-time and all-of-the-time) well-being. The pattern of results was compared to results in other studies to determine if the distribution of scores was similar or different (Mortazavi et al., 2015; Sischka et al., 2020; Temple, 2021).

The correlations between the study measures (Table 2) were used to identify (a) the correlates of parents' psychological well-being and (b) the study variables associated with variations in the best predictors of parents' well-being. Multiple regression analysis was used to identify which combination of predictor variables was associated with the largest amount of variance in parents' psychological well-being. Multiple regression analysis was also used to determine which study measures proved most important in terms of explaining variations in the predictors of parents' psychological well-being.

RESULTS AND DISCUSSION

Psychological Well-Being

Table 3 shows the percentages of the five psychological well-being items rated differently by the study participants. The results for four items indicated that the responses were skewed toward poorer well-being, whereas the results for one item (things will get better) indicated that the responses were skewed toward positive well-being.

The responses skewed toward poorer psychological well-being showed that 40.9% to 62.3% of the mothers indicated that they never or not-very-often experienced the well-being indicators. In contrast, 9.8% to 26.3% of the mothers indicated that they

Table 4:
Correlations Between Parental Well-Being and the Predictor Measures

	Predictor Measures											
	Participant Characteristics			Ukrainian Family and Friend Support			Host Location Supports and Resources			Early Childhood Intervention		
Study Measures	RES	CGR	MCL	USC	UNC	UFF	HSS	HFR	HCC	MEI	LEI	SAT
Parental Well-Being	-.13	.01	.03	.36***	.17	.21	.14	.03	-.30**	-.05	-.07	.22*
Respondent (RES)	---	-.05	-.08	-.19	-.08	-.29**	-.13	.08	.12	-.02	-.14	-.05
Child Gender (CGR)		---	-.14	.08	-.10	.12	-.18	.09	.14	-.10	-.18	-.18
Months in Current Location (MCL)			---	.21	.08	.14	.37***	.03	-.01	.05	.01	.20
Social Connectedness (USC)				---	.13	.27*	.31**	-.02	-.16	.19	.08	.17
Types of Family Contacts (UNC)					---	.35***	.08	.01	-.03	-.28*	.18	-.11
Frequency of Family Contacts (UFF)						---	.16	-.25*	-.27*	-.17	.08	-.04
Host Country Social Support (HSS)							---	.12	-.06	.00	-30**	.16
Host Country Resource Needs (HFR)								---	.40***	.02	.20	-.22*
Host Country Challenges (HCC)									---	.06	.11	-.36***
Months of Child ECI (MEI)										---	.25*	.31**
Location of ECI (LEI)											---	.03
Satisfaction with ECI (SAT)												---

*p < .05, **p < .01, ***p< .005.

experienced the same well-being indicators all-of-the-time or most-of-the-time. The only well-being item skewed toward positive psychological health was "things will get better." Twice as many mothers (42.6%) indicated that they experienced the indicator most or all of the time compared to 21.0% of the mothers who experienced the indicator never or not-very-often. For all indicators taken together, more than twice as many well-being items (47.2%) were judged as indicators of poor well-being compared to items judged as indicators of excellent well-being (22.6%).

The pattern of results in the present study differs from those reported in other studies of women's psychological well-being. Temple (2021), in a study of mostly (93.8%) female Ukranians conducted before the Russian invasion, found that the women's well-being scores were normally distributed and there was no indication of any skewed response pattern. Sischka et al. (2020), in a study conducted in 2015 of more than 43,000 participants in 35 European countries, also found that well-being scores were normally distributed where there was no indication of "extreme skewness" (p. 4). In a study of 341 pregnant women conducted in Turkey in 2013, the investigators found that 22.83% of the five WHO well-being scale items were indicators of poor well-being whereas 42.60% of the well-being scale items were indicators of positive well-being (Mortazavi et al., 2015). The latter result is the opposite of what was found in the present study.

Correlate and Predictor Analyses

The correlations between the study measures are shown in Table 4. The focus of the analysis was the correlates and predictors of mothers' psychological well-being and the study measures that were related to the predictor variables.

Mothers' Psychological Well-Being

Three predictor measures were related to mothers' positive psychological well-being. The more socially connected the

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mothers were with Ukrainian family and friends, the more positive the mothers' well-being The more satisfied the mothers were with early childhood intervention, the more positive the mothers' well-being. In contrast, the more challenges and difficulties the mothers had procuring family and child resources in displaced locations, the more negative the mothers' well-being. Multiple regression analysis showed that the three predictor variables accounted for 19% of the variance in mothers' well-being, R^2 =.19, F(3, 58) = 4.65, p = .006.

The results for the relationship between social connectedness and mothers' well-being are consistent with findings in research reviews of the relationship between social connectedness and psychological health for people in general (Wickramaratne et al., 2022) and displaced persons in particular (Song et al., 2024). The result for the relationship between satisfaction with early childhood intervention and well-being is also consistent with the findings in other early childhood intervention studies (Gascon-Ramos et al., 2010; Jemes-Campana et al., 2021) where satisfaction is most likely a proxy measure for social connectedness between mothers who are displaced from family and friends and early childhood intervention practitioners (see e.g., Honda et al., 2020).

Results reported in several sources show that Ukrainian mothers displaced from their homes and communities face numerous challenges in obtaining needed family and child resources (HIAS Foundation, 2023; Kapinus et al., 2023). These difficulties had a toll on mothers' well-being as was found in our study. This pattern of results is consistent with results in meta-analyses where large numbers of unmet family and child needs are related to negative psychological health and well-being (Dunst, 2022c) and that the adequacy of family and child resources is related to positive psychological health and well-being (Dunst, 2021).

Social Connectedness with Family and Friends

Two study measures were related to the mothers' social connectedness with Ukrainian family and friends. The more frequently mothers had contact with Ukrainian family and friends, the more socially connected the mothers were with these Ukrainian social network members. The greater the amount of social support from social network members in displaced locations, the more the mothers reported being socially connected with Ukrainian family and friends. The two predictor variables accounted for 14% of the variance in the mothers' social connectedness scores, R^2 = .14, F(2, 59) = 4.94, p = .010.

The results found in the present study are consistent with those reported in the social support literature in terms of the variables that result in a greater sense of social connectedness with different social network members. Friedling et al. (2018), in their review of the social connectedness literature, found that both the frequency of contact with social network members and developing new social contacts were two variables associated with a greater sense of social connectedness.

Challenges and Difficulties Obtaining Needed Resources

Three study measures were related to the number of challenges and difficulties mothers had locating needed family and child resources. The more the mothers reported a need for family and child resources, the more challenges and difficulties the mothers had procuring those resources. A similar relationship was found in other studies of the needs and challenges faced by displaced Ukrainians procuring family and child resources (Deliu & Trifan, 2023; Lee et al., 2023). In contrast, the more frequently the mothers had contact with Ukrainian family and friends and the more satisfied the mothers were with early childhood intervention, the fewer challenges and difficulties the mothers had in procuring needed family and child resources. These results are similar to those found in early childhood intervention studies that included analyses of the relationships between program and practitioner practices and efforts to help families procure needed resources (Busillo-Aguayo, 2010; McWilliam et al., 1995). The three predictor variables accounted for 28% of the variance in the number of challenges and difficulties the mothers had procuring family and child resources, R2 = .28, F(3, 58) = 7.46, p < .000.

Satisfaction with Early Childhood Intervention

Three study measures were related to mothers' satisfaction with early childhood intervention. The longer a child received early childhood intervention, the more satisfied the mothers were with early childhood intervention. The more needs mothers had in a displaced location and the more challenges and difficulties the mothers had in procuring needed family and child resources, the less satisfied the mothers were with early childhood intervention. The three predictor variables accounted for 21% of the variance in mothers' satisfaction with early childhood intervention, R^2 = .21, F(3, 58) = 5.15, p = .003.

The result for the relationship between the length of involvement in early childhood intervention and parent satisfaction is the same as found in other studies (e.g., Popp & You, 2016). The

findings for the relationships between family and child needs, the challenges and difficulties procuring resources to meet those needs, and parent satisfaction add to the literature about the predictors of satisfaction with early childhood intervention but need to be interpreted with caution. Two satisfaction items asked participants to judge their satisfaction with (a) resources and support from an early childhood intervention program and (b) early childhood intervention practitioner assistance with obtaining family and child resources from other programs and organizations. Satisfaction with early childhood intervention staff assistance with both procuring needed family and child resources may be a proxy for employing family-centered and family systems practices that include the provision of and assistance with procuring family and child supports, resources, and services (Dunst, 2022b; Dunst & Espe-Sherwindt, 2016).

Post hoc analyses showed that mothers' satisfaction with both types of resource-based early childhood intervention (sum of the two item ratings) was related to fewer family needs, $r(61) = -.32$, $p = .011$, and fewer challenges and difficulties procuring family and child resources, $r(61) = -.41$, $p = .001$.

GENERAL DISCUSSION

Findings from our study showed that the mothers' psychological well-being was negatively affected following the Russian invasion of Ukraine in February 2022. This result is similar to findings reported by both Asanov et al. (2023) and Skalski-Bednarz et al. (2022) who also found that Ukrainian women's well-being was negatively affected by the Russian invasion. The three sets of results differ from those found by the HIAS Foundation (2023), Owoc et al. (2024), and Quaranta-Leech (2024) for nondisplaced Ukrainian women whose psychological well-being was not negatively affected following the Russian invasion (Dunst et al., in preparation). These results, taken together, indicate that women and mothers' displacement from their homes and communities played a major role in negatively affecting their well-being.

Two variables in our study were related to enhanced positive well-being (social connectedness with Ukrainian family and friends and satisfaction with early childhood intervention) and one variable in our study was related to attenuated negative well-being (difficulties and challenges procuring needed family and child resources in a displaced location). The pattern of results is consistent with social systems theories and models (Dunst, 2022b; McGregor et al., 2003) which include tenets that psychological health is multiply determined as found in our study.

Mothers in our study experienced both war-related trauma and displacement from family and friends. These factors no doubt had negative consequences on mothers' psychological well-being as found in other studies (e.g., Hyland et al., 2023; Song et al., 2024). Social connectedness with family and friends following displacement proved to be important for bolstering a sense of positive well-being (Friedling et al., 2018; Haslam et al., 2016). Results showed that the use of different types of digital technology played an important role in maintaining contact with Ukrainian family and friends. The relationship between digital technology and social connectedness has increasingly been reported in the literature among persons displaced from their homes and communities (e.g., Janssen, 2023; Vuningoma et al., 2022). Moisala (2023), for example, found that Twitter proved to be an important tool for remaining connected with Ukrainian family and friends following displacement as a result of the Russian invasion.

The findings related to challenges and difficulties procuring needed family and child resources and satisfaction with early childhood intervention are not as straightforward as those for social connectedness with Ukrainian family and friends. Mothers displaced from their homes and communities reported different kinds of challenges and difficulties locating needed resources which is much the same as found in other studies (e.g., Shyroka et al., 2023) where early childhood intervention programs are seen as sources of assistance in procuring those resources (e.g., Kukuruza et al., 2022). Results from our analyses provide tentative evidence that early childhood intervention played an important role in helping displaced Ukrainian mothers procure needed family and child resources. Findings from meta-analyses of family-centered and family systems studies include evidence for these complex relationships (see e.g., Dunst, 2022b, 2023). Further investigation of the role early childhood intervention plays in war-torn countries where mothers and their children are displaced from their homes and communities is, however, needed.

Strengths and Limitations

One particular strength of our study deserves comment since the results make value-added contributions to the literature. Seven studies, including our own, have been published since the Russian invasion of Ukraine which used the WHO-5 Well-

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Being Index to measure the psychological health of displaced and nondisplaced Ukrainian women (Asanov et al., 2023; HIAS Foundation, 2023; Owoc et al., 2024; Quaranta-Leech, 2024; Sarwar & Mustafa, 2023; Skalski-Bednarz et al., 2022). Our study is the only investigation that explicitly included predictor measures to identify the correlates of variations in mothers' psychological well-being.

Two methodological concerns are noted for future research. First, the small sample size in the study and the fact that mothers volunteered to complete the survey may be an indication that the sample is not representative of most or all mothers displaced as a result of the Russian invasion of Ukraine. Second, the fact that the WHO-5 Well-Being Index was the only scale used to measure mothers' mental health may not have adequately captured the scope of the mothers' psychological responses to displacement. Both of these concerns would need to be taken into consideration in future studies of the effects of mothers' displacement from their homes and communities to ensure that the predictors of mental health status are the same or different for other mental health measures.

CONCLUSION

Mothers' sense of well-being found in our study is similar to that reported in other studies of women displaced from their homes and communities as a result of the Russian invasion of Ukraine (Asanov et al., 2023; Skalski-Bednars et al., 2022). Results from our study add to the knowledge base by showing that different family and social systems measures are related to variations in the mothers' positive well-being consistent with previous research testing basic tenets of systems models and theories (e.g., Dunst, 2022b). ■

Citation

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